

Online Nation

2021 report



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Overview

What we have found – in brief

People used online services more than ever as we became more dependent on them during the pandemic

With the UK in some form of lockdown for most of 2020, we were more dependent than ever on online services for entertainment, shopping, keeping in touch, getting information, home working and home schooling. By the end of the year, about 94% of UK homes had internet access, up from about 89% in 2019. And we spent more time online: an average of 3 hours 37 minutes a day on smartphones, tablets and computers (nine minutes more than in 2019) as well as an average of 1 hour 21 minutes a day watching online services such as Netflix and BBC iPlayer on television sets (24 minutes more than in 2019). In September 2020, UK internet users spent nearly four times as much time on smartphones (an average of 2 hours 19 minutes a day) than they did on computers (37 minutes).

More people have taken part in online gaming, video-calling and online health services during the pandemic

With people at home for much of the year, online gaming saw a big increase in 2020. Nearly two-thirds (62%) of adults, and 92% of 16- to 24-year-olds, said they played games on an electronic device, and over half of all gamers agreed that gaming helped them get through lockdown. Games consoles and computers are widely used by young adults in particular, but smartphones are the most commonly used device across all age groups, and were used for gaming by 39% of all UK adults. The multiplayer social deduction game Among Us was a global phenomenon on smartphones, with over 11 million downloads in the UK in the last four months of 2020.

Video calling became an important way for people to keep in touch during the pandemic. Zoom had extraordinary growth: from a few hundred thousand users in the first two months of 2020 to more than 13 million in April and May. It has since experienced some decline (down to 10.4 million users in March 2021), while platforms used primarily for work and education, notably Microsoft Teams, have shown a sustained increase in use (13.7 million users in March 2021, up by 5.3 million year on year).

Online services were also a crucial way for people to find out information about the pandemic, and for governments to try to track and control the spread of the virus. The NHS online service was used by 22.5 million UK adults in March 2020 as the country entered lockdown. Adult users of the NHS Covid-19 app in England and Wales peaked in October 2020 with 12.6 million users (27% of the population in England and Wales); in the same month the Protect Scotland app reached 23% of adults in Scotland and the StopCOVID NI app reached 3% of adults in Northern Ireland.

Fifty years since the first email was sent, 88% of UK online adults use an email service

Although messaging apps have become widespread, email is still widely used and is essential for many forms of online registration, including shopping sites. Google Gmail was the most-used email service among adults in 2020, used by 61% of the UK online adult population. WhatsApp, owned by Facebook, is the most-used messaging service, with 75% of online over-15s saying they used it during the spring 2020 lockdown, ahead of Facebook Messenger (58%). Facebook's Instagram Direct Message was used by 24% of UK online adults. Of online over-15s, 83% (and 97% of 15-24s) said they used at least one Facebook-owned service at least monthly.

But the pandemic has created a bigger digital divide

While most of us benefited from online services, lockdown had a greater effect on people who are digitally excluded. Six per cent of households don't have home internet access, and 14% of adults access the internet only infrequently. Older people are less likely to have home internet access (18% of over-64s do not have access), but so too are those in lower socio-economic households (11%). People who rely on a mobile phone for internet access might struggle to work or learn from home or complete online forms – this represents 10% of all adults, and 18% of adults in lower socio-economic households. Even among those who do have access to the internet, 5% say they are not confident in using it, again with higher proportions among over-64s (9%) and those in lower socio-economic households (10%).

While the internet was a vital lifeline in 2020, over half of children had a negative experience online

Virtually all children had some form of home internet access, though many didn't always have access to appropriate devices for their schoolwork

The internet helped most children continue their education throughout lockdown; nearly nine in ten households with school-age children had home schooling for periods in 2020 and early 2021. However, while virtually all households with school-age children had access to the internet at home, 7% did not have fixed broadband and 4% had access only via a mobile phone. One in five children did not have access to an appropriate device for their schoolwork all the time.

Children aged seven to 16 spend nearly four hours a day online

The older the child, the more time they spend online. Seven- to eight-year-olds spent an average of nearly three hours a day online in September 2020 and 15- to 16-year-olds nearly five hours. Half of children own a mobile phone by the age of ten, and nearly all children do so by the age of 13.

Among parents of five- to 15-year-olds who went online, half felt the need to relax some of the rules about what their child did online because they were spending more time at home than usual. But despite increases in children's screen time, the majority of parents (59%) said that their child had a good balance between screen time and doing other things.

Much of children's internet use is centred on watching video content and gaming

YouTube is a constant in UK children's online lives, used by nearly nine in ten children of all age groups, from three- to four-year-olds to teenagers. YouTube was the app that seven- to 17-year-olds were most likely to name as their favourite in early 2021, but TikTok was the most popular platform for girls aged 13 to 17.

Three-quarters of UK five- to 15-year-olds played games online in 2020. There are differences between the games boys and girls like to play. Creative games such as Roblox and Minecraft are particularly popular with girls, while boys tend to prefer to play console-based competitive games such as Fortnite and Call of Duty.

Social media is an integral part of most teenagers' lives

Despite most platforms setting their minimum user age at 13, by the age of 11 the majority (59%) of UK children use social media. By the age of 15, 95% of children use it. Instagram is used by 66% of 12- to 15-year-olds, ahead of Snapchat (58%) and Facebook (54%).

About nine in ten eight- to 15-year-olds who use social media said it helped them to feel closer to their friends in 2020. But there are social pressures around the use of social media; nine in ten 12- to 15-year-olds who used social media, or chat and messaging apps, said they felt pressure to be popular on these sorts of apps or sites.

But the internet is not always a child-friendly environment, and many children have been exposed to potential harms

More than half of the 12- to 15-year-olds surveyed said they had had a negative experience online in 2020. On mobile phones, the most common of these experiences was 'being contacted online by someone you don't know who wants to be your friend' (cited by 30% overall) and a significant minority had seen something scary or troubling (18%), or seen something of a sexual nature that made them feel uncomfortable (17%). Children are also coming across bullying. A quarter of eight- to 11-year-olds and a third of 12- to 15-year-olds said they had personally been bullied, either online or offline. Older children are more likely to experience bullying via social media and messaging apps, while younger children are more likely to say they have been bullied when playing games online.

Most children would tell someone if they saw something 'worrying or nasty' online. Older children are more likely to tell a friend, while younger children are more likely to tell their teacher.

YouTube continues to be used by virtually all UK internet users, while TikTok grew rapidly in 2020

Young people are heavy viewers of social video

YouTube and Facebook are the largest social video platforms in the UK, each reaching over 95% of UK internet users in September 2020. They also account for the most time spent – YouTube users spent an average of 43 minutes a day on it at the height of lockdown in April 2020 (falling to 35 minutes in September 2020), while users of Facebook (including Facebook Messenger) spent an average of 31 minutes a day on it in April (falling to 21 minutes in September 2020).

Young adults are particularly heavy users of **social video**. **During the spring 2020 lockdown, nearly three-quarters of 15- to 24-year-olds said they watched short video content online every day, and in September 2020 YouTube users aged 18-24 spent an average of 1 hour 16 minutes a day on the service.**

TikTok, owned by the Chinese company Bytedance, increased its number of UK adult users from 3.2 million in September 2019 to 11.5 million in September 2020, and this grew further during the winter 2021 lockdown, reaching 13.9 million UK adults in March 2021. It is also particularly popular among teenagers, with more than 37% of 13- to 17-year-olds saying they used it in March 2021.

In the UK, music videos are the most-viewed type of content on social video platforms, with gaming content also popular

Music videos are viewed by 47% of all social media users, and performers have been propelled up international music charts after going viral on social video platforms. For example, former postman Nathan Evans gained viral popularity on TikTok with his sea shanty Wellerman and later topped the UK Singles Chart in January 2021.

Lockdown also influenced the types of social video that were most popular. The most-viewed YouTube video of 2020 in the UK was the first episode of Joe Wicks' PE with Joe fitness video on 23 March 2020, with 7.2 million viewers. YouTube reported that in the early weeks of lockdown daily views of videos with 'home workout' in the title increased by 515%, while viewing of videos related to 'sourdough bread' increased by 458% and videos with 'self-care' in the title increased by 215%.

Social video was used in 2020 to share content on prominent social and political issues, including, in particular, the #BlackLivesMatter movement, climate change and anti-lockdown protests. However, in some instances, use of video-sharing to promote violence or hate crime has resulted in platforms taking action by removing content or banning contributors.

Social video offers huge benefits, but is also a source of harmful content

Social video services offer huge benefits for users and the economy. They provide a platform for self-expression through enabling user-generated content (our research finds that 31% of adults and 40% of 13- to 17-year-olds post video content). Social video also serves as a means of entertainment and education for many (used by 97% of adult internet users), and as an important method of marketing for businesses (online video advertising spend grew by 23% in the UK in 2020 to £2.7bn).

However, our research found that 70% of those who view social video services had seen or experienced something potentially harmful in the past three months. Fake news and offensive language were the most common potentially harmful online experiences, followed by fake or deceptive images/videos. Unwelcome friend requests/follows and trolling were the most common potentially harmful types of contact across all platforms.

In 2020 YouTube removed 34.8 million videos in 2020, 1% of which were uploaded in the UK, while TikTok removed 194 million videos. On both platforms, child safety was the most common reason for these removals.

The big internet platforms grew even bigger in 2020

Of all the time spent online in 2020, more than a third was on Google or Facebook

Sites and apps owned by Google (including YouTube) and Facebook (including Instagram) commanded 39% of all the time spent online on computers, smartphones, and tablets. There is then a further list of 18 sites and apps, headed by Spotify, Netflix and Bytedance (which includes TikTok), all of which were used by UK online adults for a minute or more a day, and which amounted to 22% of the average time spent online each day. The remaining 39% of time spent online is across a range of more than 180 million sites.

The popularity of Google and Facebook services is also evident in the use of mobile apps, with nine of the top ten most-used apps in the UK owned by either Google or Facebook. There are some differences by device, which illustrates the power of the operating system. On Android, the top three apps are all owned by Google; on iOS the top two are both Facebook-owned, with three Apple apps appearing in the top ten.

Looking more broadly, the GAFAM group of major platforms were big beneficiaries of the increased use of online services in 2020. All five companies reported record revenue and profit in Q4 2020.

Online retailers expanded their businesses as the pandemic changed consumer behaviour

Online retail spend in the UK increased by 48% to an estimated £113bn in 2020 (compared to an average annual increase of 13% in the previous four years) as online's share of retail spend increased from about 20% in 2019 to 35% in the spring lockdown and 30% in December 2020. Supermarkets expanded their online deliveries, and by December 2020 11% of UK grocery market sales were online, up from 5% at the beginning of the year. Online food delivery services also benefited from heavy increases in demand – Just Eat was the most popular, visited by nearly 10 million people in December 2020 and reporting that its UK orders were 58% higher in the last quarter of 2020 compared to the same period in 2019.

Many people get their news online, but the pandemic highlighted the risks of misinformation being spread through social media

People have relied on the internet for news and information through the pandemic

During the spring 2020 lockdown, half of online adults in Great Britain (52%) said news and current affairs was one of their main reasons to go online. Among news sites, the BBC news website or app is most commonly used, with 26% of adults using it in the first quarter of 2021 to get information or news about the coronavirus.

However, adults are as likely to use social media to find information about the Covid-19 pandemic as they are to use news sites and apps (about one in three for each). On social media, Facebook is the main source, although younger people are just as likely to use Instagram or Twitter. One in eight 16- to 24-year-olds considered social media to be their most important source of information about the coronavirus pandemic, compared to 5% of all UK online adults.

The pandemic has resulted in an abundance of information, which includes inaccurate and misleading information

The ease of publishing news online, and the speed at which it can be distributed and shared, delivers many benefits but also creates the potential for the spread of potentially false or misleading information, requiring people to identify whether the content they come across is true, false or misleading. In late March 2020, when the UK had just gone into lockdown, 46% of UK adults who were getting news or information about the coronavirus pandemic said that they had come across information or news that they thought was false or misleading. This proportion had fallen to 30% by early 2021.

Some of the most commonly circulated types of coronavirus-related misinformation in the first quarter of 2021 were that face masks/coverings offered no protection or were harmful, and that the number of deaths linked to coronavirus was actually much lower than was being reported. Social media was the most likely source for such claims, and they were most likely to be found on Facebook. However, trust in social media platforms as a source of information about the coronavirus pandemic is low; only 16% of those who used Facebook to get information about the coronavirus pandemic said they trusted it as a source, and 43% said they did not. People are more likely to be concerned about the misinformation that other people are getting about coronavirus than the impact it has on themselves.

Over half of people have seen warnings on social media that information might be untrustworthy.

Many social media and social video platforms have taken action to combat false information. Actions include raising the profile of authoritative information sources, removing content that is false and flagging content that might be untrue. In Q1 2021, 53% of adult internet users said they had come across warnings or notices on social media saying that the information might be untrustworthy or untrue.

