Seirbhís Leabharlainne 7 Taighde
Library & Research Service

L&RS Note

# Insights into the OSMR Bill

## Part 2: Societal context resource guide – empirical data on online usage

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## Introduction

The *Online Safety and Media Regulation Bill* provides for the dissolution of the Broadcasting Authority of Ireland (BAI) and the establishment of **Coimisiún na Meán**, or the Media Commission, in its place. This Commission will have a wider remit, covering on-demand audiovisual media, visual sharing platforms and online safety.

This *L&RS Note* series forms the backdrop to the L&RS's policy and legislative analysis work in respect of this piece of legislation. **Part 1** of this series provides an introduction to the Bill and the policy context underpinning its development, as well as an overview of the legislative provisions in this area, whilst **Part 3** (forthcoming) will introduce the current legal and regulatory framework.

This *L&RS Note*, which is **Part 2** of the series, is intended as a **resource** for Members who wish to access **detailed empirical data** (both national and international) in respect of various aspects of online usage, as well online media consumption and disinformation. Data in respect of online safety and online harms will be presented in later part of this *L&RS Note* series.

To aid Members access those areas of most relevance to them, please find the structure of this *L&RS Note* below – with hyperlinks directly to the relevant sections:

## Key messages

- Internet usage, both internationally and nationally, has increased over the last decade.
- Irish internet users were found to be among the most active in Europe. Whilst younger users were more likely to be online most frequently throughout the day, the proportion of those online 'all the time' throughout the day increased across all age groups.
- Social networking was prevalent; though again, younger people were more likely to engage in this than older people. Nonetheless, less Irish respondents reported never using online social networks than was average across the EU.
- The vast majority of Irish children reported having access to the internet, with the majority accessing it on a device that belonged to them.
- Whilst social media usage was more common amongst older children, the majority of younger children reported using social media platforms. Gender differences were evident. For instance, apps like TikTok and Snapchat were more popular amongst girls, whilst Discord was more popular amongst boys. Similarly, of the minority of children who reported posting videos of themselves online, girls were more likely to report this than boys. Older girls were also more likely to report excessive internet use or problematic social media use.
- With TV (41%) the most popular source of news, the next most popular sources of news were online sources (excl. social media and blogs) (29%) and social media (16%). Age was a factor, with younger people more likely to cite social media as their main source of news.
- Whist Irish respondents were less likely than their European counterparts to report trust in either the internet or online social networks, a quarter of Irish respondents reported seldom/never encountering 'fake news' as compared to a fifth of European respondents. Older people were more likely than younger people to report concern about 'fake news'.
- In terms of combatting 'fake news', the majority of Europeans indicated that the responsibility for this lay with the media (62%) and public authorities (53%), whilst just under half saw it as lying with social media platforms (53%). For Irish respondents, responsibility was seen as lying with the media (64%), social media platforms (55%) and public authorities (43%) respectively.
- The most frequently cited measures that Irish respondents stated public authorities should take to address 'fake news' were 'help citizens to better identify disinformation' (50%), 'regulate social media platforms to reduce the distribution of disinformation' (47%) and 'prevent those who spread disinformation from abusing social media platform services' (45%). Just 1% indicated that public authorities should do nothing to address the spread of 'fake news'.
- Whilst the proportion of Irish respondents with above basic digital skills was similar to the EU average, Ireland had a lower proportion of people with at least basic skills, a higher proportion of those with low overall digital skills and a lower proportion who felt that they were not sufficiently skilled to use digital technologies in their daily lives. Overall, the majority of Irish respondents classed themselves as sufficiently skilled to use digital technologies in their everyday lives (80% compared to 70% of Europeans).
- Children reported high levels of digital skills, with levels increasing across the age cohorts (i.e. lowest levels of skills reported by 9-10 year olds and the highest levels reported by 15-17 year olds).

# Online usage amongst adults

Recent international research provides details of online usage patterns at national level, whilst also providing international comparative data. For instance, the Digital Economy and Society Index (DESI) 2020, which provides comparative data at EU level[1] across a range of digital indicators, found that the number of internet users in Ireland increased significantly from the previous year (+8 percentage points to 88%) and exceeds the EU average (85%). The most popular online activities were entertainment (music, videos, games) (80%), followed by banking (75%), news (74%) and shopping (73%). Social networks were more popular in Ireland than the EU average (70% versus 65%).[2] The COVID-19 pandemic was associated with changes to online behaviour and engagement. For instance, the DESI 2020 found that internet use increased across European countries during this period. Continuing pre-pandemic trends, internet use rose with 85% of Europeans online at least once a week (up from 75% in 2014), ranging from 67% in Bulgaria to 95% in Denmark, Sweden and the Netherlands.[3] The most recently available Eurostat data showed that 98% of Irish respondents were regular internet users in 2021 (i.e. online at least once a week) as compared to an average of 87% (estimated) for the EU27[4]. Ireland's figures are up 9 percentage points on 2020 figures, up 18 percentage points on pre-pandemic figures (80% in 2018) and up 35 percentage points on 2010 figures (63%).[5]

Irish internet users were among the most active users of internet services in the EU. Whilst Finland, Sweden, the Netherlands and Denmark had the most active internet users, this was followed by the UK, Malta, Estonia and Ireland.[6] The Standard Eurobarometer 94[7] found that over 8 in 10 Europeans use the internet at least once a week (85%, +5 percentage points from 2019 and +22 since 2010), with 75% using the internet everyday/almost everyday (+6 since 2019). In the case of Ireland, 95%[8] of participants reported using the internet everyday/almost every day.[9] Similarly, recent data from the Information and Communications Technology (ICT) Household Survey (Central Statistics Office) found that over eight in every ten (81%) of recent internet users[10] used the internet every day, an increase of two percentage points on 2019. However, age differences were evident, with the vast majority of those aged 16-29 years (96%) and 30-44 years (95%) accessing the internet every day as compared a smaller majority of those aged 60-74 years (59%) and a minority of those aged 75 years and older (28%).[11] Age variance in frequency of everyday usage was also evident, with younger daily internet users using the internet most frequently throughout the day (see Table 1 below). Of note also is that the proportion of internet users who reported using the internet *All the time* increased from 2019 to 2020 across all age groups for which data was available: from 5% to 15% for those aged 16-29 years; from 4% to 13% for those aged 30-44 years; from 2% to 8% for those aged 45-59 years; and from 1% to 4% of those aged 60-74 years.[12]

Table 1 Frequency of daily internet usage, % by age, 2020

| | All the time | Nearly all the time | Several times a day | Briefly 1 or 2 times a day |
|---|---|---|---|---|
| **16-29 years** | 15% | 31% | 44% | 10% |
| **30-44 years** | 13% | 24% | 49% | 15% |
| **45-59 years** | 8% | 18% | 50% | 24% |
| **60-74 years** | 4% | 9% | 50% | 38% |
| **Over 75 years** | 1% | 5% | 47% | 47% |

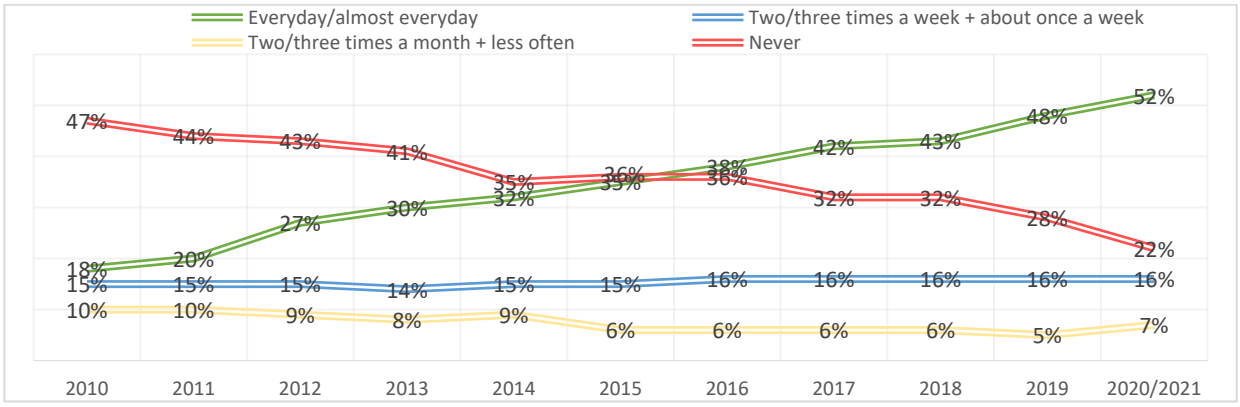
*Data source: Central Statistics Office*[13]

## Nature of online activities

A majority of internet users in the ICT Household Survey[14] reported using social networking (69%), with 81% of younger people (≤44 years) reporting this as compared to less than half of older people (60-74 years). In terms of other types of internet activity, nearly 7 in 10 (68%) of internet users reported *Watching video content from sharing services* (e.g. YouTube, TikTok), whilst over half (55%) reported *Watching video on demand (from commercial services)* (e.g. Netflix, Amazon Prime, Disney+) and half reported *Watching internet streamed TV*. Once again, age variations were evident. For instance, whilst approximately 8 in 10 younger people (≤44 years) reported *Watching video content from sharing services*, this was the case for just over a half of older people (60-74 years). Similarly, whilst approximately three quarters of younger people (≤44 years) reported *Watching video on demand (from commercial services),* just over a third of older people (60-74 years) reported this. Further, in respect of *Watching internet streamed TV* , this was reported by approximately two-thirds of younger people (≤44 years) as compared to approximately a third of older people (60-74 years).[15]

Turning to social media usage, nearly 7 in 10 Europeans reported using online social networks at least once a week (+4 percentage points since 2019 and +35 since 2010), with just over half of Europeans (52%) using this medium everyday or almost everyday (+4 since 2019 and +34 since 2010) (see Figure 1 below). By contrast, the proportion of Europeans indicating that they never use online social networks has fallen to 22% (-6 since 2019 and -25 since 2010).[16] At national level, 65% of Irish participants reported using online social networks everyday or almost every day (+10 percentage points on 2019), with a further 17% using this medium at least once a week. A lower proportion of Irish participants indicated that they never use online social networks compared to the EU average (8% versus 22%), with the Irish figure down 13 percentage points on the previous year (8% versus 21%).[17]

Figure 1 Frequency of use of online social networks, % in EU

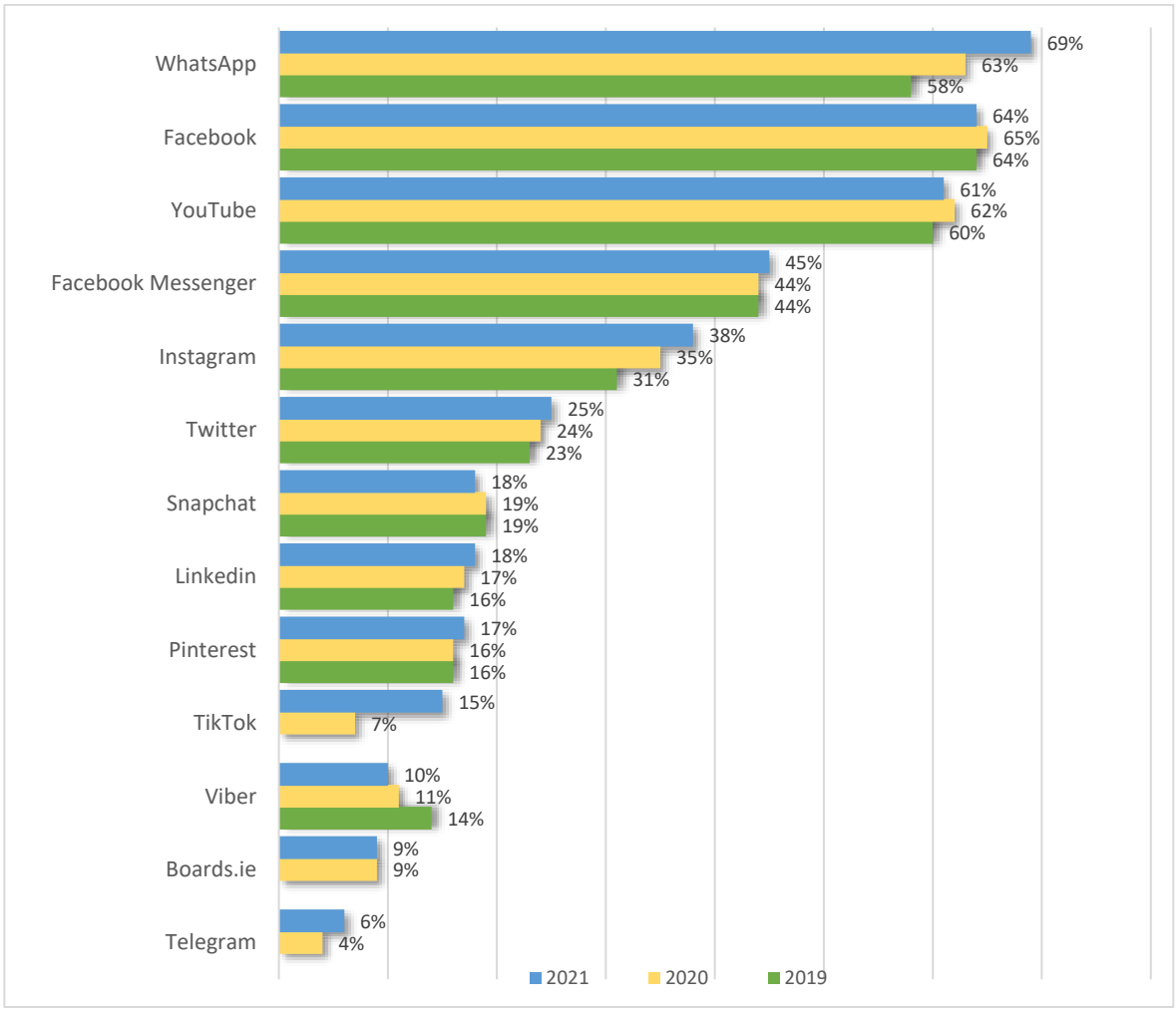



*Data source: European Commission*[18]

Further Irish-specific data from the Digital News Report Ireland 2021[19] found that WhatsApp (69%) was the most popular social platform for any use for Irish respondents, followed by Facebook (64%) and YouTube (61%) (see Figure 2 overleaf). Age variations were evident, with a range of social networks (e.g. Instagram, Twitter, Snapchat, TikTok and Reddit) less used by older age groups (see Figure 3 overleaf). However, in the case of the three major social media networks/platforms (i.e. WhatsApp, Facebook and YouTube), the pattern was less clear with usage

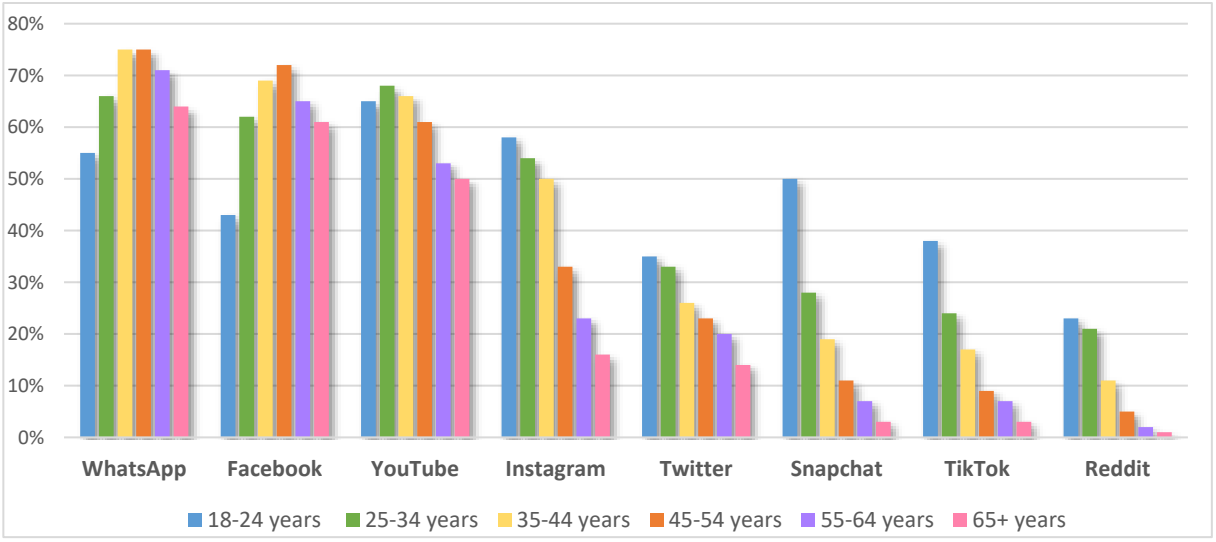
initially increasing with age, before then declining. Nonetheless, these three platforms were still popular with older age groups, reaching at least half of those aged 65+ years.[20]

Figure 2 Social media usage for any reason in the last week, % by year




*Data source: DCU FuJo & Broadcasting Authority of Ireland*[21]

Figure 3 Social media usage for any reason in the last week, % by age




*Data source: DCU FuJo & Broadcasting Authority of Ireland*[22]

# Online usage amongst children

In respect of online usage amongst Irish children, recently published data from Growing Up in Ireland[23] provided details on the online activities of 9-year-olds in Ireland. The vast majority (92%) reported having access to the internet, most commonly using a tablet (56%), smartphone (17%) or games console (12%). Moreover, the majority (69%) indicated that this device belonged to them. The three most popular online activities in the previous week were paying games alone (81%), watching YouTube videos (78%) and searching for information (55%).[24]

More broadly, the use of digital technologies was found to be prevalent amongst young people in the recently commissioned research from the National Advisory Council for Online Safety (NACOS), with 70% of children reporting at least daily online access. Smartphones were the most common device used by children for daily online access (70%), followed by tablet devices (30%), connected TVs (28%) and game consoles (24%). Age was a factor, with 37% of 9–10-year-olds reporting daily use with a smartphone, rising to 60% of 11–12-year-olds, 85% of 13–14-year-olds and 91% of 15–17-year-olds (see Table 2 below).[25]

Table 2 Daily use of smartphone device for online access, % by age

| Daily online usage | 9-10 years | 11-12 years | 13-14 years | 15-17 years | All |
|---|---|---|---|---|---|
| **A mobile/smartphone** | 37% | 60% | 85% | 91% | 70% |

*Data source: National Advisory Council for Online Safety*[26]

Ownership of smartphone devices was the primary means for going online, with 78% of children owning these devices. However, ownership of these devices rose sharply with age, with 41% of 9–10-year-olds reporting owning their own smartphone as compared to over 90% of those aged 13+ years. Nonetheless, younger children (9–10 years) reported relatively high levels of ownership overall: games console (47%), tablet devices (44%), and smartphone (41%).[27] The majority of children (93%) also reported owning a smart device[28] in the most recent Annual Report[29] of CyberSafeKids, with age variations once again evident. For instance, 89% of 8-year-olds indicated that they owned a smart device as compared to 97% of 12-year-olds. The most popular smart devices owned by children were tablets (54%), with games consoles (48%) and smartphones (47%) the next most frequently owned devices. Whilst tablet ownership remained relatively consistent across all age groups, ownership of smartphones increased with age. Approximately a quarter of 8-year-olds (24%) and 9-year-olds (25%) reported owning a smartphone as compared with over half of 11-year-olds (56%) and three-quarters of 12-year-olds (75%).[30]

## Nature of online activities

The most popular online activities reported by children, and undertaken at least daily, included watching video clips (56%), listening to music online (55%), communicating with family and friends (51%), playing online games (40%), visiting a social networking site (38%) and using the internet for schoolwork (34%). Gender differences were evident with older boys (13–17-year-olds) much more likely to report playing online games on a daily basis than older girls (13–17-year-olds) (56% versus 34%) – this was the most gendered activity. Older girls (13–17-year-olds) were more likely to report using the internet for schoolwork (51% versus 35%) and visiting a social networking site (62% versus 51%) as compared to older boys (13–17-year-olds).[31]

Specifically in respect of social media, the OCED found that social media apps were "overwhelmingly popular" with young people. Almost three-quarters of OECD students (73%)

participated in social networking sites (e.g. Facebook), whilst three-fifths (62%) chatted online daily or almost daily. However, distinct gender differences were evident. For instance, playing online games was more popular amongst boys than girls (56% versus 13%), whilst participating in social networking sites was more popular amongst girls (78% versus 69%).[32] In respect of Irish children, CyberSafeKids found that the majority (84%) of the 8- to 12-year-olds surveyed reported using social media and messaging apps[33], with just under a sixth (16%) indicating no such use. Whilst usage was more common amongst older children, nonetheless, the majority of younger children reported that they had a social media and/or instant messaging account in their own name (i.e. 81% of 8-year-olds and 75% of 9-year-olds).[34] Similarly, the majority of children in the NACOS research reported having at least one profile on a social networking, social media or gaming site. However, smaller proportions of younger children reported this as compared with CyberSafeKids, with usage rising from a quarter (26%) of 9–10-year-olds to nearly 90% of 15–17-year-olds (see Table 3 below).[35]

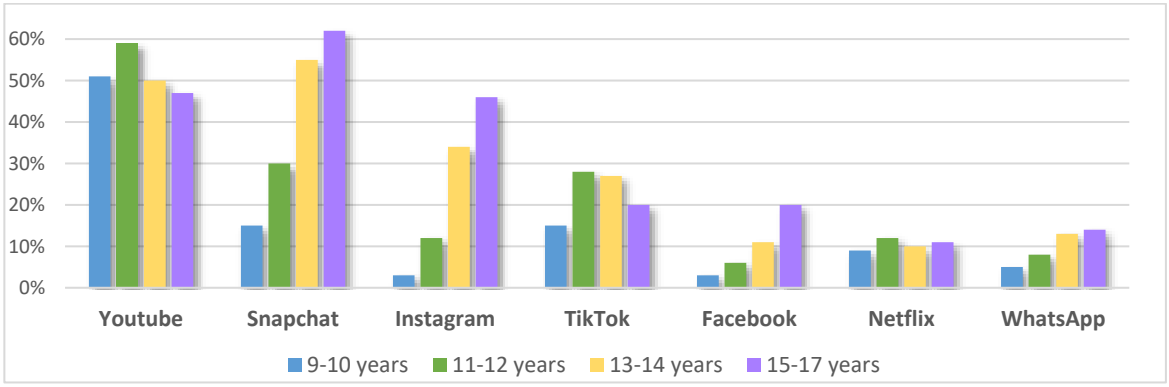
Table 3 Profile on a social networking, social media or gaming site, % by age

| | 9-10 years | 11-12 years | 13-14 years | 15-17 years | All |
|---|---|---|---|---|---|
| **Social media usage** | 26% | 45% | 73% | 87% | 62% |

*Data source: National Advisory Council for Online Safety*[36]

The most popular apps/services reported by children in the NACOS research included a range of popular social media, video sharing and instant messaging services (see Figure 4 below). Age differences were found, with social media apps (e.g. Snapchat, Instagram and Facebook) mentioned more frequently by older children (15–17-year-olds) than younger children. Notwithstanding this, underage use of social media platforms (defined by the research as below the minimum age for registering an account) was evident. Approximately a third of 11–12-year-olds reported using Snapchat (30%) and TikTok (28%), whilst 1 in 10 reported using Instagram (12%). In the case of younger children (9–11-year-olds), 18% reported using TikTok, 17% Snapchat and 6% WhatsApp.[37] Similarly, whilst the majority of 9-year-olds in *Growing Up in Ireland* reported not engaging with social media in the previous week, 11% reported that they did.[38]

Figure 4 Children's usage of (selected) online social media services, % by age




*Data source: National Advisory Council for Online Safety*[39]

Children's online activities have been found to also vary with gender. For instance, girls in the NACOS research more frequently listed social media platforms than boys: Snapchat (46% versus 40%), Instagram (28% versus 24%) and TikTok (31% versus 15%).[40] Similarly, CyberSafeKids's research found that whilst YouTube was popular with both boys and girls, more pronounced gender differences were found with other apps. For instance, both TikTok (54% versus 37%) and Snapchat (42% versus 29%) were more popular with girls, whilst Discord was more popular with

boys (22% versus 10%). In addition, whilst the majority (68%) of children indicated that they had never posted videos of themselves online, almost a third (32%) reported that they had – with girls more likely to report this than boys. Of those who posted videos of themselves online, TikTok (80%) was the most popular platform used to post videos, followed by Snapchat (30%), YouTube (16%) and Instagram (14%).[41]

The COVID-19 pandemic was associated with increased online usage among young people. For instance, data from a recent European Commission report presented data from the *Kids' Digital Lives during Covid-19 Times* (KiDiCoTi) research project[42] which found that 71% of Irish children who used a smartphone (56% of the entire sample) reported using their smartphone more often during the Spring 2020 lockdown period. Social media usage also increased, with 72% of social media users (53% of the entire sample) reporting using it more often than before the lockdown period, whilst 65% of children using messaging apps like WhatsApp or Telegram (48% of the entire sample) reported using these more often than before lockdown. No significant differences for age and gender were found in respect of this increased technology usage.[43]