More detail and data can be found in the [Online Nation interactive report](#).

1. The online consumer

Introduction

The pandemic has highlighted the importance of being online and driven changes in the take-up and use of internet services, as many people have had a critical reliance on the internet for communications, information, entertainment, and commerce. Increases in internet use in 2020 were most pronounced during the spring and November lockdowns, as people turned to the internet for video calling for socialising or home-based working, films and gaming, shopping, and information about the pandemic.

While the pandemic has brought increased reliance on the internet and online services, the digital divide continues to prevent the benefits of internet connectivity being available to all. A small percentage of the population do not have internet access – with older people and those in lower socio-economic groups less likely to be connected – but other barriers also exist, in the lack of skills and confidence that some internet users have, and in the availability of suitable devices to access internet services. The smartphone appears to be the ‘base layer’ of connectivity, with more users in lower socio-economic groups relying on this device for internet access without a computer. Forty-two per cent of internet users in the DE socio-economic group only use devices other than a computer to go online, raising questions about how restricted some groups may be in activities like filling in online forms.

Key metrics

Figure 1.1: Percentage of UK adults who used the internet in September 2020

Percentage of UK adults who use the internet ¹	86%
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Figure 1.2: Time spent online across computers, tablets and smartphones per UK adult visitor per day, by year (hours:minutes)

	2017	2018	2019	2020
Time spent online per user per day ²	2:57	3:10	3:28	3:37

Figure 1.3: UK household reach to the internet 2021

	Internet	Smartphone	Tablet	PC
Percentage of households ³	94%	91%	65%	47%⁴

¹ Ofcom modelling using ONS and Comscore MMX Multi-Platform, Total Internet, Age 18+, Sep 2020, UK

² Comscore MMX Multi-Platform, Total Audience, Age 18+ 2017-2020, UK. Note: time spent in 2017 is based on the last ten months of the year.

³ Ofcom Technology Tracker 2021

⁴ Ofcom has recorded different figures for ‘PC’ in separate surveys.

Figure 1.4: Selected key metrics

Percentage of UK adult internet users who say they only access the internet via a smartphone ⁵	10%
Percentage of UK adult internet users who access the internet on both computers and mobile devices ⁶	61%
Percentage of UK adults with 10+ years' experience online ⁷	73%
Percentage of UK adult internet users who say they are confident ⁸	83%
Percentage of UK adult internet users who say they are not happy for companies to collect and use their data ⁹	21%
Percentage of UK adult internet users who agree that people should be protected from seeing inappropriate or offensive material online ¹⁰	61%

Figure 1.5: Average time spent online per day in 2020 by adult internet users, and total apps downloaded in 2020 in selected countries



Source: Time spent online: Comscore MMX Multi-Platform, age: 18+, Jan-Dec 2020, Brazil, USA, Canada, UK, Spain, France, Germany and India. Note: TV set and smart device online use not included. Total app downloads: App Annie Intelligence. Downloads are across iOS, Google Play. Note: Germany time spent is based on the first nine months of 2020 due to a methodology change in Q4 2020.

⁵ Ofcom Adults' Media Literacy Tracker 2020

⁶ Comscore MMX Multi-Platform, Total Internet, Age 18+, Sep 2019 and Sep 2020, UK

⁷ Ofcom Adults' Media Literacy Tracker 2020

⁸ Ofcom Adults' Media Literacy Tracker 2020

⁹ Ofcom Adults' Media Literacy Tracker 2020

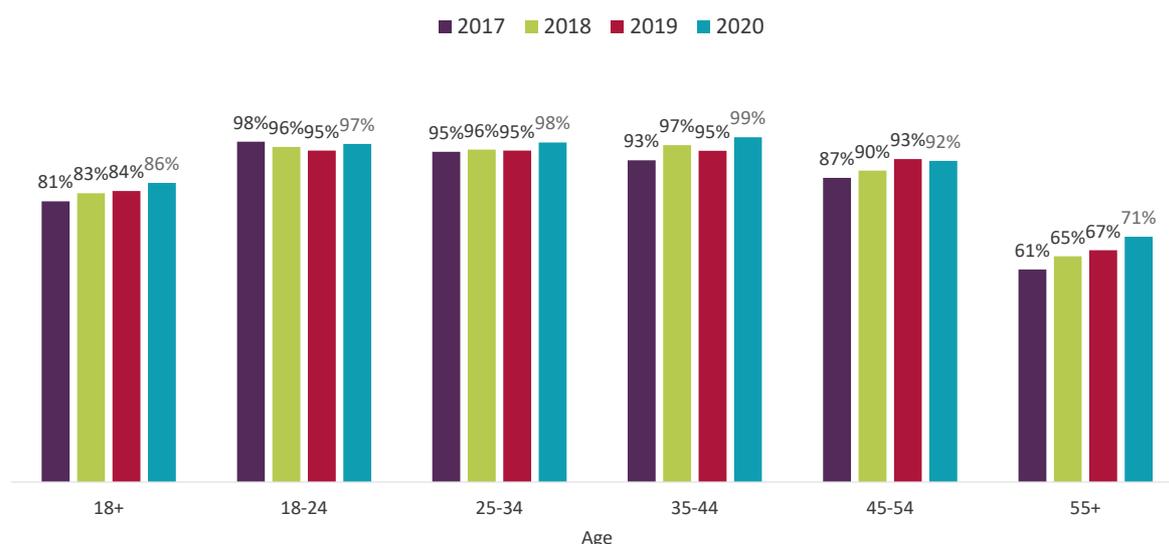
¹⁰ Ofcom Adults' Media Literacy Tracker 2020

Internet take-up and use

86% of UK adults used the internet in September 2020

Data from Comscore, the UKOM-accredited online audience measurement currency, show that 45.5 million adults aged 18+ accessed the internet in September 2020 (our sample month).¹¹ As shown in Figure 1.6, going online is almost universal among 18-to 54-year-olds. The largest increase in users was among the over-54s; up by 4 percentage points over the past year.

Figure 1.6: Online access by UK adults in September each year, by age



Source: Ofcom modelling Comscore MMX Multi-Platform, Total Internet, Adults 18+, Sep 2017, Sep 2018, Sep 2019 and Sep 2020 UK; ONS 2017-2018, 2019 data indicative, UK. Note that these figures represent monthly use of the internet, not any access at all, which is covered in [a later section](#).

UK adult internet users spent more than three and a half hours online a day in 2020¹²

UK adult internet users spent an average of three hours 37 minutes a day online on computers, tablets and smartphones in 2020. This was 9 minutes more than in 2019¹³ – perhaps a surprisingly small increase given the increased reliance most of us had on online services during the pandemic. However, internet use was already ubiquitous and multi-faceted before the onset of the pandemic. The main growth in time spent online in 2020 was via connected TVs - whether for video-on-demand viewing, online gaming or watching YouTube or TikTok. Ofcom’s estimates suggest that UK individuals, including children, spent 81 minutes per day watching these services on the TV set in

¹¹ Ofcom modelling using Comscore September 2020 and ONS data; Comscore MMX Multi-Platform, Total Internet, Age 18+, Sep 2020, UK

¹² Comscore MMX Multi-Platform, Total Internet, Age: 18+, monthly average 2020, UK

¹³ Comscore MMX Multi-Platform, Total Internet, Age 18+, monthly average 2019 and 2020, UK

2020 - an increase of 24 minutes compared to 2019 (56 minutes).¹⁴ TV online viewing will be explored in our annual Media Nations report, due to be published later this year.

Young adults continue to be the group spending the most time online, across computers, tablets and smartphones, with 18-24s averaging 4 hours 34 minutes online per day in 2020, up by 10 minutes since 2019 (4hrs 24 mins). Internet users aged over 54 had the highest year-on-year increase, up from 2 hours 35 minutes to 2 hours 51 minutes in 2020.¹⁵

Figure 1.7: Average time spent online across computers, tablets and smartphones per UK adult visitor per day, by age and year (hours:minutes)

Age	2019	2020	Year-on-year increase
18+	3:28	3:37	9 minutes
18-24	4:24	4:34	10 minutes
25-34	3:55	4:07	12 minutes
35-44	3:41	3:51	10 minutes
45-54	3:35	3:36	1 minute
55+	2:35	2:51	16 minutes

Source: Comscore MMX Multi-Platform, Total Internet, Age: 18+, Jan-Dec 2019 and 2020, UK.

Note: TV set and smart device online use not included

Increases in internet use were most pronounced during the spring and November lockdowns in 2020 and the first quarter of 2021

Whereas internet use was fairly consistent across 2019, in 2020 there were notable monthly increases in time spent online in the months when there was a national lockdown. Online UK adults on average spent 4 hours 2 minutes online per day in April 2020, an increase of 37 minutes compared to April 2019. In November 2020, when England entered a four-week lockdown, there was a less pronounced increase: 9 minutes more than November 2019.¹⁶ In the first quarter of 2021, on average, online UK adults spent 3 hours 45 minutes online per day, 13 minutes more than in the first quarter of 2020.¹⁷

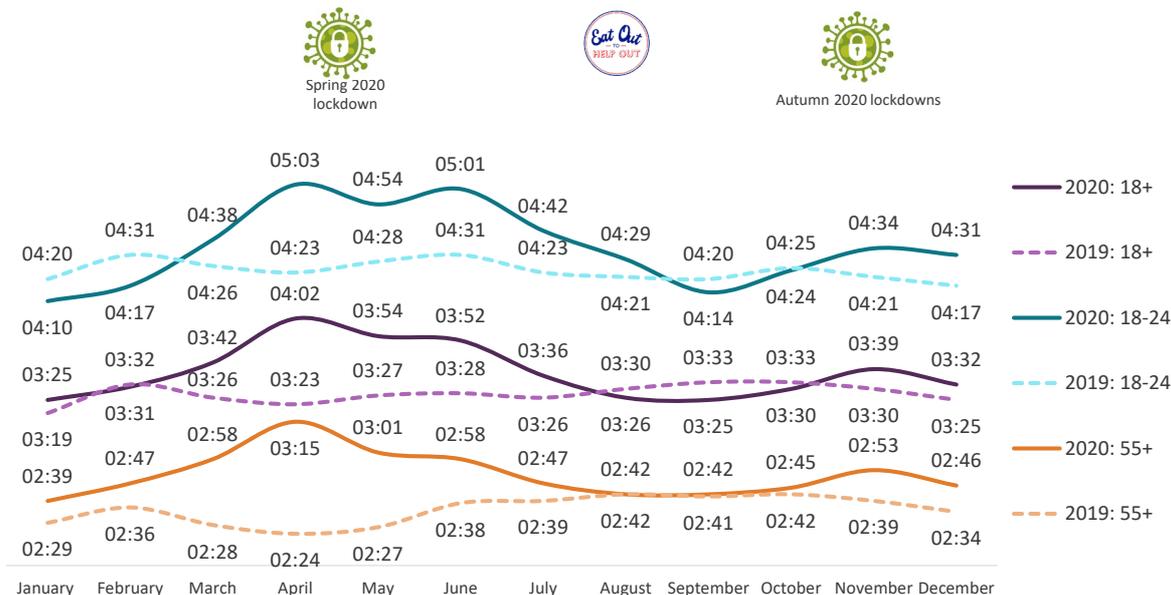
¹⁴ Ofcom estimates modelled from BARB, Comscore and TouchPoints data

¹⁵ Comscore MMX Multi-Platform, Total Internet, Age: 18+, 2020, UK

¹⁶ Comscore MMX Multi-Platform, Total Internet, Age: 18+, 2019 and 2020, UK

¹⁷ Comscore MMX Multi-Platform, Total Internet, Age: 18+, Jan-Mar 2020 and 2021, UK

Figure 1.8: Average time spent online by adult unique visitors per day, by age: Jan-Dec 2019 vs. 2020 (hours:minutes)



Source: Comscore MMX Multi-Platform, Total Internet, Age: 18+, Jan 2019-Dec 2019 and Jan 2020-Dec 2020, UK.

Note: TV set and smart device online use not included

Six per cent of UK households do not have internet access

The lockdown appears to have contributed to more households getting online. Six per cent of homes – around one and a half million – had no internet access in March 2021. This suggests a decrease in the proportion of households without internet access from 11% in March 2020, but this movement should be considered as indicative only. Enforced methodology changes to the survey limit direct comparability with previous years so, while these figures could ordinarily indicate an uplift in internet access compared to previous years, the change could also be due to the change in methodology, rather than any real change in internet access.¹⁸ Older people are less likely to have home internet access (18% of over-64s do not have home internet access), as are those in lower socio-economic groups (11% of those in DE households). Fixed broadband is by far the most common method for connecting to the internet at home, with one in five households reporting that they access by ‘tethering’ (accessing the internet on a device such as a laptop or tablet using a mobile phone’s internet connection). This includes use during fixed-access ‘outages’.

¹⁸ As a result of the Covid-19 pandemic, the Ofcom Technology Tracker was not able to conduct face-to-face fieldwork in 2021, the method by which previous Technology Tracker surveys have been conducted. Instead, data on internet access was gathered via a CATI (telephone) survey in 2021. The survey was conducted among adults aged 18+ in 2021, and among adults aged 16+ in 2020.

Figure 1.9: Proportion of UK households with internet access 2021

Yes	No
94%	6%

Source: Ofcom Technology Tracker CATI omnibus survey, 12 February to 5 March 2021. KDR06: Do you or does anyone in your household have access to the internet at home (via any device, e.g. PC, mobile phone)

Figure 1.10: Proportion of UK households with internet access: 2021

Fixed broadband	Mobile broadband	Mobile data	Tethering	Mobile or tethered access only
92%	16%	49%	21%	6%

Source: Ofcom Technology Tracker CATI omnibus survey, 12 February to 5 March 2021. KDR07: Which of these methods does your household use to connect to the internet at home? (Base: 2918). 'Mobile access only' refers to households that do not have a fixed broadband connection.

Although nearly three-quarters of UK adults have ten or more years' experience online, internet use remains lower among older people and those in lower socio-economic groups

The majority of internet users in the UK are experienced users, with most people in all adult age groups first going online ten years ago or more. But 7% of users went online for the first time in the past four years.

Figure 1.11: When UK internet users first went online

	All internet users	16-24	25-34	35-44	45-54	55-64	65+
In the past 1-4 years	7%	11%	9%	4%	3%	7%	5%
In the past 5-9 years	16%	32%	10%	13%	12%	19%	13%
Ten years ago or more	73%	53%	75%	80%	81%	69%	78%

Source: Ofcom Adults' Media Literacy Tracker 2020

IN3: How long ago did you first start going online?

Base: All adults aged 16+ who go online, including those responding by post that gave a response (2956 in 2020, varies by demographic)

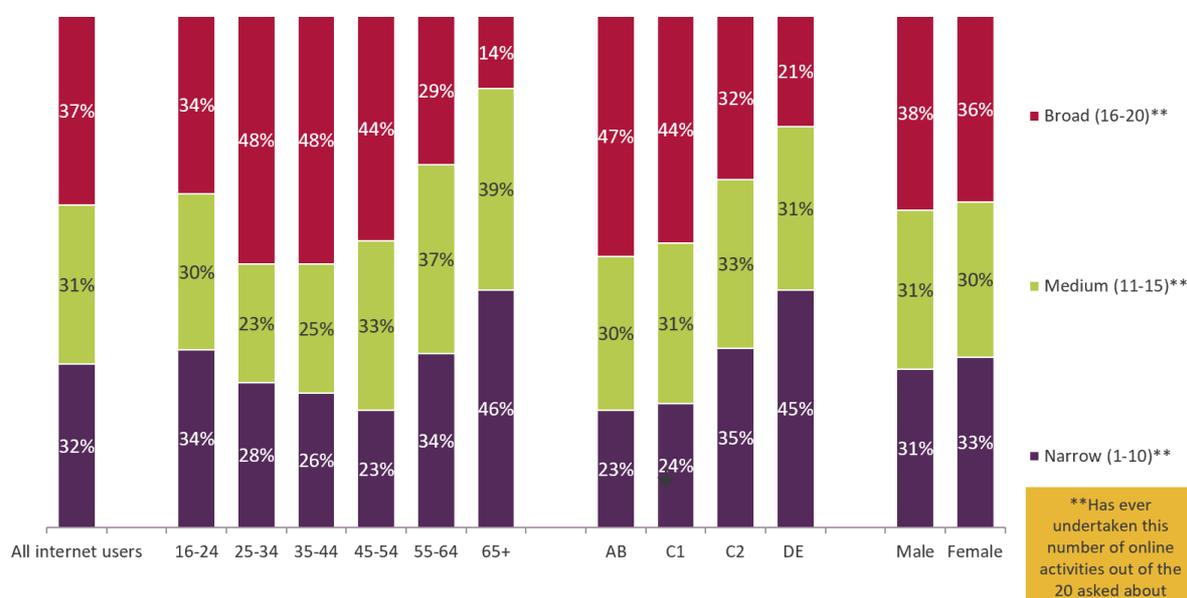
Among those who are online, the breadth of their internet use varies by socio-economic group and age. Our Adults' Media Literacy Tracker 2020 research found that internet users aged 65+ were more likely to be 'narrow' internet users who do less online, as were users in lower socio-economic groups. Almost half of the respondents aged 65+ or in the DE group were classified as narrow users.

Those aged 25-54 and in the ABC1 socio-economic groups were more likely than average to be 'broad' users, possibly because broader internet use correlates with being in employment.¹⁹

Digital literacy is critical if consumers are to be able to navigate, and get the most out of, the internet, as well as to understand the basics of internet safety. While confidence in using the internet is high in the UK, it is not universal, and not everyone employs security measures to protect themselves online.

Five per cent of internet users said they were not confident internet users, while 12% said they were neither confident nor not confident or didn't know. Lack of online confidence is most prevalent among users aged 65 and over (9%), and those in DE households (10%).²⁰ And lack of confidence, or being unsure, can potentially prevent users from making the most of the internet, or make them more susceptible to online harms.

Figure 1.12: Breadth of use of the internet, by age, socio-economic group and gender: 2020



Source: Ofcom Adults' Media Literacy Tracker 2020

IN13. Which, if any, of these activities have you ever done online? (multi-coded)

Base: All adults aged 16+ who go online, including those responding by post that gave a response (2957 in 2020, varies by demographic)

There was a marked increase in time spent online in other countries as well as in the UK in April 2020

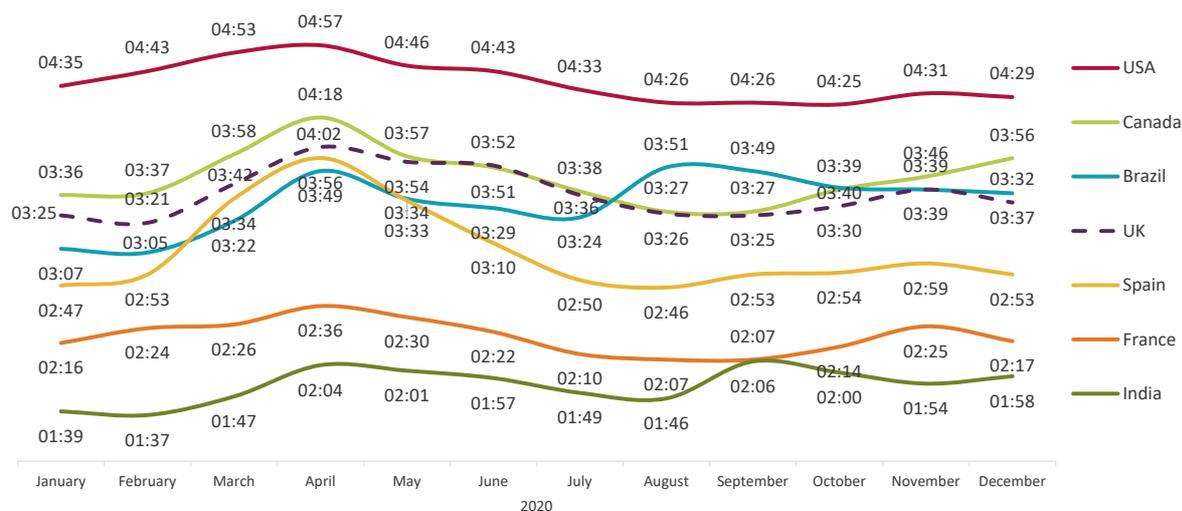
Internet users in the UK spend less time online than those in the US, but considerably more than those in France and Spain. Internet use in the other countries that we examined also saw a marked

¹⁹ We asked about 20 activities, which included using social media or email, accessing government or banking services, shopping, searching for information and accessing news or entertainment content. Narrow users were defined as going online to do up to ten of the 20 activities, medium as 11-15 and broad as 16-20. <https://www.ofcom.org.uk/research-and-data/media-literacy-research/adults>

²⁰ Ofcom, Adults' Media Literacy Tracker 2020

increase in April 2020 as the full effects of the pandemic took hold. The highest increase was in Spain, with average time spent online per adult per day across computers, tablets and smartphones rising from 2 hours 47 minutes in January 2020 to 3 hours 56 minutes in April.²¹ All countries saw spikes in daily use throughout the year, which can be attributed to the varying lockdown periods and the severity of the lockdown measures employed by governments over the course of the pandemic.

Figure 1.13: Average time spent online on computers, tablets and smartphones (excludes activities on TV sets and smart devices) by adult internet users per day, by country: 2020



Source: Comscore MMX Multi-Platform, Total Internet, Age: 18+, Jan 2020 - Dec 2020, USA, Canada, Brazil, UK, Spain, France and India.

Note: TV set and smart device online use not included

Device take-up and use

The smartphone is the most-used device for accessing the internet for all age groups apart from those aged 65+

Our Adults' Media Literacy research in 2020 found that 85% of internet users aged 16+ used a smartphone to go online. Almost three-quarters access the internet via a computer and just over half via a tablet. Access via computer is more popular among respondents aged 65+.²²

One in ten adults said they use *only* a smartphone to go online. Three in ten used their phone to complete an online form or application on a weekly basis, and younger age groups were less likely to agree that this is difficult to do. Reliance on smartphones to access the internet is more prevalent among younger people and those in lower socio-economic groups, with 18% of respondents in DE households saying they use only a smartphone to go online, in contrast to only 4% of AB users who

²¹ Comscore MMX Multi-Platform, Total Internet, Age: 18+, 2020, Brazil, Canada, France, India, Spain, USA, and UK

²² Ofcom Adults' Media Literacy Tracker 2020

said the same.

Figure 1.14: Devices used to go online, among those who go online, by age

	16+ internet users	16-24	25-34	35-44	45-54	55-64	65+	AB	C1	C2	DE
Smartphone	85%	87%	91%	93%	92%	85%	59%	85%	89%	88%	79%
Computer	74%	68%	66%	71%	78%	77%	87%	83%	81%	69%	58%
Tablet	51%	37%	48%	56%	55%	54%	56%	59%	50%	48%	45%
Smart TV	41%	42%	46%	50%	43%	34%	26%	48%	43%	42%	29%
Games console/ player	21%	43%	30%	26%	17%	5%	1%	22%	23%	22%	15%
Smart Speaker	20%	23%	22%	24%	25%	16%	11%	23%	23%	20%	14%
Wearable tech	12%	12%	17%	16%	13%	8%	4%	14%	14%	12%	7%
Only use devices other than a computer to go online	26%	32%	34%	29%	22%	23%	13%	17%	19%	31%	42%
Only uses a smartphone to go online	10%	12%	15%	13%	8%	8%	2%	4%	8%	12%	18%

Source: Ofcom Adults' Media Literacy Tracker 2020

IN2A. Do you go online using any of these devices? (multi-coded)

Base: All adults aged 16+ who go online, excluding those responding by post (2776 aged 16+, 396 aged 16-24, 435 aged 25-34, 505 aged 35-44, 418 aged 45-54, 402 aged 55-64, 620 aged 65+, 801 AB, 796 C1, 493 C2, 649 DE)

UK adults spend nearly four times as much time online on smartphones than on computers

Across computers, tablets and smartphones, 68% of the time spent online in September 2020 was on smartphones, up from 65% in September 2019. Eighteen per cent of the time spent online was via computers and 13% via tablets.²³

²³ Comscore MMX Multi-Platform, Total Internet, Age: 18+, Sep 2019 and 2020, UK. Note: TV set and smart device online use not included

Households in lower socio-economic groups have fewer devices available for online access

Our 2021 Technology Tracker data shows that 12% of households in the DE group have no devices available to access the internet and 13% have just one device, roughly double the percentage of C2 households and three times that of AB and C1 households.