## Frequency of online activity

On average, children in the NACOS research reported spending 2.1 hours online on weekdays and 3.4 hours online during weekends, with usage generally rising with age (see Table 4 below).[44]

Table 4 Children's report of online usage during weekdays and weekends, by age

| Estimated time spend online | 9-10 years | 11-12 years | 13-14 years | 15-17 years | All |
|---|---|---|---|---|---|
| **Weekdays (average hrs)** | 1.2 | 1.6 | 2.3 | 2.8 | 2.1 |
| **Weekends (average hrs)** | 2.3 | 2.9 | 3.8 | 4.2 | 3.4 |

*Data source: National Advisory Council for Online Safety*[45]

In terms of social media usage, Irish-specific data from 15-year-olds participating in PISA 2018[46] found that almost 4 in 10 students reported spending 1-3 hours on social media on a normal school day, with almost 1 in 6 reporting very high social media usage (described by the research as more than 5 hours on a normal school day) (see Table 5 below).[47]

Table 5 Frequency of time spend using digital devices on a normal school day (selected activity)

| | None | <1 hour | 1-3 hours | 3-5 hours | >5 hours |
|---|---|---|---|---|---|
| **Chatting or interacting with friends on social networking sites** | 4.6% | 19.2% | 38.5% | 21.5% | 16.3% |

*Data drawn from PISA 2018 as reported by the ERC*[48]

Gender differences were evident. On average across OECD countries, the percentage of girls (76.8%) reporting using digital devices every day or almost every day for participating in social media was larger (+10 percentage points points) than that of boys (66.8%), with girls also slightly more likely to report (+4.2) using digital devices frequently for chatting online (75.1% versus 70.9%).[49] This trend was also evident in the case of Irish students, with girls statistically more likely to chat online daily or almost daily (+8.5 percentage points), chat online several times a day (+10.6), and participate in social networks every day or almost every day (+11.2). By contrast, boys were significantly more likely than girls to play collaborative online games daily or almost daily (+48.6 percentage points) (see Table 6 overleaf).[50]

Table 6 Usage digital devices by Irish students for selected activities

| | Girls | Boys | Gender differences (% dif girls – boys)** |
|---|---|---|---|
| **Chatting online** (every day or almost every day) | 91.5% | 83.0% | +8.5 * |
| **Chatting online (**several times a day) | 90.4% | 79.8% | +10.6* |
| **Participating in social networks** (every day or almost every day) | 82.5% | 71.4% | +11.2* |
| **Playing collaborative online games** (every day or almost every day) | 5.6% | 54.3% | -48.6* |

*denotes significant gender difference
**please note that values are potentially impacted by data rounding

*Data drawn from PISA 2018*[51]

## Excessive internet usage

Children in the NACOS research were asked about how often various features associated with excessive internet use had happened to them in the previous year. The most common form of excessive internet use was spending less time with family/friends or less time doing schoolwork than they should have on account of time spent online, with 45% of children reporting this. Age was a key feature of this, with approximately a fifth of younger children (9–12-year-olds) reporting this as compared to over a third (36%) of older children (13–17-year-olds). Another feature, conflict with family/friends on account of the amount of time spent on the internet was reported by almost 1 in 4 children (38%).[52]

International comparative data in respect of excessive internet usage is available from the most recent Health Behaviour in School-Aged Children (HBSC) survey[53], whereby approximately a third of adolescents were classed as intensive users of electronic media communication. Prevalence in respect of this ranged from 12% of 11-year-old boys in Azerbaijan to 63% of 15-year-old girls in Italy.[54] In the case of Irish young people, whilst Irish 11-year-olds reported lower prevalence compared to the HBSC average, Irish 13- and 15-year-olds reported higher prevalence of intensive electronic media communication. Overall, 15-year-old girls reported the highest prevalence rates of intensive electronic communication amongst Irish participants, with a prevalence rate just below the high for 15-year-old Italian girls referenced above (61% versus 63%) (see Table 7 below).[55]

Table 7 Intensive electronic media communication: Ireland vs. HBSC average

| | Ireland | HBSC average |
|---|---|---|
| **Intensive electronic media communication with friends and others**[56] | 24% 11-year-old girls<br>24% 11-year-old boys<br><br>47% 13-year-old girls*<br>33% 13-year-old boys*<br><br>61% 15-year-old girls*<br>39% 15-year-old boys* | 28% 11-year-old girls<br>27% 11-year-old boys<br><br>40% 13-year-old girls<br>31% 13-year-old boys<br><br>46% 15-year-old girls<br>36% 15-year-old boys |

*denotes significant gender difference at national level

*Data drawn from WHO*[57]

In respect of intensive electronic media communication specifically with close friends, the figures reported for Irish girls were notably higher than the HBSC averages at both 13 years of age (41% versus 34%) and 15 years of age (56% versus 40%). Concerning intensive electronic communication with their larger friendship groups, Irish 15-year-old girls once again reported a notable higher prevalence than the HBSC average (29% versus 14%).[58]

Table 8 Intensive electronic media communication: Ireland vs. HBSC average

| | Ireland | HBSC average |
|---|---|---|
| **Intensive electronic media communication with close friends** (i.e. online contact almost all the time with close friends) | 20% 11-year-old girls<br>21% 11-year-old boys<br><br>41% 13-year-old girls<br>28% 13-year-old boys<br><br>56% 15-year-old girls<br>35% 15-year-old boys | 21% 11-year-old girls<br>21% 11-year-old boys<br><br>34% 13-year-old girls<br>26% 13-year-old boys<br><br>40% 15-year-old girls<br>31% 15-year-old boys |
| **Intensive electronic media communication with larger friendship group** (i.e. online contact almost all the time with friends from a larger friendship group) | 8% 11-year-old girls<br>14% 11-year-old boys<br><br>18% 13-year-old girls<br>15% 13-year-old boys<br><br>29% 15-year-old girls<br>20% 15-year-old boys | 12% 11-year-old girls<br>15% 11-year-old boys<br><br>14% 13-year-old girls<br>16% 13-year-old boys<br><br>14% 15-year-old girls<br>16% 15-year-old boys |

*Data drawn from WHO[59]*

Overall, 7% of adolescents in the HBSC survey were categorised as 'problematic social media users'[60], with prevalence ranging from 1% among 11-year-old girls in Iceland to 24% of 11-year-old boys in Azerbaijan. In respect of 15-year-olds, Ireland was cited as having amongst the highest levels of problematic usage.[61] Gender differences, whilst small, were found to increase with age across the HBSC sample, with problematic social media usage among 13- and 15-year-olds more common among girls. Notably, 15-year-old girls reported the highest levels of problematic usage, with prevalence increasing from 5% at 11 years to 10% at 15 years. By comparison, prevalence rates remained relatively stable amongst males, increasing from 6% at 11 years to 7% at 15 years.[62] As can be seen from Table 9 below, 11-year-old boys in Ireland were significantly more likely than 11-year-old girls to report problematic social media usage (8% versus 5%). However, older girls in Ireland were more likely than age-matched boys and the HBSC average to report problematic social media use. Compared to the HBSC average, increased prevalence with age amongst boys in Ireland was also evident, increasing from 8% amongst 11-year-olds (compared to 6%) to 13% amongst 15-year-olds (compared to 7%).[63]

Table 9 Problematic social media use: Ireland vs. HBSC average

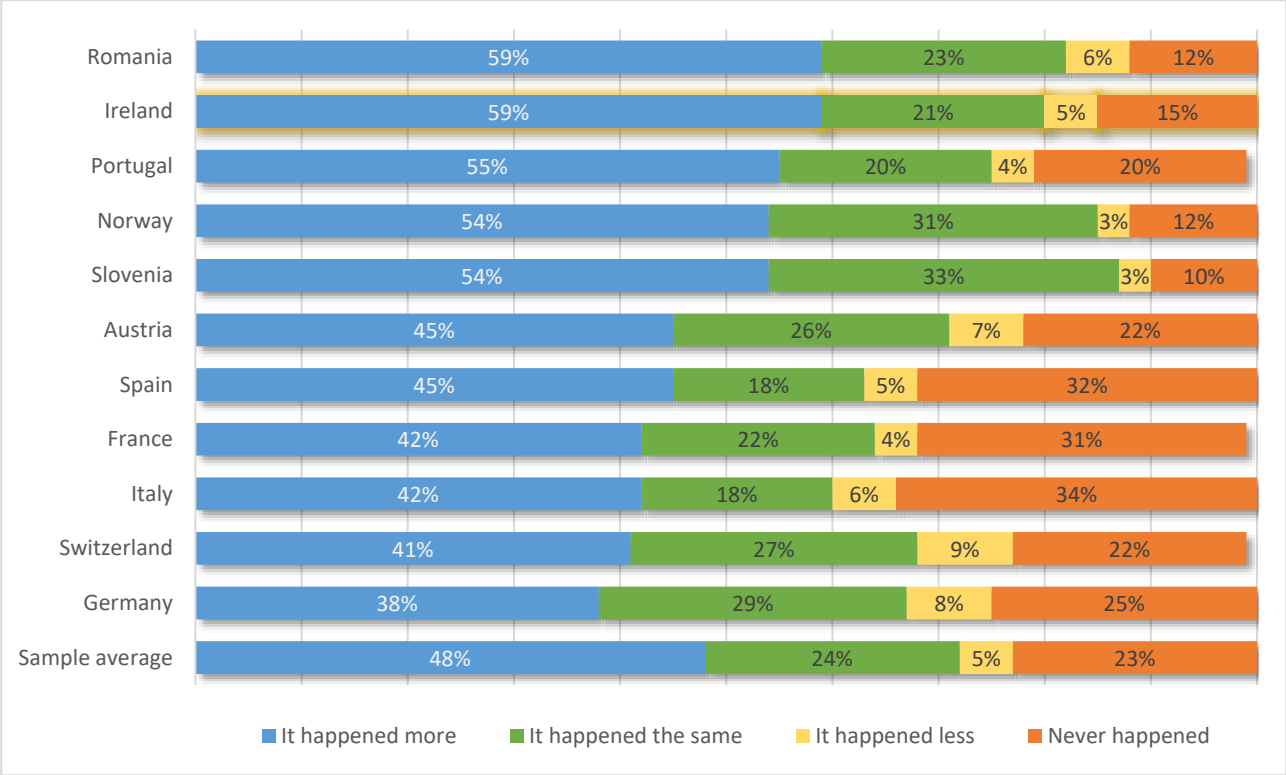
| | Ireland | HBSC average |
|---|---|---|
| **Problematic social media use** | 5% 11-year-old girls*<br>8% 11-year-old boys*<br><br>15% 13-year-old girls*<br>10% 13-year-old boys*<br><br>17% 15-year-old girls<br>13% 15-year-old boys | 5% 11-year-old girls<br>6% 11-year-old boys<br><br>9% 13-year-old girls<br>7% 13-year-old boys<br><br>10% 15-year-old girls<br>7% 15-year-old-boys |

*denotes significant gender difference at national level (at $p < 0.05$)

*Data drawn from WHO[64]*

Excessive internet usage was also reported by children in the KiDiCoTi research project, with nearly half reporting spending too much time online during the COVID-19 lockdown. This ranged from a low of 38% in Germany to highs of 59% in Romania and Ireland (see Figure 5 overleaf).[65]

Figure 5 Children's feelings of excessive online use during the COVID-19 lockdown, % by country

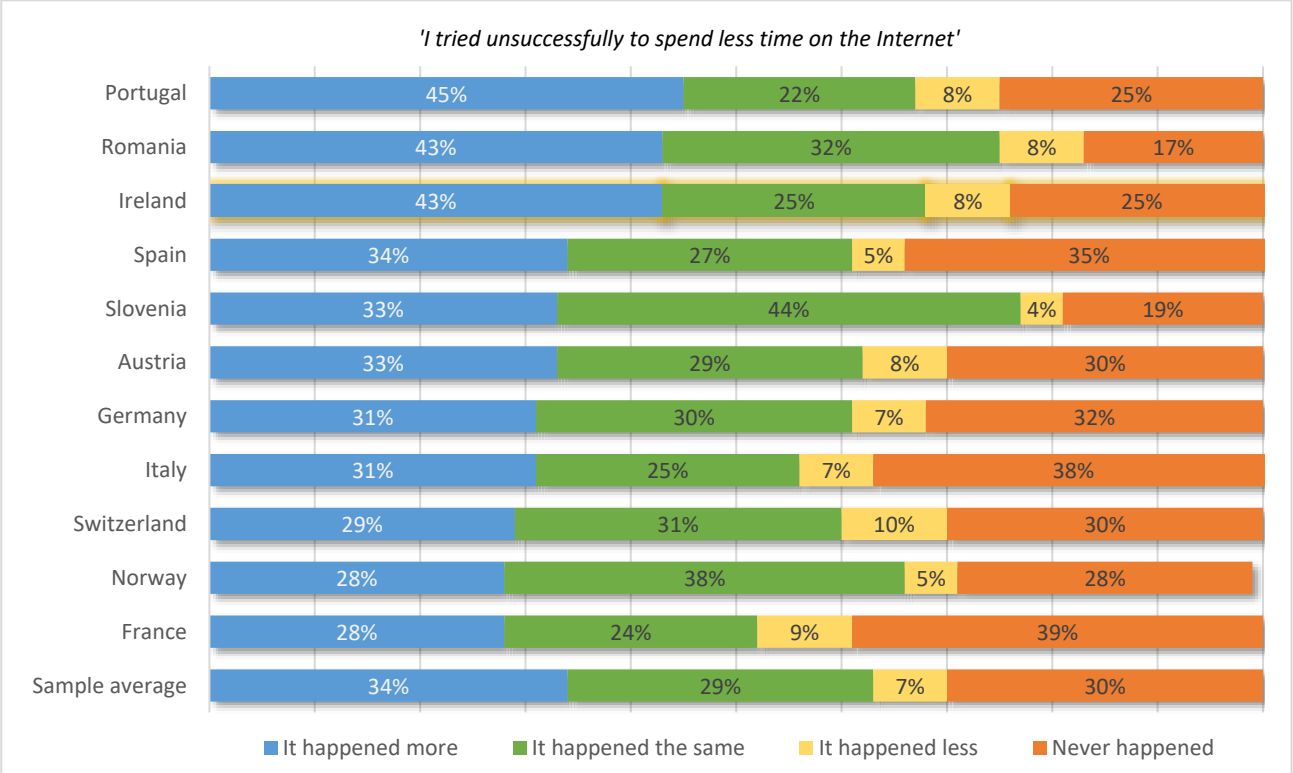



*Values may not add up to 100% due to rounding.