Figure 1.15: Count of individual devices in UK households, by socio-economic group

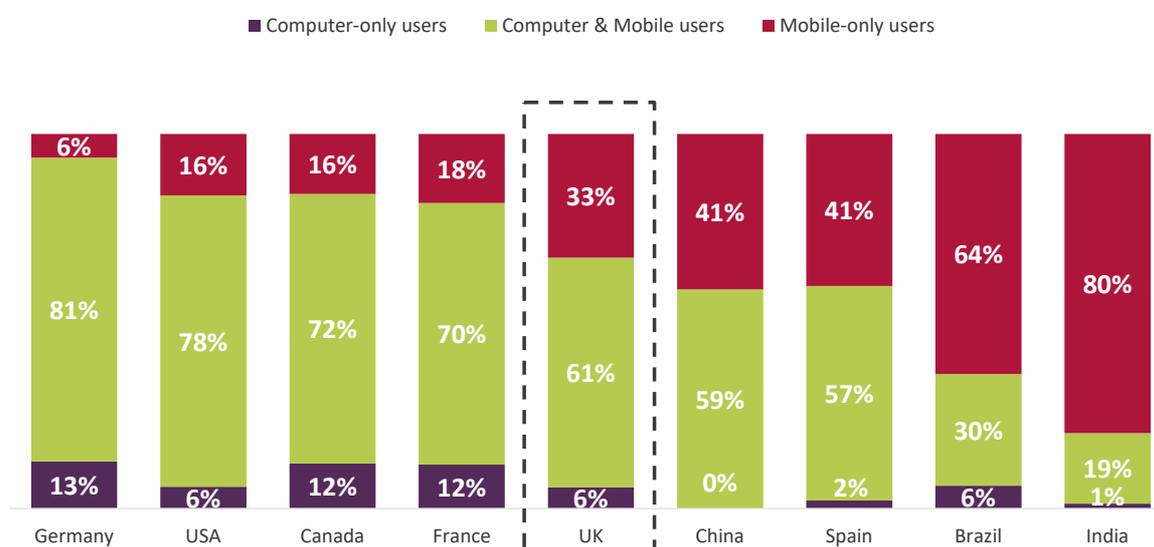
	AB	C1	C2	DE	Entire pop.
0 devices	4%	5%	6%	12%	7%
1 device	4%	4%	7%	13%	7%
5+ devices	69%	58%	53%	36%	54%

Source: Ofcom Technology Tracker CATI omnibus survey, 12 February to 5 March 2021.

In comparison to other selected markets, the UK is in the middle in its proportion of mobile-only users

International data from Comscore for September 2020 shows that some European countries (France, Germany) of comparable population and economy size to the UK have higher proportions of computer-only internet users and lower proportions of mobile-only users. Users in Brazil and India are much more reliant on mobile devices, with 64% and 80% mobile-only online users respectively.²⁴

Figure 1.16: Devices used by adults for accessing the internet, by country



Source: Comscore MMX Multi-Platform, Age: 18+, Sep 2020, Brazil, Canada, China, France, Germany, India, Spain, USA and UK

²⁴ Comscore MMX Multi-Platform, Total internet, Age: 18+, Sep 2020, Brazil and India

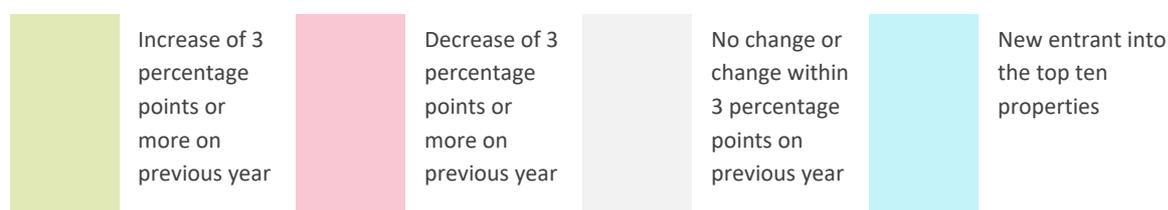
Note: Measured take-up includes activity where data is available (desktop and laptop PCs, tablets and smartphones); it therefore excludes activities over a single month on smart TVs, smart speakers and other internet-connected devices. Note distinction in methodology between this data and the survey responses from the Adults' Media Literacy Tracker that informed the chart at figure 1.14.

Use of internet services

Popular online properties

Google- and Facebook-owned sites and apps remain the two most popular online properties in the UK, used by almost all adult internet users

In September 2020, Google and Facebook properties remained the most-used properties, reaching 99% and 97% of online adults respectively.²⁵ Amazon continued to reach 92% of online adults across its e-commerce sites and the film and television information database IMDb, which it owns. Microsoft sites continued to increase their reach, as in previous years, now up to 90%, while News UK (The Times and The Sun), Reach Group (The Express, The Mirror, The Daily Star and local titles), BBC sites and Sky sites remain well established in the top ten. Mail Online/Daily Mail sites entered the top ten for the first time in 2020, extending their reach to 82%, although figure 1.17 below shows that they were not in the top ten properties for average time spent per day in September 2020.²⁶ In late 2019 Apple introduced a new suite of products, including Apple TV+ and Arcade. Apple Music has had the largest increase in reach among the Apple app suite since September 2019,



when Apple released a web version²⁷ of its Music service. Despite a year featuring increased e-commerce site use, eBay exited the top ten, falling from 73% reach to 67% in September 2020.²⁸

Figure 1.17: Top ten properties accessed by adults online, ranked by reach: September 2018-2020

Rank	2018		2019		2020	
	Property	Reach	Property	Reach	Property	Reach
1	Google Sites	98%	Google Sites	99%	Google Sites	99%
2	Facebook	96%	Facebook	96%	Facebook	97%

²⁵ Properties are groups of websites and apps owned by the same company; for instance, Google properties include Google Search, Gmail and YouTube; Facebook properties include Facebook and Messenger, Instagram and WhatsApp.

²⁶ Comscore MMX Multi-Platform, Age: 18+, September 2020, UK

²⁷ TechCrunch, [Apple Music launches a public beta on the web](#), September 2019

²⁸ Comscore MMX Multi-Platform, Age: 18+, September 2020, UK

3	BBC Sites	93%	Amazon Sites	92%	Amazon Sites	92%
4	Amazon Sites	91%	Reach Group	88%	Reach Group	91%
5	Microsoft Sites	86%	Microsoft Sites	87%	Microsoft Sites	90%
6	Reach Group	83%	BBC Sites	87%	News UK Sites	89%
7	Verizon Media	72%	News UK Sites	79%	Mail Online/Daily Mail	82%
8	eBay	72%	eBay	73%	BBC Sites	82%
9	Sky Sites	72%	Sky Sites	70%	Sky Sites	81%
10	News UK Sites	68%	Verizon Media	70%	Apple Inc.	73%

Source: Comscore MMX Multi-Platform, Age: 18+, Sep 2018-2020, UK

Note: Does not include TV set and smart speaker use. A methodology change in data collection for BBC sites may explain their year-on-year decrease.

UK internet users spent an average of 52 minutes a day on Google-owned sites and 29 minutes on Facebook-owned sites

By time spent, Google and Facebook remain the top two most popular properties on smartphones, tablets and computers. On average, adult users in the UK spent 52 minutes a day on a Google-owned site or app in September 2020, up from 47 minutes the year before. Bytedance Inc., which owns TikTok, took the third spot, with adult users in the UK spending 20 minutes per day on it.²⁹ While neither Netflix or Spotify were in the top ten based on reach, both appear in the top ten properties based on time spent per visitor, ranking fourth and fifth respectively in 2020. Time spent on Netflix is significantly understated, as the data only captures time spent on computers and mobile devices, and excludes time spent watching Netflix on connected TV sets, while time spent on Spotify does not include time spent listening on smart devices.³⁰

²⁹ In 2019, TikTok did not feature in the top 100 sites for reach, but if it had, it would have been in fifth position on time spent per visitor

³⁰ Comscore MMX Multi-Platform, Age: 18+, September 2020, UK

Figure 1.18: Top ten properties accessed by UK adults via computer, smartphone and tablet, ranked by average time spent per day, by visitors to the sites: September 2018 – September 2020

	2018		2019		2020	
Rank	Property	Time	Property	Time	Property	Time
1	Google Sites	43 mins	Google Sites	47 mins	Google Sites	52 mins
2	Facebook	29 mins	Facebook	36 mins	Facebook	29 mins
3	Spotify	23 mins	Spotify	15 mins	Bytedance Inc.	20 mins
4	Netflix	15 mins	Netflix	15 mins	Netflix	16 mins
5	BBC Sites	5 mins	Samsung Group	6 mins	Spotify*	15 mins
6	Xhamster	4 mins	Verizon Media	4 mins	Snapchat, Inc.	8 mins
7	Verizon Media	4 mins	Microsoft Sites	4 mins	Twitter	5 mins
8	eBay	4 mins	eBay	4 mins	Roblox	5 mins
9	Microsoft Sites	3 mins	BBC Sites	4 mins	Verizon Media	5 mins
10	Amazon Sites	2 mins	Twitter	3 mins	Microsoft Sites	4 mins

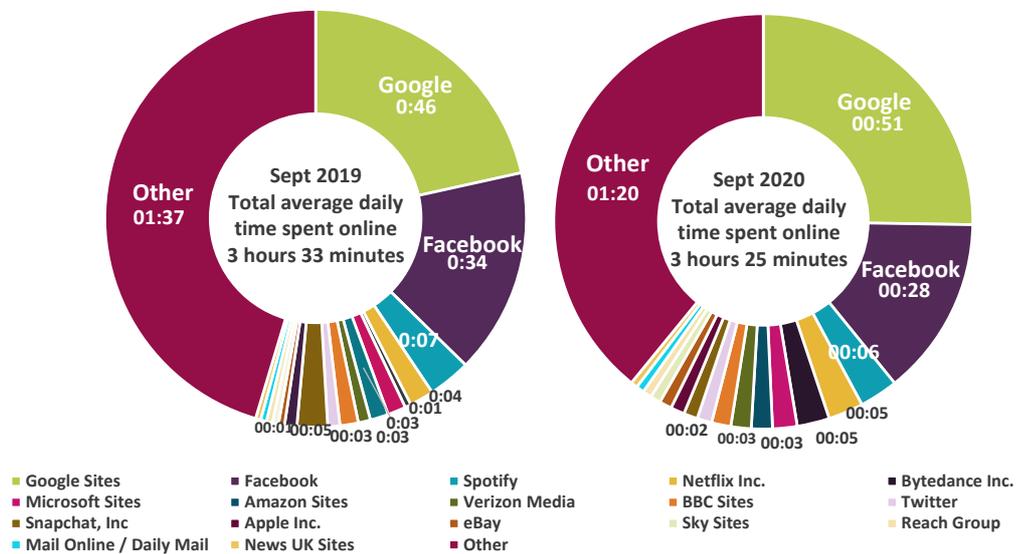
Source: Comscore MMX Multi-Platform, based on Top 100 Properties by reach, Age: 18+, Sep 2018-2020, UK.

Note: Online use via a TV set and smart device is not measured by Comscore. *Due to a tagging issue on iOS, Spotify was under-reported for September 2020. A methodology change in data collection for BBC sites may explain its year-on-year decrease. Snapchat is only measured via current methodology since Nov 19. TikTok and Roblox are covered in the [Children chapter](#) of this report.

Thirty-nine per cent of measured time online by UK adults in September 2020 was spent on Google- or Facebook-owned sites and apps, in line with 2019. However, while Google gained 5 minutes compared to September 2019, Facebook lost 6 minutes. Eighteen properties in the top 100 were accessed by UK adults on average for a minute or more a day, across all internet users, on

smartphones, tablets and computers; 22% of the average time spent online each day per adult is on these 18 out of the top 100 properties. ³¹

Figure 1.19: Share of average time spent online per day by UK adult digital population, split by property: September 2019 and 2020 (hours:minutes)



Source: Comscore MMX Multi-Platform, Age: 18+, Sep 2019 and Sep 2020, UK.

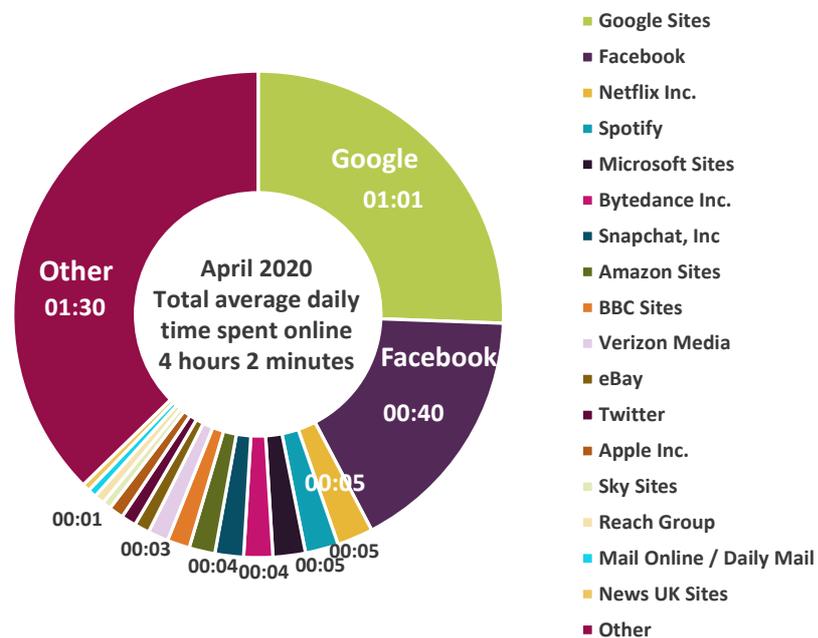
The spring 2020 lockdown saw an increase in average time spent online by UK adults on Google- and Facebook-owned sites and apps

In April 2020, during the UK spring 2020 lockdown, time spent online per day by UK adults had increased by around half an hour compared to both September 2019 and 2020 overall. In April 2020 42% of measured time online was spent on Google- or Facebook-owned sites and apps, up from 39% in September 2019. Google had gained 15 minutes since September 2019 but then lost 10 mins by September 2020. Similarly, Facebook had gained 6 minutes since September 2019 but lost 12 minutes by September 2020.³²

³¹ Netcraft, [May 2020 Web Server Survey](#), 26 May 2020

³² Comscore MMX Multi-Platform, Age:18+, September 2019, September 2020 and April 2020, UK

Figure 1.20: Share of average time spent online per day by UK adult digital population, split by property: April 2020 (hours:minutes)



Source: Comscore MMX Multi-Platform, Age: 18+, Apr 2020, UK

Google sites are the most-visited property in many other countries too

Google sites also lead other countries’ most-visited properties in 2020. In our sample month of September 2020, Google sites had more visitors than any other property in Brazil, France, Germany, India, Spain and the United States. Facebook was the second most popular property in five of our eight comparison markets. Microsoft sites feature in the top ten properties of all the countries we examined. Multi-service properties Tencent Inc. and Alibaba.com Corporation were the most-visited properties in China, with over 600 million and 500 million visitors respectively in September. Despite being blocked in mainland China, Google was the property with the tenth most visitors in this country, through access in the Special Administrative Regions of Hong Kong and Macau.³³

News conglomerate properties were in the top tens of all the countries selected and featured heavily in many countries’ lists. In Australia, Rupert Murdoch’s NYPost Network was the third most-accessed property in September 2020, reaching 80% of the Australian adult online population, ahead of Mail Online/Daily Mail, accessed by 62% (compared with 82% in the UK). Brazil’s news properties Globo and UOL were closely behind Google and Facebook in September 2020 with online adult reach of 98% and 91% respectively. In India, the third most popular property in September was Times Internet Ltd., the digital arm of Times Group, which is the largest news conglomerate in India.³⁴

³³ Comscore MMX Multi-Platform, Age: 18+, Sep 2020, Brazil, China, France, Germany, India, Spain and USA

³⁴ Comscore MMX Multi-Platform, Age: 18+, Sep 2020, Australia, Brazil and India

Brazil's state-owned financial services company Caixa, which also manages lotteries, featured in Brazil's top ten, as did e-commerce retailers MercadoLibre and B2W Digital, and news outlets R7 and Terra Networks (the latter of which also provides connectivity and e-commerce services).

In India, Amazon was the highest-reaching e-commerce service, at 77% of online adults in September 2020, although India's own e-commerce service Flipkart, established by former Amazon employees³⁵, is also popular, reaching 57% of online adults³⁶. In 2018 Walmart acquired a 77% controlling stake in Flipkart for \$16bn.³⁷ India's payment platform PAYTM ('pay through mobile'), reached 47% of online adults in India in September 2020.³⁸

Figure 1.21: Top ten properties accessed by adults online, by country, ranked by reach: September 2020

Australia 		Brazil 		China 		France 		
	Property	Adult visitors	Property	Adult visitors	Property	Adult visitors	Property	Adult visitors
1	Microsoft sites	14.9m	Google sites	112.3m	TENCENT Inc.	602m	Google sites	40.6m
2	Google sites	14.2m	Facebook	111.7m	Alibaba.com Corp	505.5m	Group Figaro	36.3m
3	NYPPost Network	14m	Globo	110.3m	Qihoo.com sites	369.4m	Microsoft sites	36.2m
4	Mail Online, Daily Mail	10.7m	UOL	102.2m	Sohu.com Inc.	344.4m	Facebook	34.3m
5	CafeMedia	9m	Microsoft sites	78.4m	Baidu.com Inc.	324.3m	Webedia sites	29.4m
6	Verizon Media	8.6m	CAIXA.GOV.BR	74.7m	360Buy Corporation	246.5m	Verizon Media	27.4m
7	Hearst	8.4m	Terra Networks	74.1m	Bytedance Inc.	236.7m	Gruner+Jahr sites	26.6m
8	Amazon sites	6.8m	MercadoLibre	65m	PUNDUODUO.COM	226.4m	Amazon sites	22.3m
9	9NEWS.COM.AU	5.8m	B2W Digital	64m	SINA Corporation	145.4m	Group TF1	20.8m
10	Spotify	5.5m	R7 Portal	61.9m	Google Sites	133.4m	DailyMotion	14.8m

Germany 		India 		Spain 		United States 		
	Property	Adult visitors	Property	Adult visitors	Property	Adult visitors	Property	Adult visitors
1	Google sites	50.9m	Google sites	385m	Google sites	32.2m	Google sites	229.6m
2	Microsoft sites	43m	Facebook	377.5m	Facebook	31m	Facebook	217.7m
3	Axel Springer SE	29m	Times Internet Ltd.	322.9m	Vocento	29.6m	Verizon Media	203.2m
4	Amazon sites	23.9m	Amazon sites	302.3m	RCS Media Group	29.3m	Amazon sites	202.3m

³⁵ The Times of India, [Flipkart co-founder likely to quit after Walmart takeover](#), May 2018

³⁶ Comscore MMX Multi-Platform, Age: 18+, Sep 2020, India

³⁷ Walmart, [Walmart and Flipkart Announce Completion of Walmart Investment in Flipkart, India's Leading Marketplace eCommerce Platform](#), August 2018

³⁸ Comscore MMX Multi-Platform, Age: 18+, Sep 2020, India

5	Facebook	19m	Flipkart sites	223.4m	Prisa	28.8m	Microsoft sites	200.3m
6	eBay	16.3m	TRUECALLER.COM	202.3m	Prensa Ibérica	28m	ViacomCBS Digital	190.3m
7	Hubert Burda Media	15.2m	PAYTM.COM	185.3m	Microsoft sites	26.9m	WarnerMedia	178.9m
8	United-Internet	15.1m	Reliance Jio	179.8m	Grupo Gudo	26.8m	Comcast	177.8m
9	Spotify	14.6m	Microsoft sites	158.7m	Atresmedia	26.4m	Apple Inc.	165.4m
10	Webedia sites	13.5m	Network 18	157.5m	Amazon sites	23.9m	Walt Disney Company	162.4m

Source: Comscore MMX Multi-Platform, Age: 18+, Sep 2020.

Popular apps

Google and Facebook-owned apps dominate the UK's top ten-reaching apps

Forty-two and a half million adults (94% of the online adult population) use apps on smartphones or tablets in the UK, and 39.9 million adults (88% of the online adult population) use apps on smartphones. YouTube was the most popular app across all mobile devices in the UK in September 2020, by reach and time spent per visitor per day. Users spent almost twice as much time on YouTube every day as on Facebook, which was in second place. Amazon is the only app in September 2020's top ten that is not owned by Facebook or Google.³⁹

Figure 1.22: Top ten applications, by mobile reach and time spent per adult visitor per day: September 2020 (Apple and Android)

	App owner	September 2020	Reach	Mobile adult reach	Time spent by visitor per day
1	Alphabet	YouTube	31.9m	75%	31mins 56secs
2	Facebook	Facebook	31.7m	74%	16mins 46secs
3	Facebook	WhatsApp	29.6m	70%	7mins 36secs
4	Alphabet	Google Search	23.9m	56%	5mins 37secs
5	Alphabet	Google Maps	22.5m	53%	2mins 18secs
6	Facebook	Instagram	20.8m	49%	6mins 45secs
7	Alphabet	Gmail	20.4m	48%	4mins 8secs
8	Amazon	Amazon	19.2m	45%	2mins 5 secs
9	Alphabet	Google Play	18.4m	43%	23secs
10	Facebook	Facebook Messenger	18.2m	43%	15mins 46secs

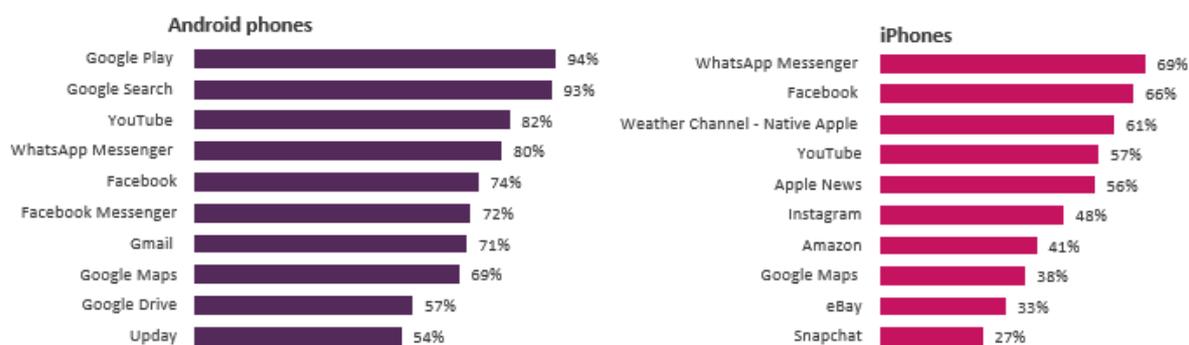
Source: Comscore Mobile Metrix, App only, Adults 18+, Sept 2020, UK. Note: Alphabet is Google's parent company.

³⁹ Comscore Mobile Metrix, App only, Age: 18+, September 2020, UK

The top three apps on Android phones are Google-owned

Figure 1.23 below shows that the most-used apps differ by operating system. Six of the top ten apps on Android phones are Google-owned, three are Facebook-owned, and Samsung’s Upday mobile app (pre-installed on Samsung phones) also features in the top ten. Google Play, Google Search, Gmail and YouTube come pre-installed on Android phones, which probably accounts for their high reach. Four of the top ten apps on iPhones are Facebook-owned, while two are Google-owned. The weather channel and Apple News are the only pre-installed apps on iPhones that are in the top ten for reach. Looking at changes since 2019, WhatsApp messenger has increased its reach on both Android (+8pp) and iPhones (+4pp). Conversely, Instagram reach on iPhones has declined (-18pp).

Figure 1.23: Top ten smartphone apps, Android phones vs. iPhones, based on reach of mobile app universe



Source: Comscore Mobile Metrix, Adults 18+, Sep 2020, UK.

Note: Data for Apple imessage and Safari not measured.

Online communications services

Facebook’s WhatsApp is the most popular messaging and calling service in the UK, reaching 67% of online adults in September 2020

WhatsApp, which is used for instant messaging and voice and video calling, reached a peak of 31.4 million UK online adults in December 2020. Its largest month-on-month increase during 2020 was from March to April, when an additional 1.1 million adults visited the service. Facebook Messenger, the second-highest reaching messaging and/or calling service, had a similar pattern of use, peaking at 21.1 million adult users in April 2020.⁴⁰

Figure 1.24: UK adult users of WhatsApp site and/or apps and Facebook Messenger app: January – December 2020

2020	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
WhatsApp	28.4m	28.2m	29.9m	31.0m	30.6m	30.2m	30.7m	30.7m	30.7m	30.8m	31.2m	31.4m

⁴⁰ Comscore MMX Multi-Platform, WhatsApp and Facebook Messenger, Age: 18+, Mar, Apr and Dec 2020, UK

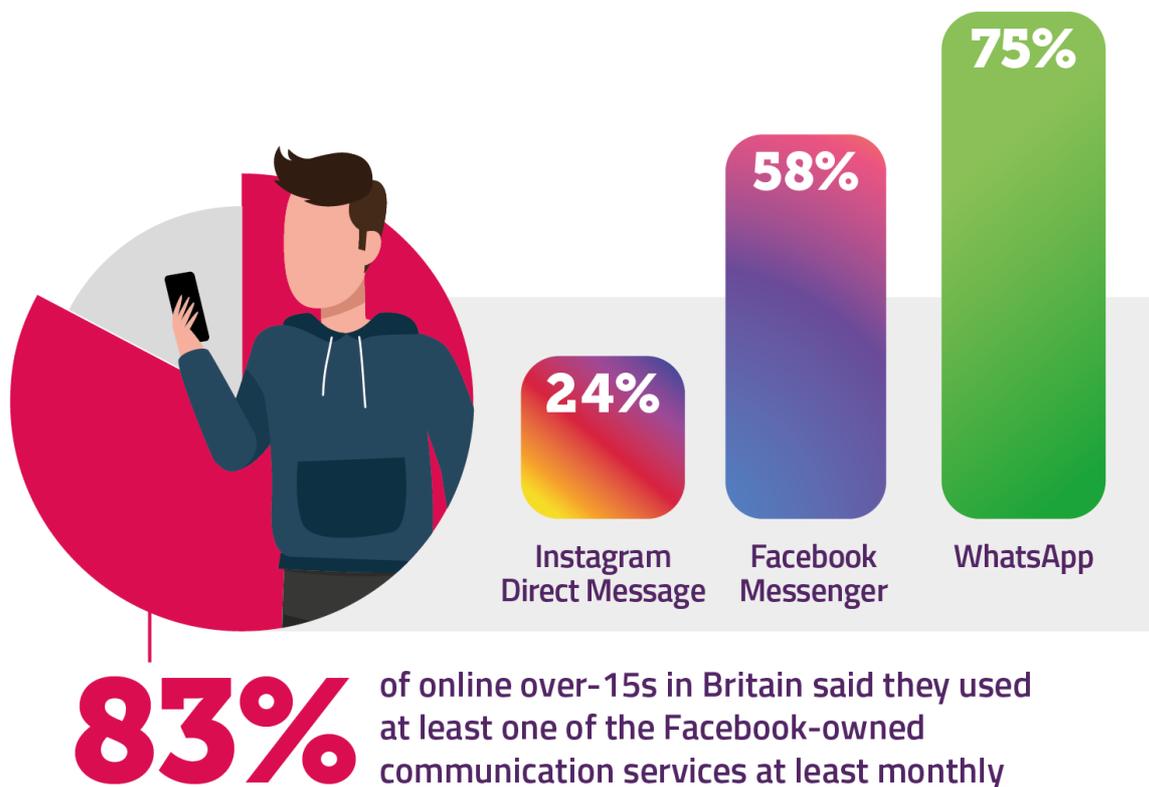
Facebook Messenger*	22.0m	20.6m	16.4m	21.1m	20.3m	20.0m	20.0m	19.9m	18.2m	18.1m	18.2m	18.2m
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Source: Comscore MMX Multi-Platform, Age: 18+, Jan - Dec 2020, UK

Note: *Facebook messaging service can also be accessed from the main Facebook platform; users who visited the service only via the main Facebook service are not included in this data.