*Data source: Joint Research Centre, European Commission*[66]

The highest proportions of children struggling more to reduce internet usage during the lockdown were found in Portugal (45%), Romania (43%) and Ireland (43%) (see Figure 6 below).[67]

Figure 6 Children's attempts to reduce time spend online during the COVID-19 lockdown, % by country




*Values may not add up to 100% due to rounding.

*Data source: Joint Research Centre, European Commission*[68]

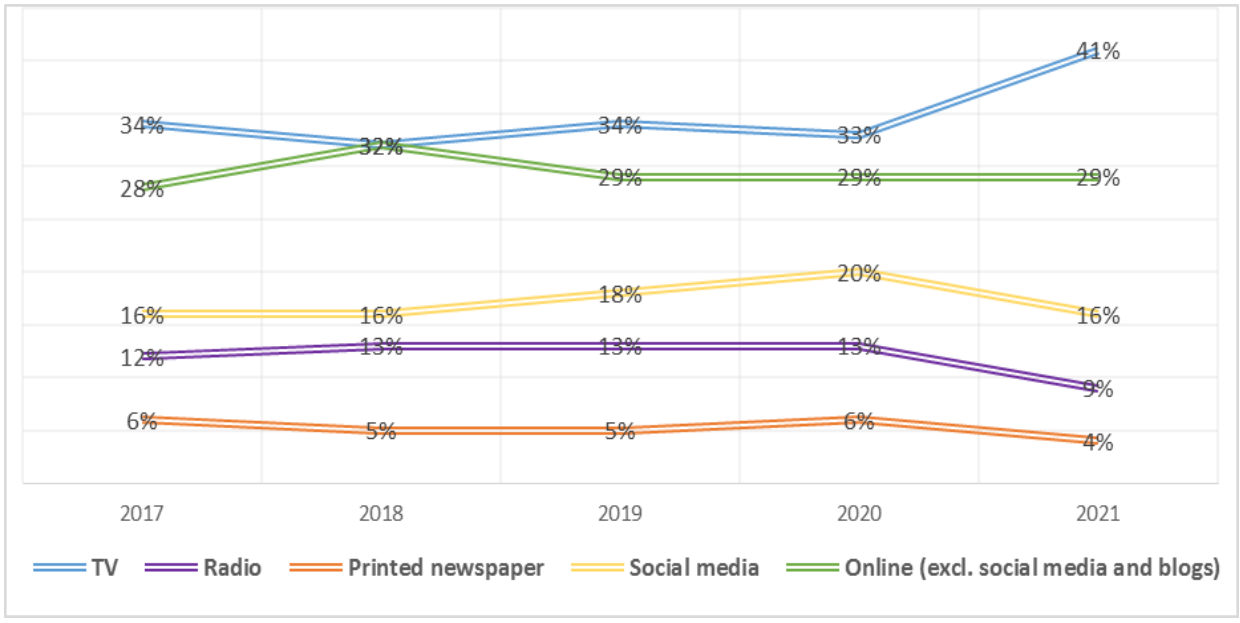
Approximately a third of children (34%) in the NACOS research also reported both trying unsuccessfully to spend less time online and feeling bothered when they could not be online. Girls and older children were more likely to report experiencing multiple features of excessive internet use.[69]

# Online consumption of news and information

The Digital News Report Ireland 2021 found that whilst television was the most popular (main) source of news in Ireland (+8 percentage points since 2020 to 41%, a rise attributed to the COVID-19 pandemic[70]), the next most popular sources of news were online (excl. social media and blogs) at 29% (unchanged) and social media at 16% (-4). These figures were broadly similar to the EU average figures: TV (45%), online (excl. social media and blogs) (29%), and social media (15%). Of note is that whilst social media as a main source of news decreased in Ireland (-4 to 16%), it remained the same in the UK (14%) and the EU on average (15%), whilst increasing 2 percentage points in North America to 24%.[71]

See Figure 7 below for the main sources of news for Irish respondents from 2017-2021.

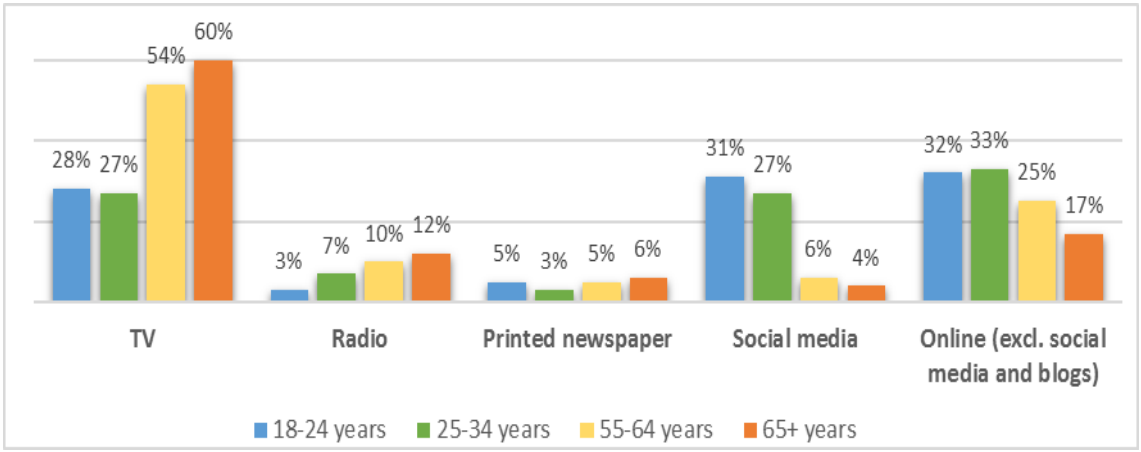
Figure 7 Main sources of news, % by year




*Data source: DCU FuJo & Broadcasting Authority of Ireland*[72]

However, there was variance by age (see Figure 8 overleaf). Whilst 31% of those aged 18-24 years cited social media as their main source of news, this compared to 6% of those aged 55-64 years and 4% of those aged 65+ years. In terms of the online sources (excl. social media and blogs), this ranged from approximately a third of those aged 18-34 years to less than a fifth (17%) of those aged 65+ years. Age variations were also evident in respect of how these sources of news have changed over time. For instance, whilst there was an increase across all age groups reporting TV as their main source, 18–24-year-olds recorded the largest increase compared to the previous year (+13 percentage points on 2020). Conversely, social media (the previous most popular main source of news for the 18–24 age cohort) recorded its largest drop in this age group (-15 on 2020).[73]

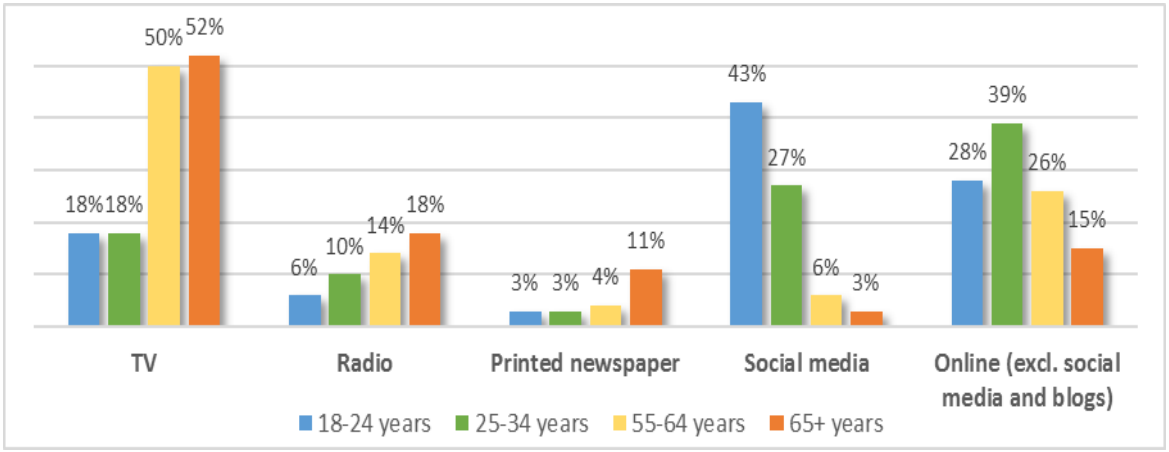
Figure 8 Main Sources of news, % by selected age groups (2021)




*Data source: DCU FuJo & Broadcasting Authority of Ireland*[74]

However, given the potential for figures to have been skewed in 2020 and 2021 due to the COVID-19 pandemic, Figure 9 below presents the most recent pre-pandemic figures for comparative purposes, which shows the relevant figures for TV (18%) and social media (43%) in 2019.[75]

Figure 9 Main source of news, % by selected age group (2019)




*Data source: DCU FuJo & Broadcasting Authority of Ireland*[76]

In respect of social media sources of news consumption, the Digital News Report Ireland 2021 found that Facebook declined in popularity for news consumption compared to the previous year (-4 percentage points), though it remained the most popular social media source for news purposes (35%). Other social media platforms also declined in popularity as news sources compared to the previous year, with YouTube (-4), Twitter (-1), and Snapchat (-2) all declining.[78] Recently published research[79] from the Broadcasting Authority of Ireland examining media consumption in Ireland found that incomes levels and educational background played in a role in trust in news on social media. For instance, low-income earners in Ireland appeared to have higher trust in news on social media (25%) than medium- or high-income earners (19% and 15% respectively). Similarly, those with low levels of education were less likely than those with medium/high levels of education to report a lack of trust in news on social media (41% versus 49% and

> Overall in Ireland, those who are less well educated, and from the lower income category, are more likely to be trusting of news material they see on social media. Those who are higher educated and from higher income appear to be more sceptical.
>
> *Reproduced from Broadcasting Authority of Ireland*[77]

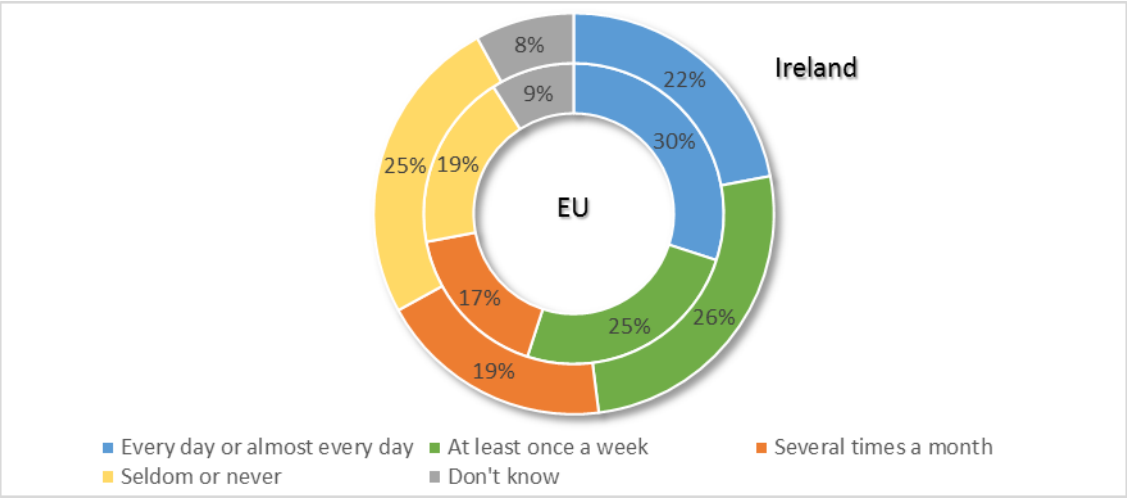
57% respectively). However, gender differences in respect of trust in news on social media were not evident in this research. Approximately half of both men and women indicated that they tended to disagree/strongly disagree that news on social media can be trusted most of the time, with less than a fifth indicating that they tended to agree/strongly agree with this.[80]

## Trust and disinformation

A majority of Europeans in the Standard Eurobarometer 94 survey reported tending to trust radio (58%) and television (51%). By contrast, a minority trusted the internet, although trust levels increased since the previous survey. Just over a third of Europeans (35%, +3 percentage points since 2019) reported that they "tend to trust" the internet, with just over half (54%, -1 since 2019) stating that they 'tend not to trust' this medium. In the case of Irish participants, less than a third (27%) 'tend to trust' the internet (-5 since 2019), with over 7 in 10 indicating that they 'tend not to trust' the internet (+15 since 2019). Europeans reported least trust in online social networks, with just under a fifth (19%, -1 since 2019) reporting that they 'tend to trust' these and a little over two-thirds reporting that they 'tend not to trust' them (+3 since 2019). Lower proportions of Irish respondents as compared to the EU average reported that they 'tend to trust' online social networks (10% versus 19%), with a "particularly marked" fall noted in a number of European countries, including Ireland (-14). Conversely, a larger proportion of Irish participants (90%, +25 since 2019) reported that they 'tend not to trust' online social networks as compared to the EU average (68%, +3 since 2019).[81]

In respect of 'fake news', the majority of respondents to the recent Special Eurobarometer 503 survey on the impact of digitalisation on daily lives reported encountering this at least once a week, with 30% encountering it daily/almost daily and 25% encountering it at least once a week. Younger respondents and those with higher levels of education, as well as more frequent internet users, were more likely to come across 'fake news' at least once a week. Across the 16 countries surveyed, at least half of respondents indicated that they had encountered 'fake news' at least once a week, with at least two-thirds reporting this in Malta (73%), the UK (72%) and France and Spain (both 66%). Almost half of Irish respondents (48%) reported encountering 'fake news' at least once a week, with 22% encountering it daily/almost daily and 26% at least once a week. However, a quarter of Irish respondents indicated that they seldom or never encounter 'fake news' as compared to just under a fifth of EU respondents more generally (see Figure 10 below).[82]

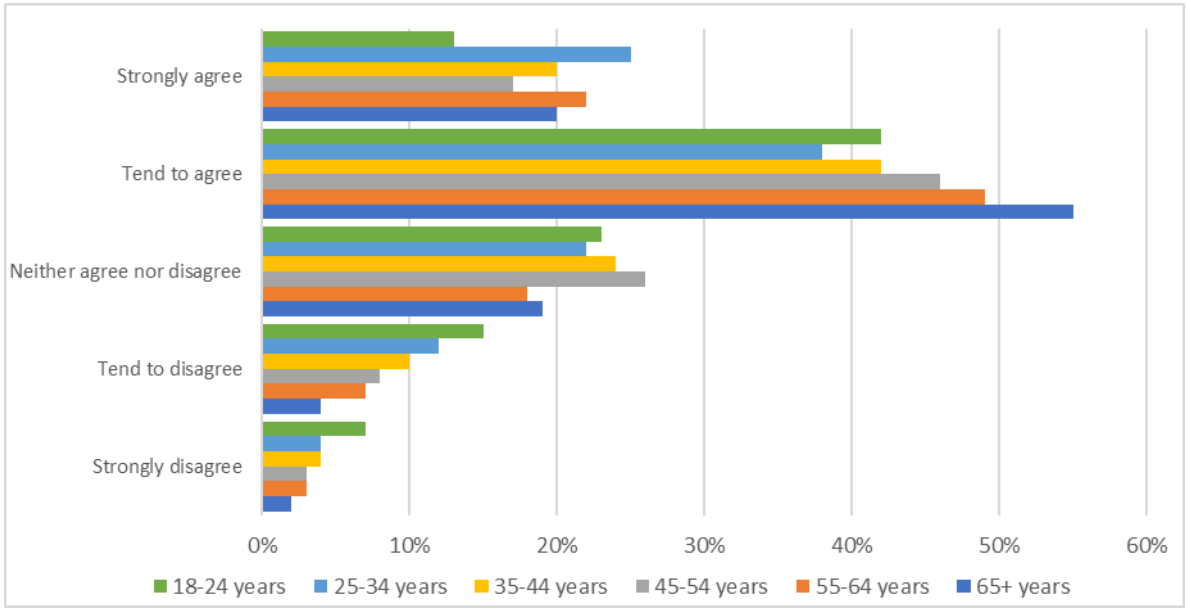
Figure 10 Frequency of encountering 'fake news' (Ireland, outer pie, and EU28, inner pie)




*Data drawn from European Commission*[83]

Turning to trust in respect of sources of news, the majority of adults (61%) in the NACOS research reported that they trust most of the news that they choose to read, with the highest levels of trust expressed by those aged 35-44 years (79%). By contrast, lower levels of trust were expressed in social media, with just 25% of respondents indicating that social media does a good job of helping users distinguish fact from friction. Whilst low levels were reported across all age categories, the lowest levels were reported by those aged 55-64 years.[84] Irish respondents in the Digital News Report also indicated distrust of news that they see on social media, with 51% tending to disagree or strongly disagreeing that news on social media can be trusted most of the time. By contrast, just under a fifth of respondents (19%) indicated that they tended to agree or strongly agreed that news on social media can be trusted most of the time. Age differences were evident, with 75% of those in the 65+ age group reporting concern with what is real and what is fake on the internet (i.e. 'tend to agree' or 'strongly agree') as compared to 55% of 18-24-year-olds (see Figure 11 below).[85]

Figure 11 Level of agreement with the statement 'Thinking about online news, I am concerned about what is real and what is fake on the internet', % by age group (2021)




*Data source: DCU FuJo & Broadcasting Authority of Ireland*[86]

Information in respect of COVID-19 was the most frequent topic of false or misleading information encountered by Irish respondents in the week prior to the survey, with 38% singling out Facebook as the main platform of concern, as compared to other platforms such as news websites/apps (12%), messaging apps (11%), or Twitter (11%). Younger people were more likely to report seeing false or misleading information about COVID-19 in the week prior to the survey, with over half of those aged under 45 years reporting this (53%, 18-24 years; 63%, 25-34 years; and 55%, 35-44 years). By contrast, just over a third (35%) of those aged 65+ years reported seeing false or misleading information about COVID-19. These age differences were attributed to the fact that younger age groups were more likely to rely on social media as sources of news.[87]

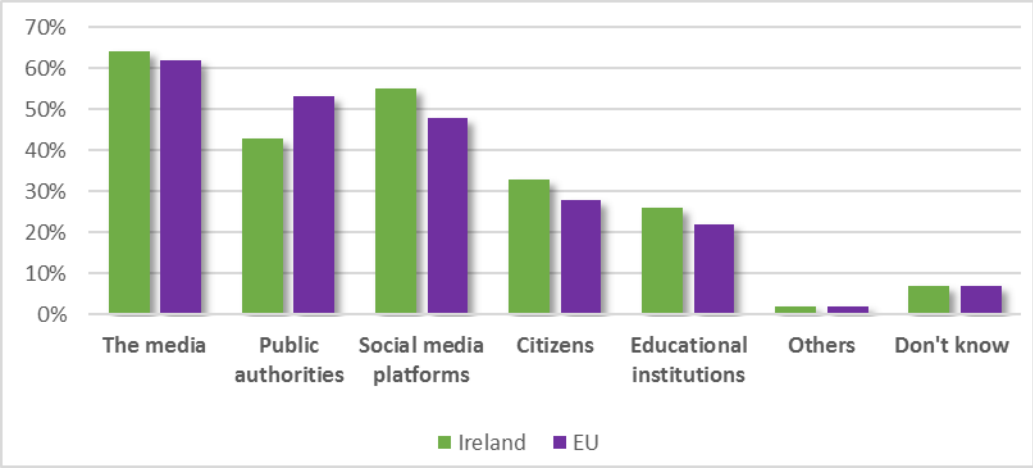
As part of the KiDiCoTi research project, children were asked if they had encountered online information that they perceived to be untrue, as well as how such experiences changed as compared to the period prior to the COVID-19 lockdown. The highest proportions of children reporting never having encountered false information were in France (40%) and Germany (35%), whilst just 12% of children in Norway reported this. In the case of Ireland, less than a fifth (18%) of children reported never having encountered false information (second lowest share of all

participating countries and below sample average of 25%). However, almost half (48%) of Irish children reported that they had encountered more disinformation during the COVID-19 lockdown – the highest proportion of all participating countries (sample average, 37%).[88]

## Measures to combat disinformation / 'fake news'

In the recent Special Eurobarometer 503 survey, respondents were asked about where responsibility lies for combating 'fake news' or disinformation (see Figure 12 below). The majority of respondents indicated that responsibility rests with the media (62%) and public authorities (53%), with just under half of respondents indicating that responsibility lies with social media companies (48%). In addition, more than a quarter of respondents believed that the citizens themselves should be responsible. In the case of Irish respondents, 64% believed that the media has responsibility for combatting 'fake news', with social media platforms (55%) and public authorities (43%) also deemed to have responsibility.[89]

Figure 12 Responsibility for combatting 'fake news' or disinformation, comparison between Ireland and EU (multiple answers possible)




*Data drawn from European Commission*[90]

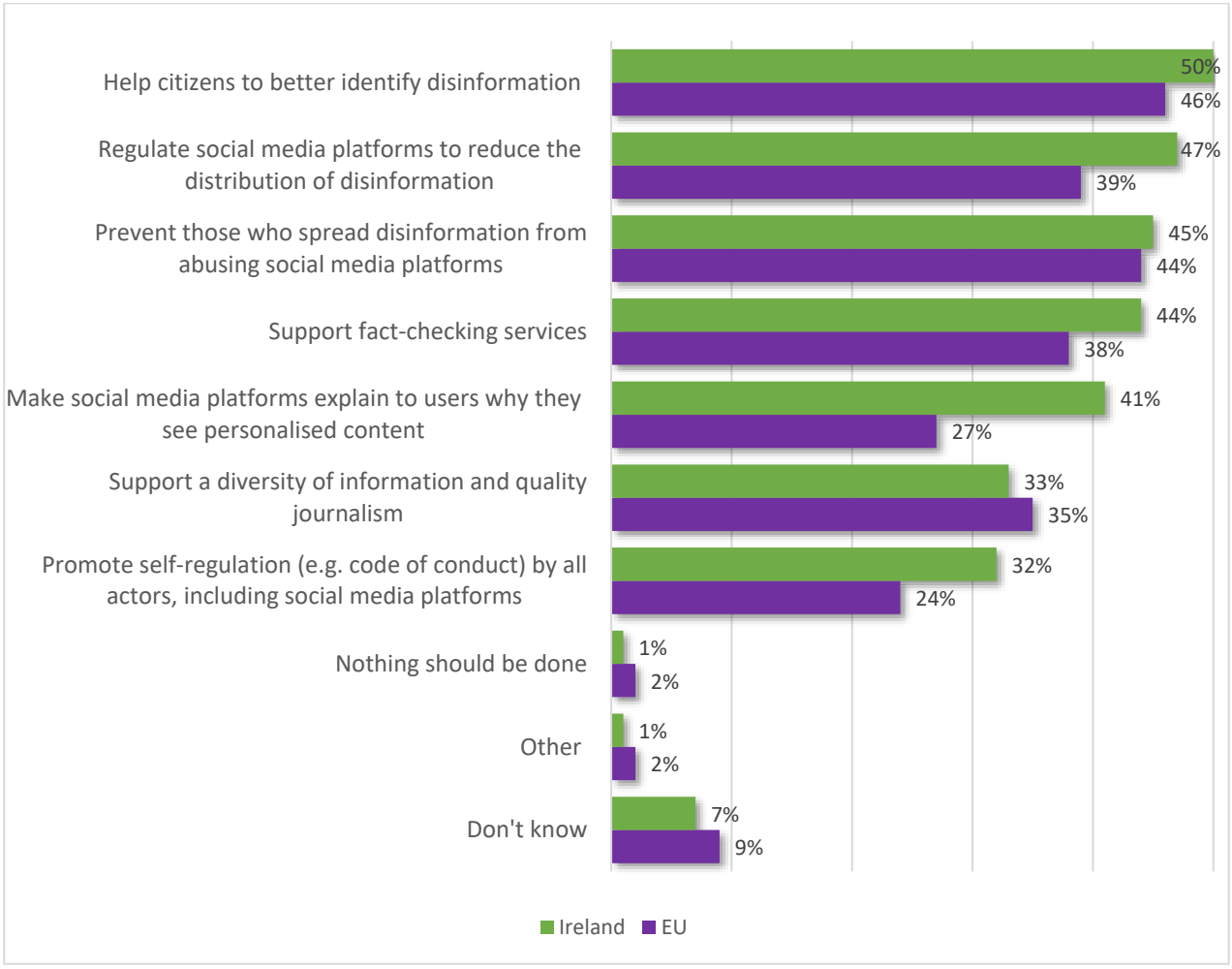
Whilst in 19 countries, at least half of respondents believed that public authorities should have responsibility for combatting 'fake news', this ranged from a high of 73% in Greece to lows of 41% in Czechia and Romania – with Ireland the next lowest at 43%. Nevertheless, this was the third most frequently mentioned category by Irish respondents.[91]