During the spring 2020 lockdown 83% of online over-15s in Britain, and 97% of 15-to 24-year-olds, said they used at least one Facebook-owned communication service for messaging at least monthly. Among 15-24s, 80% said they used WhatsApp for messaging at least monthly, 72% used Facebook Messenger and 67% used Instagram direct messaging at least monthly.⁴¹ In September 2020 Facebook introduced cross-app messaging and calling across Instagram and Messenger, enabling users to use either app to send messages and join video calls, and removing the need for connections to be on one app or the other.⁴²

Figure 1.25: Proportion of online adults who said they used Facebook-owned messaging services at least monthly during the spring 2020 lockdown, by service



Source: TouchPoints, GB, spring 2020 lockdown.

Base: all adults (15+) who have gone online in last 12 months.

⁴¹ TouchPoints, GB, spring 2020 lockdown. Base: all adults (15+) who have gone online in last 12 months

⁴² Facebook Newsroom, [Say 👋 to Messenger: Introducing New Messaging Features for Instagram](#), Sept 2020

Beyond the Facebook-owned services, there are various other online communications services available in the UK, all of which have a much smaller online UK adult reach than WhatsApp. In addition, many apps and sites, including social media, also have messaging, voice and/or video-calling features; these are not listed in figure 1.26 below. [Social media](#) is explored in the next section, and some of the other services with communication features, such as dating sites and apps, are explored below.

Figure 1.26: UK adult reach of online messaging and calling services: September 2020

Rank	Communications services	Adult reach	Online adult reach
1	WhatsApp	30.4m	67%
2	Facebook Messenger app*	20.4m	45%
3	Microsoft teams	9.5m	21%
4	Zoom	8.0m	18%
5	Google duo app	3.3m	7%
6	Skype	2.7m	6%
7	Discord	2.3m	5%
8	Viber	1.63m	4%
9	Telegram	1.23m	3%
10	Kik	770k	1.7%
11	Imo	733k	1.6%
12	Houseparty	703k	1.5%
13	Line	274k	0.6%
14	WeChat	240k	0.6%
15	Signal	137k	0.3%
16	Kakao app	14k	0.1%

Source: Comscore MMX Multi-Platform, Age: 18+, September 2020, UK

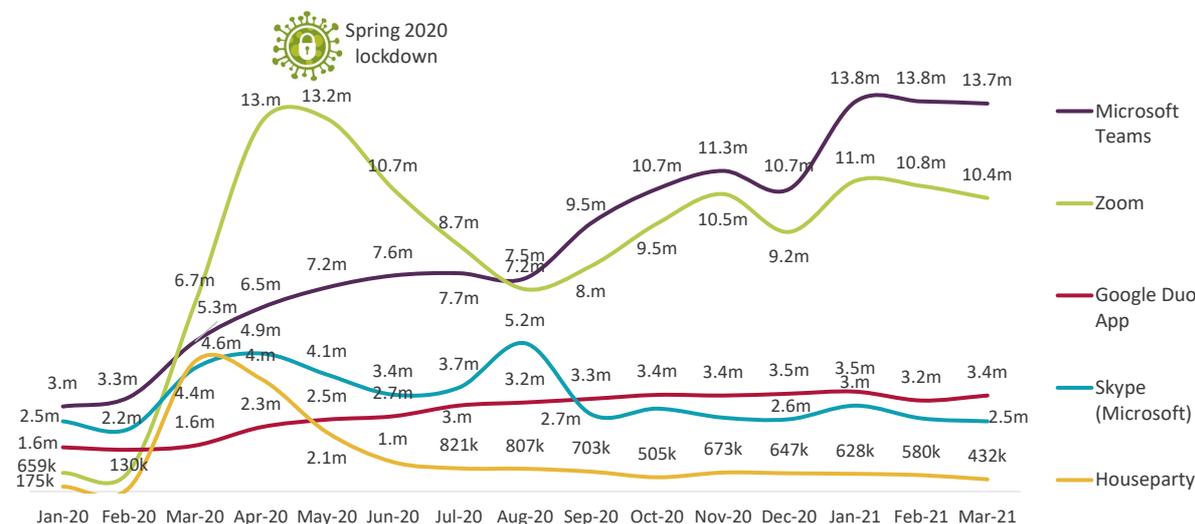
Note: Custom list of entities defined by Ofcom. *Facebook messaging service can be accessed via the main Facebook app which is not counted here. Data for Apple imessage and FaceTime not measured.

Zoom and Microsoft Teams were big winners in 2020 as people made more use of video-calling services

During 2020, the coronavirus pandemic pushed people in the UK to use video-calling services to keep in touch with friends and family as well as for business purposes and education. Zoom increased its reach during the spring 2020 lockdown, but fell back after an initial peak in April 2020, before settling into a pattern of steady growth over the rest of the year, and Microsoft Teams showed a steady increase in use over the whole of 2020. In contrast, Houseparty, which initially gained popularity during the spring 2020 lockdown and peaked at 4.6 million adults in March 2020,

had only short-lived success; its adult UK reach declined over the rest of 2020 and the beginning of 2021.⁴³

Figure 1.27: UK adults using selected communication services with video-calling features: January 2020 – March 2021



Source: Comscore MMX Multi-Platform, Age: 18+, Jan 2020 - Mar 2021, UK

Note: Custom list of entities defined by Ofcom.

2021 marks 50 years since the first email was sent: in September 2020 88% of UK online adults visited an email service⁴⁴

In 1971 computer engineer Ray Tomlinson sent the first email, using software he had created – ‘SNDMSG’ – and introduced the now ubiquitous ‘@’ symbol to separate the recipient’s name from their location.⁴⁵ Despite the growth of messaging services, email reach remains high: 88% visited a service in September 2020 compared with 87% in September 2019. Google Gmail was the highest-reaching email service among adults in 2020, reaching 61% of the UK online adult population.⁴⁶ A study conducted by Microsoft found that on its Microsoft 365 service, the number of emails delivered to commercial and academic users globally in February 2021 was up by 40.6 billion since February 2020.⁴⁷

Figure 1.28: Reach of selected email sites/apps to UK adults: September 2020

Ranks	Email service	Adult reach	Online adult reach
1	Google Gmail	27.9m	61%

⁴³ Comscore MMX Multi-Platform, Houseparty, age: 18+, 2020, UK

⁴⁴ Comscore MMX Multi-Platform, email, Age: 18+, September 2020, UK

⁴⁵ Guinness world records, [1971: First Ever Email](#), 19 Aug 2015

⁴⁶ Comscore MMX Multi-Platform, Google Gmail, Age: 18+, September 2020, UK

⁴⁷ Microsoft, [2021 Work Trend Index: Annual Report](#), 22 March 2021. The number of emails delivered to commercial and education customers via Microsoft Exchange Online in February, when compared to the same month last year

2	Outlook.com (Microsoft)	14.0m	31%
3	Verizon media – mail sites (incl. Yahoo and AOL mails)	9.3m	21%
4	Samsung email app	5.0m	11%
5	ParentMail (IRIS)	933k	2%
6	Mail.com	617k	1%

Source: Comscore MMX Multi-Platform, Age: 18+, September 2020, UK

Note: Custom list of entities defined by Ofcom.

Twelve per cent (5.9 million) of online adults in Britain were using online dating before the spring lockdown in 2020⁴⁸

Online dating services also provide online users with a form of direct communication via messaging and calls. Twelve per cent of all online adults and 22% of those aged 15-34 in Britain said they used an online dating service before the spring 2020 lockdown.⁴⁹ Match Group owns some of the most popular dating services: Tinder, Plenty of Fish, Hinge, Match.com and OK Cupid, together reaching 7% of the adult UK online population.⁵⁰ Tinder is most popular with young adults; it was visited by 11% of UK online 18-24s in September 2020.⁵¹ Plenty of Fish was the most popular dating site for UK online 45-54s, with 4% visiting its site/app.⁵² During the pandemic, as more people looked to start relationships online, there arose instances of ‘sweetheart’ or romance scams, where criminals use online dating services to manipulate users into sending them money or goods. This can involve victims losing money via money transfers and buying fraudsters gift cards or high-value gifts. The total value of these scams rose by 12% to £18.5m. There was a 20% increase in bank transfers related to romance scams in 2020 compared to 2019, according to UK Finance.⁵³

Figure 1.29: Selected dating sites/apps’ reach to UK adults: September 2020

Rank	Dating site and/or app	Adult reach	Online adult reach
1	Tinder	1.85m	4%
2	Plenty of Fish (POF)	1.34m	3%
3	Badoo	723k	2%
4	Bumble	663k	2%
5	Grindr	378k	1%
6	Zoosk	358k	1%
7	Hinge app	323k	1%
8	Match.com	319k	1%

⁴⁸ TouchPoints, GB, pre-spring lockdown 2020. Base: all adults (15+) who have gone online in last 12 months

⁴⁹ TouchPoints GB, pre-spring lockdown 2020. Base: all adults (15+) who have gone online in last 12 months

⁵⁰ Comscore MMX Multi-Platform, The Match Group, Age: 18+, September 2020, UK

⁵¹ Comscore MMX Multi-Platform, Tinder, Age: 18-24, September 2020, UK

⁵² Comscore MMX Multi-Platform, POF sites Age: 45-54, September 2020, UK

⁵³ UK Finance, [Romance scams on the up during lockdown](#) accessed 22 April 2021

9	Secret Benefits	298k	1%
10	Happn	290k	1%

Source: Comscore MMX Multi-Platform, Age: 18+, September 2020, UK

Note: Custom list of entities defined by Ofcom.

Social media

Older social media using adults are more likely to have a Facebook profile...