In terms of measures to address 'fake news', the most frequently mentioned measures that EU respondents stated that public authorities should take were 'help citizens to better identify disinformation' (46%), followed by 'prevent those who spread disinformation from abusing social media platform services' (44%). Nearly 4 in 10 believed that regulating social media platforms and supporting fact-checking services should be among the measures taken to address 'fake news'. The vast majority (87%) of EU respondents mentioned at least one measure that they believe public authorities should take, with just 2% believing that nothing should be done.[92]

In the case of Irish respondents, the most frequently referenced action that public authorities should take was 'help citizens to better identify disinformation' (50% versus EU average of 46%). This was followed by 'regulate social media platforms to reduce the distribution of disinformation' (47% versus EU average of 39%) and 'prevent those who spread disinformation from abusing social media platform services' (45% versus EU average of 44%). Just 1% of Irish respondents indicated that 'nothing should be done' by public authorities to limit the spread of disinformation or

'fake news'.[93] The full range of measures selected by Irish respondents, with comparative EU data, can be found in Figure 13 below.

Figure 13 Measures that should be taken by public authorities to address 'fake news' or disinformation, comparison between Ireland and EU (multiple answers possible)




*Data drawn from European Commission*[94]

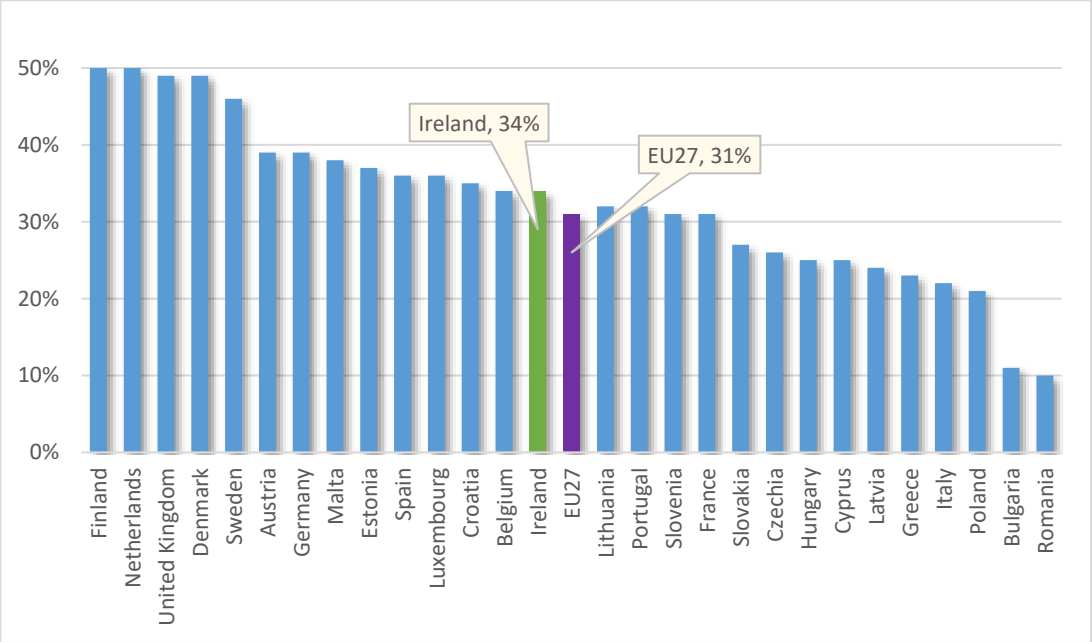
# Digital skills

"**Digital skills** are the backbone of the digital society. They enable people to use digital services and engage in basic activities online, especially when mobility is restricted. The COVID-19 crisis has shown that adequate digital skills empowering citizens to access information and services are crucial for the whole population … having an internet connection is not sufficient; it must be paired with the appropriate skills to take advantage of the digital society. Digital skills range from basic usage skills that enable individuals to take part in the digital society and consume digital goods and services, to advanced skills that empower the workforce to develop new digital goods and services."

*European Commission*[95]

Based on the DESI 2021, the proportion of Irish people with above basic overall digital skills[96] is similar to the EU27 average (34% versus 31%)[97] – and compares to highs of 50% in Finland and the Netherlands and a low of 10% in Romania (see Figure 14 overleaf).

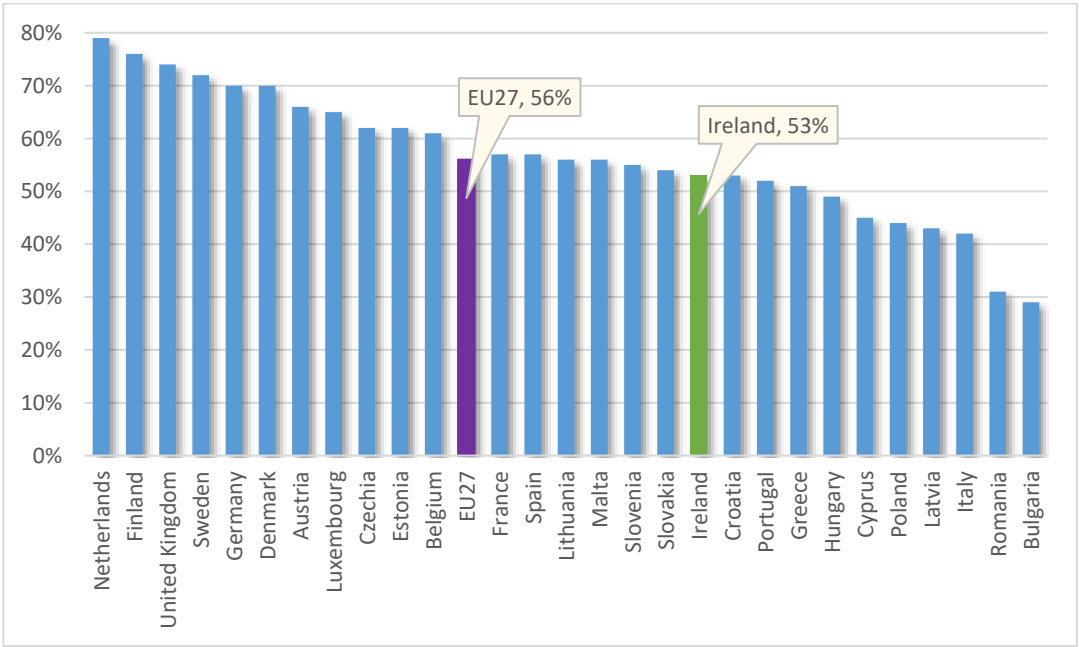
Figure 14 Above basic overall digital skills, all individuals (2019) (selected countries)




*Data drawn from Eurostat*[98]

By contrast, the proportion of people with at least basic skills in Ireland is below the EU27 average (53% versus 56%)[99] – and compares to a high of 79% in the Netherlands and a low of 29% in Bulgaria (see Figure 15 below).[100] However, the proportion of Irish people with at least basic digital skills increased from 48% to 53% from DESI 2018 to DESI 2021.[101]

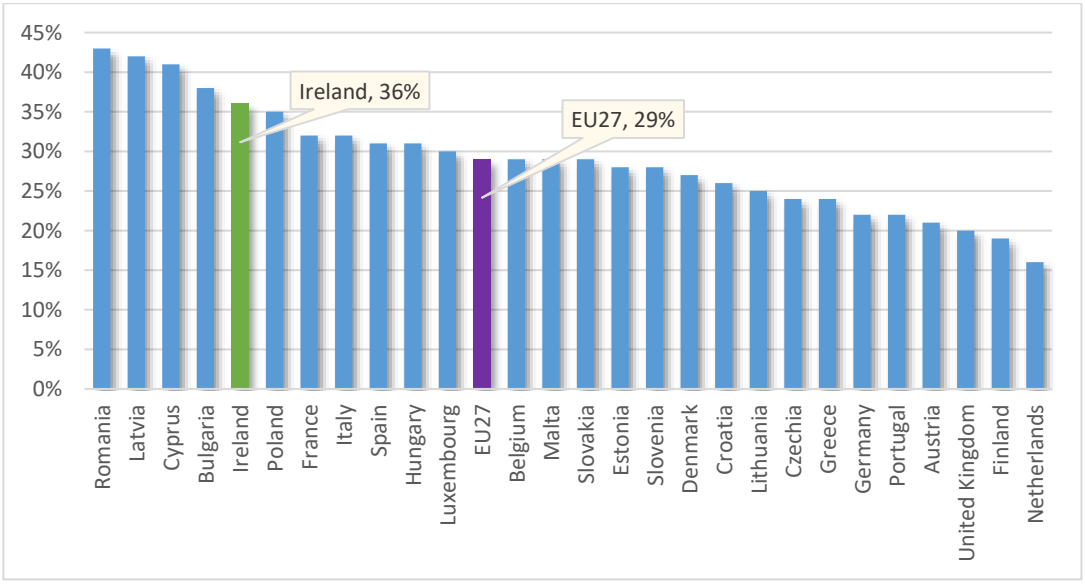
Figure 15 At least basic digital skills, all individuals (2019) (selected countries)




*Data drawn from Eurostat*[102]

Turning to Figure 16 overleaf, Ireland has higher proportion of those with low overall digital skills than the EU average (36% versus 29%) – and compares to a high of 43% in Romania and a low of 16% in the Netherlands.[103]

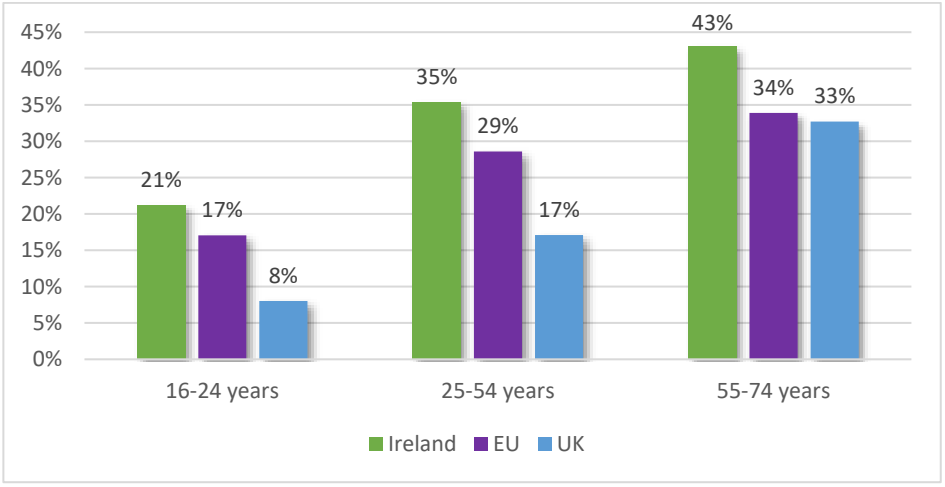
Figure 16 Low overall digital skills, all individuals (2019) (selected countries)




*Data drawn from Eurostat*[104]

The Consultancy Paper for the Adult Literacy, Numeracy and Digital Literacy Strategy noted that those with low levels of formal education, older people and those of lower incomes are "heavily overrepresented" amongst those scoring lowest on measures of digital skills.[105] In respect of age, Eurostat data shows that there were higher proportions of Irish people with low overall digital skills compared to the EU average and the UK across all age groups (see Figure 17 below). For instance, 43% of Irish people aged 55-74 years had a low level of digital skills as compared to the EU average of 34% (corresponding UK figure, 33%).[106]