Eighty-two per cent of adults aged 16+ who go online have a social media profile,⁵⁴ and Facebook and Instagram continue to be the most widely used platforms. Ninety-one per cent of social media users aged 65+ use Facebook, and nearly half (49%) of these said it was the only social media service they used. Facebook is less popular with younger social media users; 69% of 16-24s who use social media said they used Facebook. Among all social media users, 57% said Facebook was their main service, with popularity increasing with age. Fourteen per cent said Instagram was their main service, and this was more popular with younger people – nearly a quarter of 16- to 34-year-olds said it was their main service.⁵⁵

...while younger social media users prefer Instagram, Snapchat and TikTok

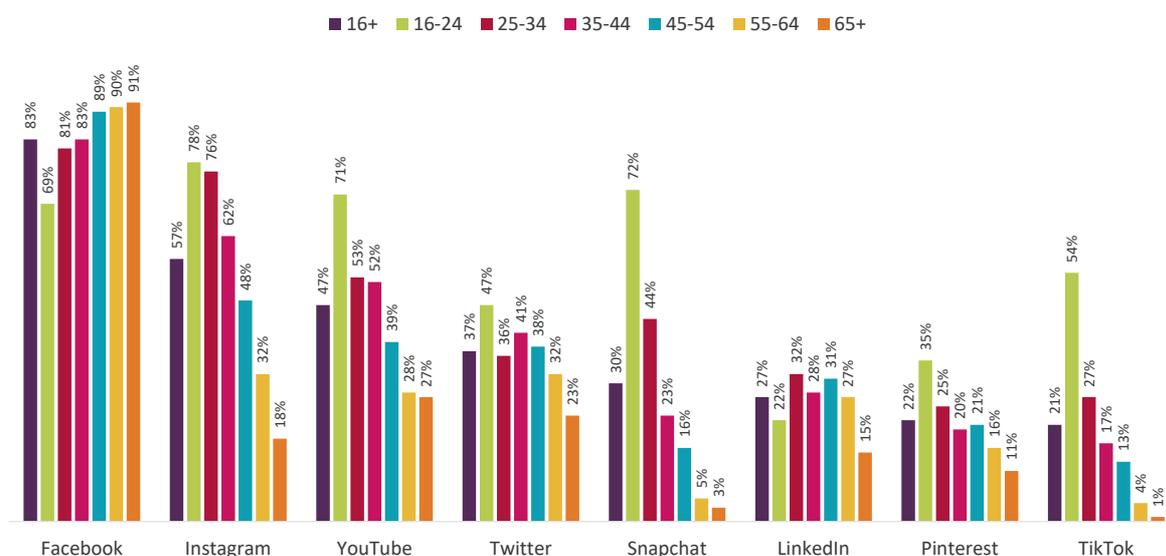
Seventy-eight per cent of 16-24 year olds reported that they used Instagram, compared to 18% of over-64s. TikTok was one of the platforms with big increases in number of users in 2020; more than half (54%) of 16-24s, said they had an active TikTok profile. However, like YouTube, users do not need a profile to use TikTok, so there will probably be more adult users than profiles. TikTok, and time spent on some social media services, are explored further in the [Social video chapter](#). The average number of social media services used decreases with age, from 5.1 for social media users aged 16-24, to 1.9 for those aged 65+. Overall, the average number of sites or apps used by all social media users was 3.5.⁵⁶

⁵⁴ Ofcom, Adults' Media Literacy Tracker 2020

⁵⁵ Ofcom, Adults' Media Literacy Tracker 2020

⁵⁶ Ofcom, Adults' Media Literacy Tracker 2020

Figure 1.30: Use of social media sites or apps by social media users: 2020



Source: Ofcom, Adults' Media Literacy Tracker 2020

IN22. You said you had a profile or account on a social media site or app. Which social media sites or apps do you have a profile or account on that you still use? (multi-coded) showing responses of more than 10% of adults in 2020 aged 16+ who use social media sites or apps. Reddit, Twitch and Tumblr not shown.

Base: All who use social media sites or apps, excluding those responding by post (2231 in 2020)

Older adults are more likely than younger adults to use neighbourhood connection service Nextdoor

Nextdoor is an app which aims to connect neighbours with each other, and to services and local businesses nearby. According to Nextdoor, it is used by one in seven UK households,⁵⁷ and at its peak in November 2020 reached 4.2 million UK adults. However, unlike many of the communication services which often skew younger in reach, Nextdoor was used mostly by over-54s, who comprised 54% of the 3.9 million UK adults visiting the service in September 2020. Only 2% of the visitors were aged 18-24.⁵⁸

Figure 1.31: Reach of selected community- and interest-based online connection services to UK adults: September 2020

Rank	Sites/apps	Adult reach	UK Online adult reach
1	Nextdoor	3.9m	9%
2	Meetup	498k	1%
3	Meetme	154k	0.4%
4	Twoo	49k	0.1%

⁵⁷ Nextdoor, [About](#)

⁵⁸ Comscore MMX Multi-Platform, Nextdoor, Age: 18+, Nov and Sep 2020, UK

Source: Comscore MMX Multi-Platform, Age: 18+, September 2020, UK

Note: Custom list of entities defined by Ofcom.

Case study: Clubhouse

Clubhouse, founded in April 2020, is a social network app that offers live-audio-only conversations between users. It has grown to at least 10 million users globally over the space of a year and had a valuation of around \$1bn in March 2020, despite the app being in beta testing. In May 2021, Clubhouse was valued at \$4bn.⁵⁹ User accounts are linked to a mobile phone number for identification purposes. Currently, Clubhouse is available only by invitation, and only existing users are allowed to invite others to the app. This exclusivity has led to a grey market for invitations, which are on sale from £5 to £200. According to Comscore, 122,000 UK adults visited the Clubhouse app in March 2021 (0.3% of the online UK digital population). Of these adult visitors, 34,000 were aged 18-24.⁶⁰ Other platforms have also been developing audio services. Telegram added voice chats to its service in December 2020,⁶¹ and in April 2021 Instagram added new features to Instagram Live, enabling users to mute their microphones and turn their video off while using Instagram Live, allowing hosts to create an audio-only stream.⁶² In May 2021 Twitter launched Spaces, which permits accounts with 600 or more followers to host live audio conversations.⁶³ Facebook is also reportedly testing a live web audio discussion service called Hotline.⁶⁴

Gaming

The most-used device for gaming among adults is the smartphone

Research from Opinium shows that the overall UK gaming population increased by 63% over the course of the spring 2020 lockdown period and that over half of gamers agreed that gaming helped them get through lockdown.⁶⁵ Ofcom's Adults' Media Literacy Tracker found that 62% of adults in the UK said they played games on an electronic device. Younger adults were more likely than older adults to say they did this, at 92% of 16-24s but only 30% of over-64s.⁶⁶

The most widely used gaming device for all age groups is a mobile phone (used by 39% of adults). Gaming was equally popular among male and female adults, but mobile gaming was more popular among female gamers (43% of females) while computer/console gaming was more popular with males (29%/32% of males respectively).⁶⁷

⁵⁹ TechCrunch, [Clubhouse closes an undisclosed \\$4bn valuation Series C round, as tech giants' clones circle](#), 19 April 2021

⁶⁰ Comscore MMX Multi-Platform, Clubhouse: Drop in audio chat, Age: 18+, March 2021, UK

⁶¹ Telegram, [Voice Chats 2.0: Channels, Millions of Listeners, Recorded Chats, Admin Tools](#), 19 March 2021

⁶² TechCrunch, [Instagram Live takes on Clubhouse with options to mute and turn off the video](#), 29 April 2021

⁶³ Twitter blog, [Spaces is here, let's chat](#), 3 May 2021

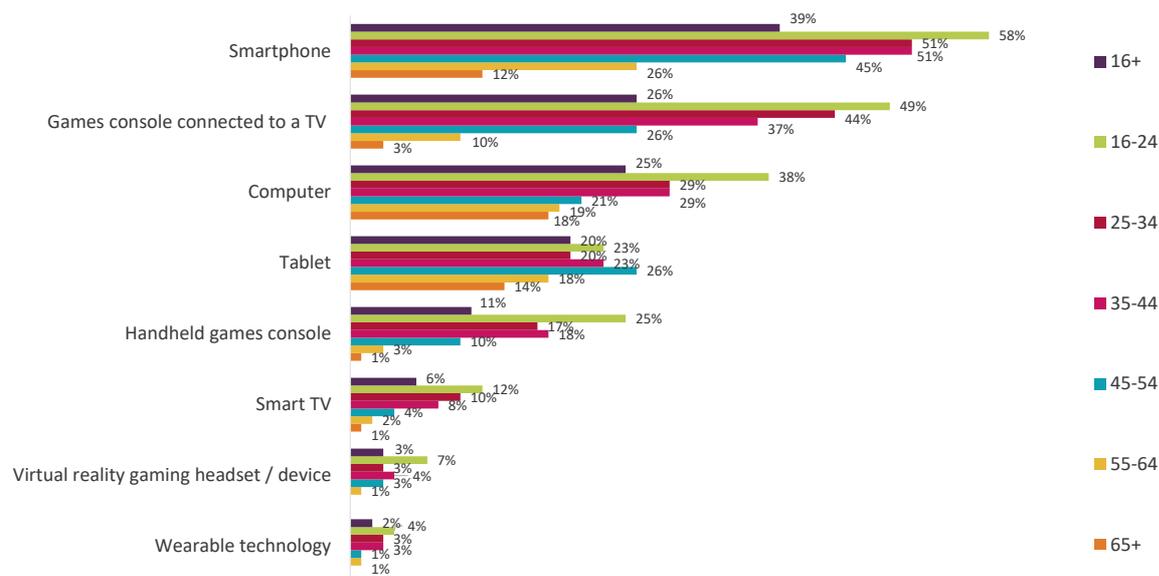
⁶⁴ BBC News, [Facebook creates Clubhouse clone Live Audio Rooms](#), 20 April 2021

⁶⁵ Opinium, [Gaming in the time of Covid-19: the rise of Covideogamers and how to retain them](#), 5 October 2020

⁶⁶ Ofcom, Adults' Media Literacy Tracker 2020

⁶⁷ Ofcom, Adults' Media Literacy Tracker 2020

Figure 1.32: Devices used for gaming, at home or elsewhere: 2020



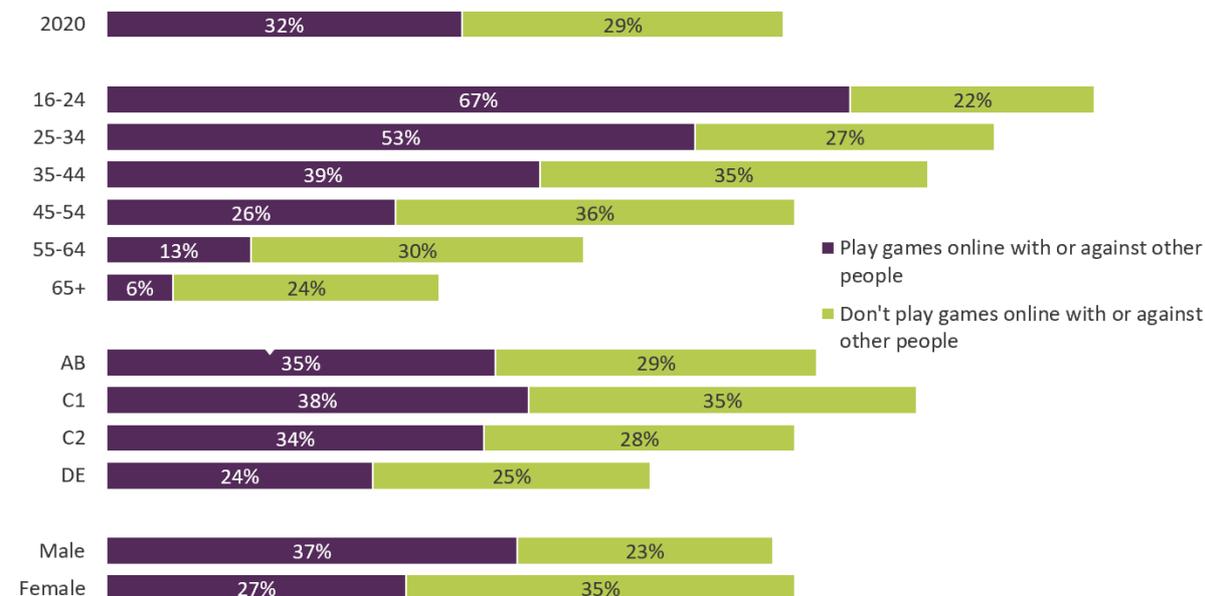
Source: Ofcom, Adults’ Media Literacy Tracker 2020

G1. Do you ever play games at home or elsewhere in any of these ways? (multi-coded)

Base: All adults aged 16+, including those responding by post who gave a response (3013 in 2020)

Playing online with or against other people was also more popular with younger people, and with male gamers.

Figure 1.33: Playing games online with or against other people, by age, socio-economic group and gender



Source: Ofcom, Adults’ Media Literacy Tracker 2020

G3. Many games can be played online. Do you ever play games online with or against other people? (single coded)

Base: All adults aged 16+, including those responding by post who gave a response (3010, varies by demographic)

Half of all 16- to 64-year-old UK gamers surveyed by Ampere in Q2 2021 said they agreed or strongly agreed with the statement: “I only play free-to-play games”. However, just over a third of gamers had spent money on in-game items, currency or battle passes in the 30 days before the survey; this was the biggest category of spending, surpassing the average amounts spent on physical full game purchases, digital full game purchases and games subscriptions.⁶⁸

Among Us became the most popular gaming app among adults in the latter half of 2020

Among Us, which launched in 2018, is an online multiplayer social deduction game (a game in which players attempt to uncover other players’ hidden roles or team allegiances) which gained popularity during the pandemic to become the top mobile and PC game during 2020. *Among Us* was the most downloaded gaming app globally in 2020, with more than a quarter of a billion downloads.⁶⁹ Social video platforms helped to drive awareness and growth of the game; its success started in July 2020 on video-streaming platform Twitch, when high-profile gamers began streaming themselves playing it, and many YouTubers and TikTok influencers immediately followed suit.