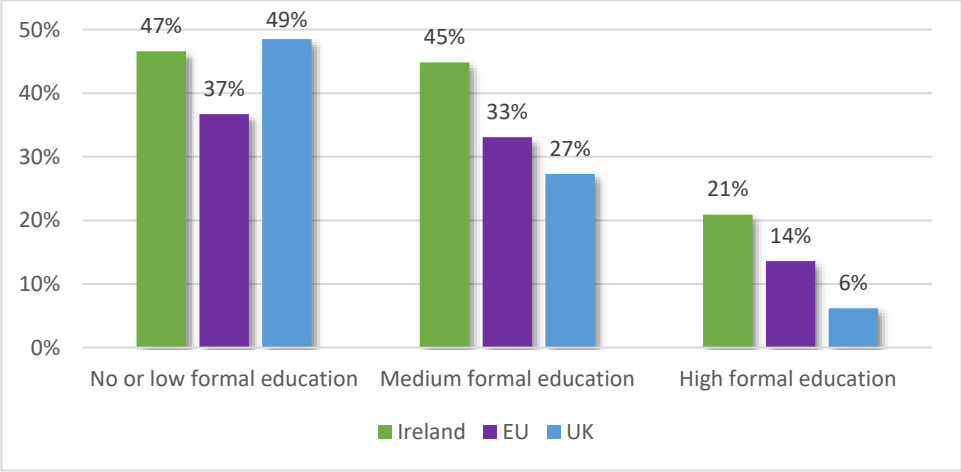
Figure 17 Low level of digital skills, % by age




*Data drawn from European Commission*[107]

In respect of education levels, similar levels of those with no or low levels of formal education in Ireland and UK had low overall digital skills (47% and 49% respectively) – both higher than the equivalent EU average figure (37%) (see Figure 18 overleaf). However, a higher proportion of those with both a medium and a high level of formal education had low overall digital skills in Ireland (45% and 21% respectively) as compared to EU average (33% and 14% respectively) and the UK (27% and 6% respectively).[108]

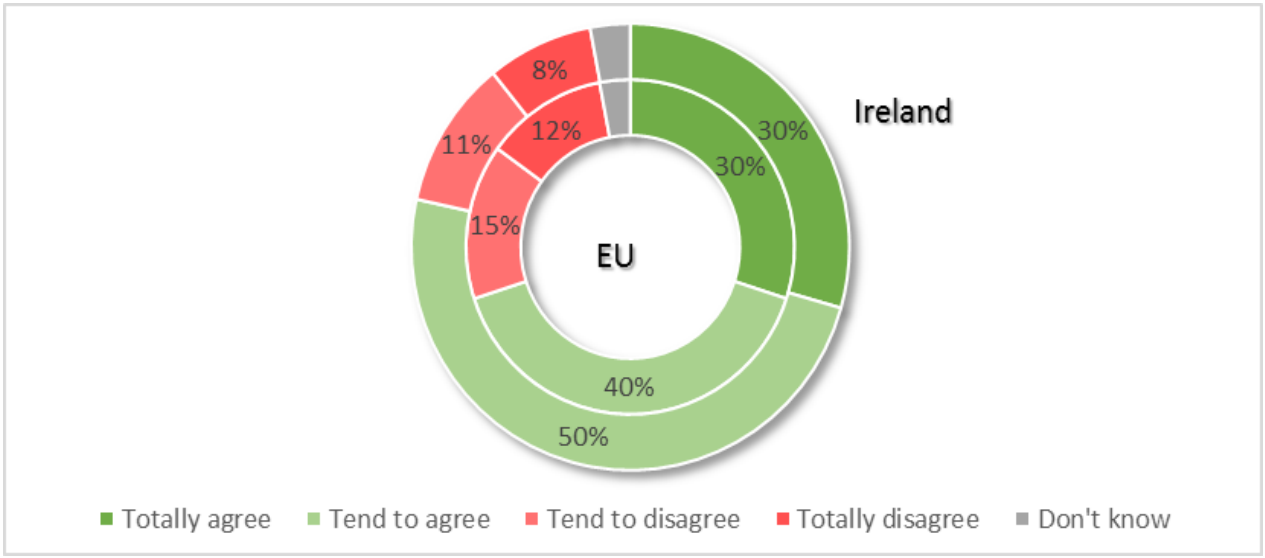
Figure 18 Low level of digital skills, % by educational level




*Data drawn from European Commission*[109]

Notwithstanding this, the vast majority of Irish respondents (80%)[110] in the most recent Special Eurobarometer survey indicated that they consider themselves to be sufficiently skilled in the use of digital technologies in their daily lives (30% 'totally agree'; 50% 'tend to agree') (see Figure 19 below). Just under a fifth (19%) of Irish respondents reported that they do not have sufficient digital skills in their daily life, as compared to just over a quarter (27%) of EU respondents as a whole. Whilst the proportion of respondents who considered themselves to be sufficiently skilled in the use of digital technologies in their daily lives declined in 19 countries as compared to 2017, this proportion remained stable in Ireland (= 80%). However, the proportion of Irish respondents who totally agreed with this sentiment declined from 47% in 2017 to 30% in 2019. Conversely, the proportion who tended to agree that they were sufficiently skilled increased from 33% to 50% during this period.[111]

Figure 19 Level of agreement with the statement: 'You consider yourself to be sufficiently skilled in the use of digital technologies in your daily life', comparison between Ireland (outer pie) and EU28 (inner pie)




*Data drawn from European Commission*[112]

Almost two-thirds (65%) of Europeans in the recent Standard Eurobarometer 94 agreed with the statement that it is easy for them to identify news or information that they believe misrepresents reality or is fake (+7 percentage points on 2019). However, 3 in 10 Europeans tended to disagree or totally disagreed that they can easily identify such misinformation. In the case of Irish respondents, 8 in 10 Irish respondents agreed that that it was easy for them to identify such misinformation (+17 since 2019), with a fifth (20%) indicating that they did not find this easy (-9 since 2019).[113]

Children in the NACOS research reported high levels of digital skills, scoring an average of 7.3 out of 10 on the Internet Skills Scale, with levels increasing from an average of 5.1 for 9–10-year-olds to 8.7 for 15–17-year-olds (see Table 10 below). However, gender differences were not a feature of digital skills, with scores balanced across both genders with an average of 7.4 and 7.3 respectively for boys and girls.[114]

Table 10 Digital skills of children and young people

| | 9-10 years | 11-12 years | 13-14 years | 15-17 years | All |
|---|---|---|---|---|---|
| **Overall digital skills** | 5.1 | 6.6 | 8.2 | 8.7 | 7.3 |

*Data source: National Advisory Council for Online Safety*[115]

In respect of young people and the learning of digital skills in schools, data from PISA 2018 found that Irish students were more likely than the OECD average to report learning about the consequences of making information publicly available on social media sites (83.1% versus 75.8%). In addition, Irish students were slightly more likely than the OECD average to report learning how to detect whether the information is subjective or biased (59.1% versus 54.5%). However, Irish students were less likely to report learning how to decide whether to trust information from the internet than the OECD average (58.2% versus 69.3%).[116] Research with Irish children conducted during the COVID-19 lockdown in Spring 2020 found that the majority of children (73%) reported that they know which information they should/should not share online. Of note also is that almost half (52%) stated that they know more about 'the Internet' than their parent/guardian.[117]

Of relevance here is a UNICEF Office for Research's rapid review of evidence in respect of children's online engagement, which found that better digital skills were associated with more online opportunities – however, such skills were also associated with more online risks. This rapid review highlighted that there is little discussion/evidence concerning how particular skills might be related to higher/lower exposures to particular types of risks. Further, it identified that there is little literature examining how offline skills (e.g. critical thinking or social skills) might mediate children's experience of online situations, as well as little evidence on how children might build resilience. Finally, the review highlighted that the lack of longitudinal data in respect of children's digital skills means that knowledge gaps exist (e.g. whether children acquiring better digital skills at a younger age positively impacts their internet usage outcomes and, if so, whether these effects persist over time).[118]

Further, the OECD observed that there is "increasing recognition" of the importance of educating children about disinformation to enable them to distinguish between fact and false or misleading material online. Nonetheless, the OECD contended that fostering digital literacy with a view to enhancing the capacity of young people to identify such online material does not negate the role of those creating and hosting such disinformation in tackling its spread. In this context, the OECD asserted that:

> ..it is important to ensure that a focus on ensuring strong digital literacy does not result in the responsibility to mitigate against this risk being placed squarely on the shoulders of children.[119]

It is envisaged that a future **L&RS Note** in this series will focus on online safety. This will include national and international data in respect of online safety (including experiences of various online harms such as cyberbullying, potentially harmful user-generated content, and online harassment). In a regulatory context, it will also consider the self-regulation mechanisms of individual social media platforms, developments at EU level and related issues such as the verification of age and identification.

# References

[1] DESI 2020 reports are based on 2019 data, with EU averages calculated for 28 Member States. [*Source:* DESI | Shaping Europe's digital future (europa.eu)]

[2] European Commission, 2020, Digital Economy and Society Index (DESI) 2020: Ireland, p.9

[3] European Commission, 2020, Digital Economy and Society Index (DESI) 2020: Full Economic Analysis, p.12

[4]This is an aggregate figures for the current 27 EU Member States and does not include comparable statistics for the UK.

[5] Eurostat, Individuals - frequency of internet use, Online Data Code: isoc_bdek_di

[6] European Commission, 2020, Digital Economy and Society Index (DESI) 2020: Full Economic Analysis, p.57

[7] Fieldwork for this survey was conducted in February – March 2021.

[8] This was an increase of 23 percentage points compared to the Autumn 2019 survey. However, the authors advised caution due to methodological changes in several countries (not specified) on account of to the COVID-19 pandemic.

[9] European Commission, 2021, Standard Eurobarometer 94: Media use in the European Union, Winter 2020-2021, European Commission, Directorate-General for Communication, p.9,22

[10] An estimated 89% of individuals were classed as recent internet users (i.e. used the internet in the three months prior to the interview). [*Source:* Frequency of Internet Usage - CSO - Central Statistics Office]

[11] Central Statistics Office, 2021, Information Society Statistics - Households 2020, Frequency of Internet Usage, accessed 31 January 2022

[12] Central Statistics Office, 2021, Information Society Statistics - Households 2020, Frequency of Internet Usage, accessed 31 January 2022

[13] Central Statistics Office, 2021, Information Society Statistics - Households 2020, Frequency of Internet Usage, accessed 31 January 2022

[14] This data was collective during the COVID-19 pandemic. Consequently, these results might reflect some (potentially temporary) changes associated with online usage resulting from the pandemic.

[15] Central Statistics Office, 2021, Information Society Statistics - Households 2020, Type of Internet Activities - CSO - Central Statistics Office, accessed 31 January 2022

[16] European Commission, 2021, Standard Eurobarometer 94: Media use in the European Union, Winter 2020-2021, European Commission, Directorate-General for Communication, p.24

[17] European Commission, 2021, Standard Eurobarometer 94: Media use in the European Union, Winter 2020-2021, European Commission, Directorate-General for Communication, p.25; European Union, 2020, Standard Eurobarometer 92: Media Use in the European Union, Autumn 2019, European Commission, Directorate-General for Communication, p.20

[18] European Commission, 2021, Standard Eurobarometer 94: Media use in the European Union, Winter 2020-2021, European Commission, Directorate-General for Communication, p.24

[19] The Broadcasting Authority of Ireland (BAI) funded the inclusion of Ireland in the Reuters Institute Digital News Report and commissioned the Institute for Future Media, Democracy and Society (FuJo) to produce a specific report on the Irish results of the survey. [*Source:* Digital News Report Ireland 2021 (fujomedia.eu)] Research was conducted via YouGov using an online questionnaire at the end of January/ beginning of February 2021, with 2,031 people were sampled in Ireland. [Source: Digital News Report Ireland 2021]

[20] Murrell *et al.*, 2021,Digital News Report Ireland 2021, p.69,70

[21] *ibid*, p.69

[22] *ibid*, p.70

[23] *Growing Up in Ireland* is a longitudinal study that follows the progress of two groups of children: 8,000 9-year-olds (Child Cohort/Cohort '98) and 10,000 9-month-olds (Infant Cohort/Cohort '08). [*Source:* Growing Up in Ireland – National Longitudinal Study of Children] Detailed interviews were conducted between June 2017 and April 2018 with 8,032 9-year-olds and their families from the Infant Cohort/Cohort '08.

[24] McNamara, E., Murray, A., O'Mahony, D., O'Reilly, C., Smyth, E. and Watson, D., 2021, Growing Up in Ireland: The lives of 9-year-olds of cohort '08, Report 10, Dublin, Department of Children, Equality, Disability, Integration and Youth, p.115,116

[25] National Advisory Council for Online Safety, 2021, Report of a National Survey of Children, their Parents and Adults regarding Online Safety 2021, November 2021, p.8,19,20

[26] *ibid*, p.19

[27] *ibid*, p.8,19,21

[28] This referred to touch-screen devices, games consoles and PCs.

[29] During the 2020-2021 academic year, data was collected from 3,904 children aged between 8 and 12 years via an anonymous online survey conducted prior to CyberSafeKids delivering sessions in various settings.

[30] CyberSafeKids, 2021, CyberSafeKids Annual Report 2020, 9 September 2021, p.23,24

[31] National Advisory Council for Online Safety, 2021, Report of a National Survey of Children, their Parents and Adults regarding Online Safety 2021, November 2021, p.24,25

[32] OECD, 2018, Children & Young People's Mental Health in the Digital Age: Shaping the Future, p.7

[33] CyberSafeKids highlighted that all the popular social media and messaging apps had a minimum age restriction of at least 13 years. [*Source:* CyberSafeKids, 2021, CyberSafeKids Annual Report 2020, p.24]

[34] CyberSafe Kids, 2021, CyberSafeKids Annual Report 2020, 9 September 2021, p.24

[35] National Advisory Council for Online Safety, 2021, Report of a National Survey of Children, their Parents and Adults regarding Online Safety 2021, November 2021, p.8,26

[36] *ibid*, p.26

[37] *ibid*, November 2021, p.27

[38] McNamara, E., Murray, A., O'Mahony, D., O'Reilly, C., Smyth, E. and Watson, D., 2021, Growing Up in Ireland: The lives of 9-year-olds of cohort '08, Report 10, Dublin, Department of Children, Equality, Disability, Integration and Youth, p.115,116

[39] National Advisory Council for Online Safety, 2021, Report of a National Survey of Children, their Parents and Adults regarding Online Safety 2021, November 2021, p.27

[40] *ibid*, p.27

[41] CyberSafe Kids, 2021, CyberSafeKids Annual Report 2020, 9 September 2021, p.25,26

[42] KiDiCoTi sought to provide a snapshot of how children aged 10-18 years in 11 European countries (including Ireland) experienced online risks during the COVID-19 lockdown in Spring 2020. Data was collected between June and August 2020 from 6,192 children and 6,192 parents. [*Source:* Lobe *et al*., 2020,

How children (10-18) experienced online risks during the Covid-19 lockdown - Spring 2020, p.9] In the case of Ireland, 504 children and 504 parents participated in this research. [*Source:* Milosevic *et al*., 2021, Kids' Digital Lives in Covid-19 Times: Key Findings from Ireland, p.3] There are a number of caveats in respect of the findings presented in this research, including that the data was self-reported (i.e. subject to possible error and bias) and that responses were collected online in respondents' households (i.e. proximity of parents/children could potential influence answers). [*Source:* Lobe *et al*., 2020, How children (10-18) experienced online risks during the Covid-19 lockdown - Spring 2020, p.41]

[43] Milosevic, T., Laffan, D., O'Higgins Norman, J., 2021, Kids' Digital Lives in Covid-19 Times: Key Findings from Ireland, Dublin: National Anti-Bullying Research and Resource Centre, p.9

[44] National Advisory Council for Online Safety, 2021, Report of a National Survey of Children, their Parents and Adults regarding Online Safety 2021, November 2021, p.8,22

[45] *ibid*, p.22

[46] PISA, the OECD's Programme for International Student Assessment, tests the skills and knowledge of 15-year-old students in reading, mathematics and science. Seventy-nine countries/economies took part in the 2018 assessment.

[47] McKeown, C., Denner, S., McAteer, S. and Shiel, G. with O'Keeffe, L., 2019, Learning for the Future: The Performance of 15-year-olds in Ireland on Reading Literacy, Science and Mathematics in PISA 2018, Dublin, Educational Research Centre, p.131

[48] *ibid*, p.131

[49] OECD, 2019, PISA 2018 Results (Volume II): Where All Students Can Succeed, PISA, OECD Publishing, Paris, p.161; with additional data sourced from OECD, PISA 2018 Database, Tables II.B1.8.6 and II.B1.8.8: *StatLink* https://doi.org/10.1787/888934038723

[50] See OECD, PISA 2018 Database, Tables II.B1.8.6 and II.B1.8.8: *StatLink* https://doi.org/10.1787/888934038723

[51] See OECD, PISA 2018 Database, Tables II.B1.8.6 and II.B1.8.8: *StatLink* https://doi.org/10.1787/888934038723

[52] National Advisory Council for Online Safety, 2021, Report of a National Survey of Children, their Parents and Adults regarding Online Safety 2021, November 2021, p.67,68,69,70

[53] This is a World Health Organisation collaborative cross-national study of 11-, 13- and 15-year-old boys and girls, which has been conducted for over 30 years. The 2017/2018 survey presents data from over 220,000 young people in 45 countries, with new items on electronic media communication and cyberbullying introduced.

[54] World Health Organization, 2020, Spotlight on adolescent health and well-being. Findings from the 2017/2018 Health Behaviour in School-aged Children (HBSC) survey in Europe and Canada. International report. Volume 1. Key findings. Copenhagen: WHO Regional Office for Europe; 2020. Licence: CC BY-NC-SA 3.0 IGO, p.18

[55] World Health Organization, 2020, Spotlight on adolescent health and well-being. Findings from the 2017/2018 Health Behaviour in School-aged Children (HBSC) survey in Europe and Canada. International report. Volume 2. Key data. Copenhagen: WHO Regional Office for Europe; 2020. Licence: CC BY-NC-SA 3.0 IGO, p.40-41

[56] Proportion of young people reporting online contact almost all the time with at least one of four friendship categories.

[57] World Health Organization, 2020, Spotlight on adolescent health and well-being. Findings from the 2017/2018 Health Behaviour in School-aged Children (HBSC) survey in Europe and Canada. International report. Volume 2. Key data. Copenhagen: WHO Regional Office for Europe; 2020. Licence: CC BY-NC-SA 3.0 IGO, p.40-41

[58] *ibid*, p.46,47

[59] *ibid*, p.46,47

[60] This classification is based on those who responded 'yes' to at least 6 of the 9 questions asking if social media use negatively impacted on various aspects of their lives.

[61] World Health Organization, 2020, Spotlight on adolescent health and well-being. Findings from the 2017/2018 Health Behaviour in School-aged Children (HBSC) survey in Europe and Canada. International report. Volume 1. Key findings. Copenhagen: WHO Regional Office for Europe; 2020. Licence: CC BY-NC-SA 3.0 IGO, p.vii,19

[62] *ibid*, p.19

[63] World Health Organization, 2020, Spotlight on adolescent health and well-being. Findings from the 2017/2018 Health Behaviour in School-aged Children (HBSC) survey in Europe and Canada. International report. Volume 2. Key data. Copenhagen: WHO Regional Office for Europe; 2020. Licence: CC BY-NC-SA 3.0 IGO, p.44-45

[64] *ibid*, p.44-45

[65] Lobe, B., Velicu, A., Staksrud, E., Chaudron, S. and Di Gioia, R., 2020, How children (10-18) experienced online risks during the Covid-19 lockdown - Spring 2020, EUR 30584 EN, Publications Office of the European Union, Luxembourg, 2021, ISBN 978-92-76-29763-5, doi:10.2760/562534, JRC124034, p.6

[66] *ibid*, p.19

[67] *ibid*, p.6,19,20

[68] *ibid*, p.20

[69] National Advisory Council for Online Safety, 2021, Report of a National Survey of Children, their Parents and Adults regarding Online Safety 2021, November 2021, p.68,70

[70] This rise was attributed to increased numbers tuning into news bulletins and briefings (e.g. Government, NPHET, HSE) related to the pandemic [*Source:* Digital News Report Ireland 2021, p.26]. However, the Reuters Institute Digital News Report 2021 cautioned that the temporary bump in TV consumption evident in a number of European countries should be considered in the context of the longer-term shift towards digital sources [p.10].

[71] Murrell, C., Park, K., Robbins, D. and Wheatley, D., 2021, Digital News Report Ireland 2021, DCU Institute of Future Media, Democracy and Society and Broadcasting Authority of Ireland, p.26,27

[72] *ibid*, p.26

[73] *ibid*, p.28

[74] *ibid*, p.28

[75] Kirk, N., Park, K., Robbins, D., Culloty, E., Casey, E. and Suiter, J., 2020, Digital News Report Ireland 2020, p.26

[76] *ibid*, p.26

[77] *ibid*, p.6

[78] Murrell, C., Park, K., Robbins, D. and Wheatley, D., 2021, Digital News Report Ireland 2021, DCU Institute of Future Media, Democracy and Society and Broadcasting Authority of Ireland, p.11,71

[79] This supports the existing analysis in the Digital News Report Ireland 2021 by providing additional insights on how gender impacts engagement with news and news systems in Ireland.

[80] Broadcasting Authority of Ireland, 2022, Digital News Report: Gender & Diversity in Ireland 2016-2021 & Internationally 2021, January 2022, p.6,7

[81] European Commission, 2021, Standard Eurobarometer 94: Media use in the European Union, Winter 2020-2021, European Commission, Directorate-General for Communication, p.27,33,35

[82] European Commission, 2020, Special Eurobarometer 503: Attitudes towards the impact of digitalisation on daily lives, March 2020, p.6,44

[83] *ibid*, p.44

[84] National Advisory Council for Online Safety, 2021, Report of a National Survey of Children, their Parents and Adults regarding Online Safety 2021, November 2021, p.10

[85] Murrell, C., Park, K., Robbins, D. and Wheatley, D., 2021, Digital News Report Ireland 2021, DCU Institute of Future Media, Democracy and Society and Broadcasting Authority of Ireland, p.44,46

[86] *ibid*, p.46

[87] *ibid*, p.10,79,81

[88] Lobe, B., Velicu, A., Staksrud, E., Chaudron, S. and Di Gioia, R., 2020, How children (10-18) experienced online risks during the Covid-19 lockdown - Spring 2020, EUR 30584 EN, Publications Office of the European Union, Luxembourg, 2021, ISBN 978-92-76-29763-5, doi:10.2760/562534, JRC124034, p.28-29

[89] European Commission, 2020, Special Eurobarometer 503: Attitudes towards the impact of digitalisation on daily lives, March 2020, p.6,48,51

[90] *ibid*, p.51

[91] *ibid*, p.49,51

[92] *ibid*, p.6,54

[93] *ibid*, p.58

[94] *ibid*, p.58

[95] European Commission, 2020, Digital Economy and Society Index (DESI) 2020: Full Economic Analysis, p.12,51

[96] According to the European Commission, digital skills range from basic usage skills that enable individuals to engage in digital society and consume digital goods and services to advanced skills that empower the development of new digital goods and services. [Digital Economy and Society Index (DESI) 2020: Full Economic Analysis, p.51]

[97] European Commission, 2021, Digital Economy and Society Index (DESI) 2021 Ireland, p.6

[98] Eurostat, Individuals' level of digital skills, Online Data Code: isoc_sk_dskl_i

[99] European Commission, 2021, Digital Economy and Society Index (DESI) 2021 Ireland, p.6

[100] Eurostat, Individuals' level of digital skills, Online Data Code: isoc_sk_dskl_i

[101] European Commission, 2021, Digital Economy and Society Index (DESI) 2021 Ireland, p.6

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[105] SOLAS, 2020, Adult Literacy, Numeracy and Digital Literacy Strategy: Consultation Paper, p.19

[106] European Commission, Digital Scoreboard

[107] European Commission, Digital Scoreboard

[108] European Commission, Digital Scoreboard

[109] European Commission, Digital Scoreboard

[110] This compared to highs of 87% in the Netherlands and Sweden and to a low of 55% in Greece.

[111] European Commission, 2020, Special Eurobarometer 503: Attitudes towards the impact of digitalisation on daily lives, March 2020, p.62,63,64; European Commission, 2017, Special Eurobarometer 460: Attitudes towards the impact of digitisation and automation on daily life, May 2017, p.22

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[116] OECD, 2021, 21st-Century Readers: Developing Literacy Skills in a Digital World, PISA, OECD Publishing, Paris, p.164

[117] Milosevic, T., Laffan, D., O'Higgins Norman, J., 2021, Kids' Digital Lives in Covid-19 Times: Key Findings from Ireland, Dublin: National Anti-Bullying Research and Resource Centre, p.10

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[119] OECD, 2021, Children in the Digital Environment: Reviewed Typology of Risks, OECD Digital Economy Papers No. 302, January 2021, p.8

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