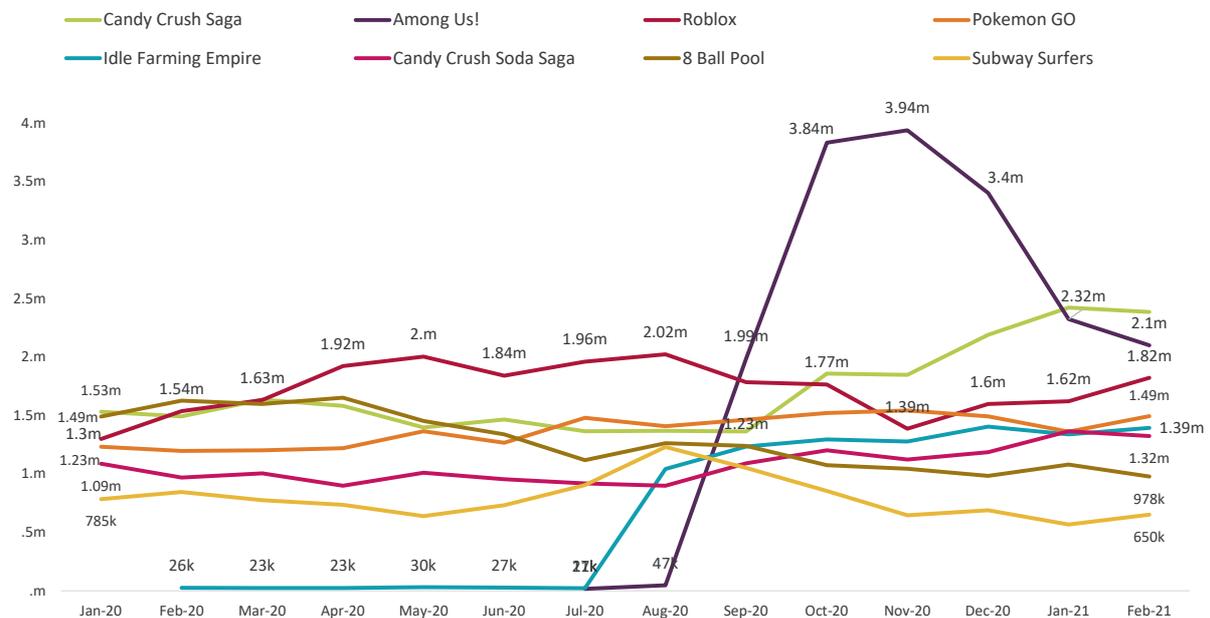
By the end of September 2020, 60 million people across the world were playing *Among Us* every day. As can be seen in figure 1.34 below, it was the top-reaching games app among UK adults, more than half of whom (1.2 million) were aged 18-24.⁷⁰ The growth of *Among Us* demonstrates that there is potential for games to take off quickly, alongside established games such as Candy Crush. But the game’s reach to online adults on mobile devices has declined since 2020, perhaps because it has been available on Nintendo Switch since December 2020, or because after the initial play it has maintained its reach only among its most dedicated users.

⁶⁸ Ampere Analysis Games – Consumer, Q2 2021, UK, age 16-64

⁶⁹ Apptopia, [Worldwide & US Download Leaders 2020](#) 7 January 2021

⁷⁰ Comscore MMX Multi-Platform, Among Us!, Age: 18+, 2020, UK

Figure 1.34: UK adults' use of selected games apps: January 2020 – February 2021



Source: Comscore MMX Multi-Platform, Age: 18+, Jan 2020-Feb 2021, UK
 Note: Custom list of entities defined by Ofcom.

Health

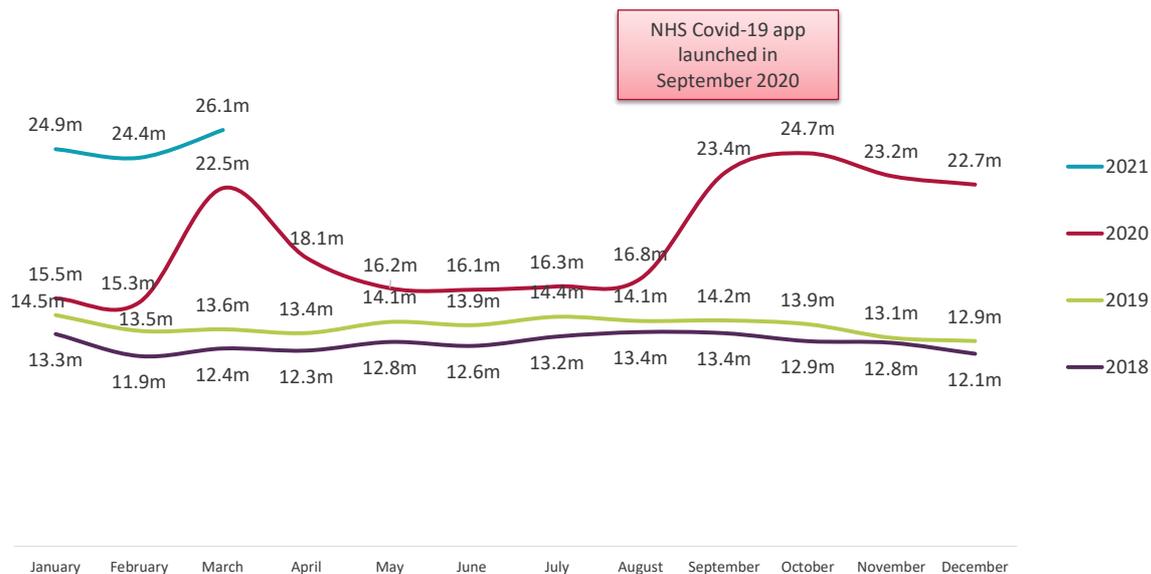
26.1 million UK adults visited the NHS online service in March 2021

Health, both physical and mental, has received a lot of attention during the past year as a result of the pandemic. The NHS site and app were used by 22.5 million UK adults in March 2020⁷¹, the month the UK went into spring lockdown. Following this initial spike, use of the NHS site and app dropped during the summer months of 2020, but in September 2020, following the roll-out of the Government’s NHS Covid-19 track and trace app, there was another increase in reach, with the Department of Health announcing that the app had been downloaded 6 million times on its launch day.⁷² In 2021 adult use of the NHS site and app continued to increase while the UK was under winter lockdown restrictions.

⁷¹ Comscore MMX Multi-Platform, NHS Site and app. Age: 18+, Mar 2020, UK.

⁷² Gov.UK, [NHS COVID-19 app has been downloaded over 10 million times](#), 27 September 2020

Figure 1.35: UK adult users of NHS sites and/or apps, by year



Source: Comscore MMX Multi-Platform, NHS Sites, Age: 18+, Monthly 2018-2021, UK

In February 2021 the Government said that more than 1.7 million app users across England and Wales had been advised to isolate by the NHS COVID-19 app, following close contact with someone who had gone on to test positive.⁷³ In January 2021 24% of adults in England and Wales had accessed the NHS Covid-19 app. The StopCOVID NI app has had comparatively low reach compared to apps for the other UK nations, perhaps because it does not have a checking-in feature for people to use when they visit a venue.⁷⁴

Figure 1.36: Adult reach of Covid-19 tracker apps, by month

	Age: 18+	NHS Covid-19 app (England & Wales)	Protect Scotland app	StopCOVID NI
September 2020	Reach	9.8m	1m	200k
	Nation reach %	21%	24%	3%
October 2020	Reach	12.6m	1m	231k
	Nation reach %	27%	23%	3%
November 2020	Reach	11.1m	822k	89k
	Nation reach %	24%	19%	1%
December 2020	Reach	10.9m	828k	96k
	Nation reach %	23%	19%	1%
	Reach	11.2m	821k	192k

⁷³ Gov.UK, [NHS COVID-19 app alerts 1.7 million contacts to stop spread of COVID-19](#), 9 Feb 2021

⁷⁴ Nidirect.gov, [Coronavirus \(COVID-19\): StopCOVID NI proximity app](#), 22 April 2021

January 2021	Nation reach %	24%	19%	3%
February 2021	Reach	9.4m	724k	169k
	Nation reach %	20%	16%	2%
March 2021	Reach	10m	682k	47k
	Nation reach %	21%	15%	1%

Source: Comscore MMX Multi-Platform, Age: 18+, Sep 2020-Mar 2021, UK. Please note that nation reach has been modelled based on Comscore UK unique visitor figures and ONS nations' population, so this figure may include users in the UK but not within the respective nation.

Fitness trackers show that physical activity dropped during the spring 2020 lockdown

There are a variety of fitness-related sites and apps available in the UK, offering individuals the ability to track their workouts, count steps and see workout instructions. Google-owned Fitbit, which tracks the number of steps an individual has taken, reached a peak of 3.5 million UK adult users in August 2020⁷⁵, by which time lockdown restrictions for some in the UK had eased. Fitbit data in March 2020 revealed a 9% decline in its users' step count⁷⁶.

Some fitness apps available on the market combine fitness with entertainment. The UK-developed 'Zombies, Run!' app provides running routes as part of a mission, in this case a Zombie chase storyline. According to the developers of the app, the UK is its second biggest market (behind the US) and the app is used by half a million people per month globally. The Running Stories app, which was piloted in Singapore in November 2020, is an 'audio-tainment' platform that turns running routes into immersive experiences using live data, to motivate users⁷⁷.

Data from App Annie show that spend on health and fitness apps grew by 70% in 2020.⁷⁸

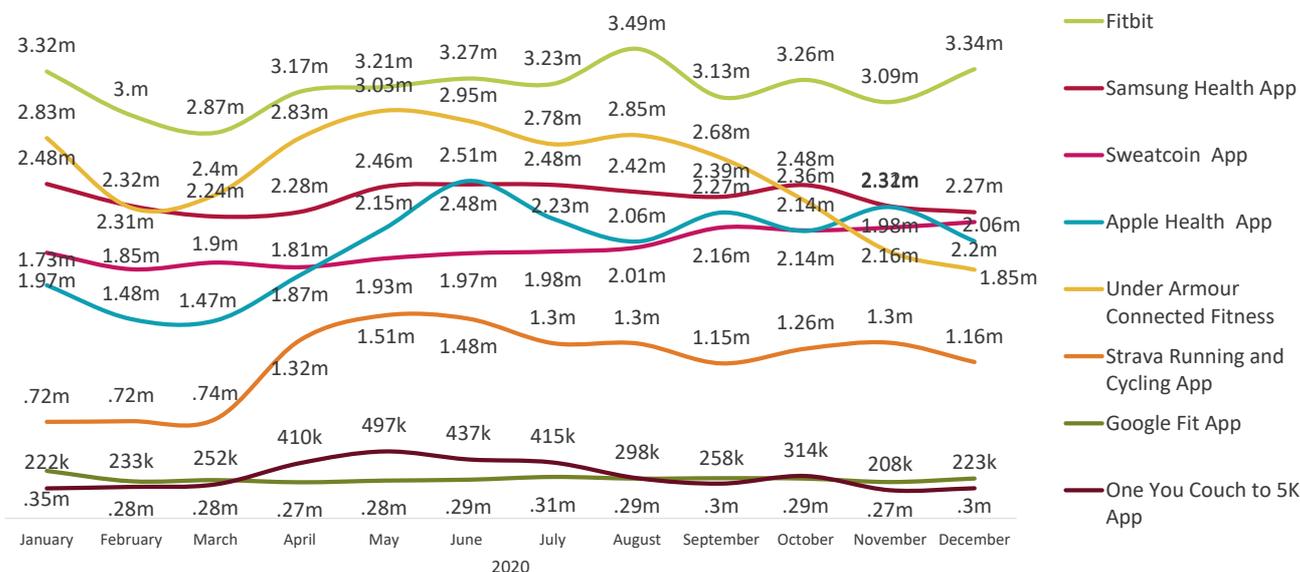
⁷⁵ Comscore MMX Multi-Platform, Fitbit, Age: 18+, August 2020, UK.

⁷⁶ Fitbit blog, [The Impact Of Coronavirus On Global Activity](#), 23 March 2020.

⁷⁷ [Running stories](#)

⁷⁸ App Annie, [State of mobile report 2021](#)

Figure 1.37: UK adult reach of selected health sites and apps: Jan-Dec 2020



Source: Comscore MMX Multi-Platform, Age: 18+, Jan-Dec 2020, UK
 Note: Custom list of entities defined by Ofcom.

Learning

Language learning app Duolingo is the most popular education app

The pandemic moved formal learning online as schools and universities closed. BBC Bitesize was the top-reaching formal learning site/app among adults⁷⁹, many of whom were likely to be logging on to help children.

There was also an increase in take-up of informal learning services. Ofcom research, which passively monitors app use on smartphones and tablets, found that just under a quarter of participants were using education apps. Use was slightly higher among women than men (25% vs. 21%) and in the 35-44 age bracket, where a third said they used education apps.⁸⁰

Language learning app Duolingo is the most popular education app. This app was launched ten years ago, in 2011, and at its peak in 2020 reached 1.77 million UK adults.⁸¹ Duolingo reported that globally, 30 million new users took up learning a language in the weeks after global lockdown, and that in 2020 Spanish was the most popular language being studied on the app.⁸² It also found that Welsh was the fastest-growing language in the UK – the number of people using its service to learn Welsh increased by 44% in 2020.⁸³

⁷⁹ Comscore MMX Multi-Platform, BBC Bitesize, Age: 18+, 2020, UK

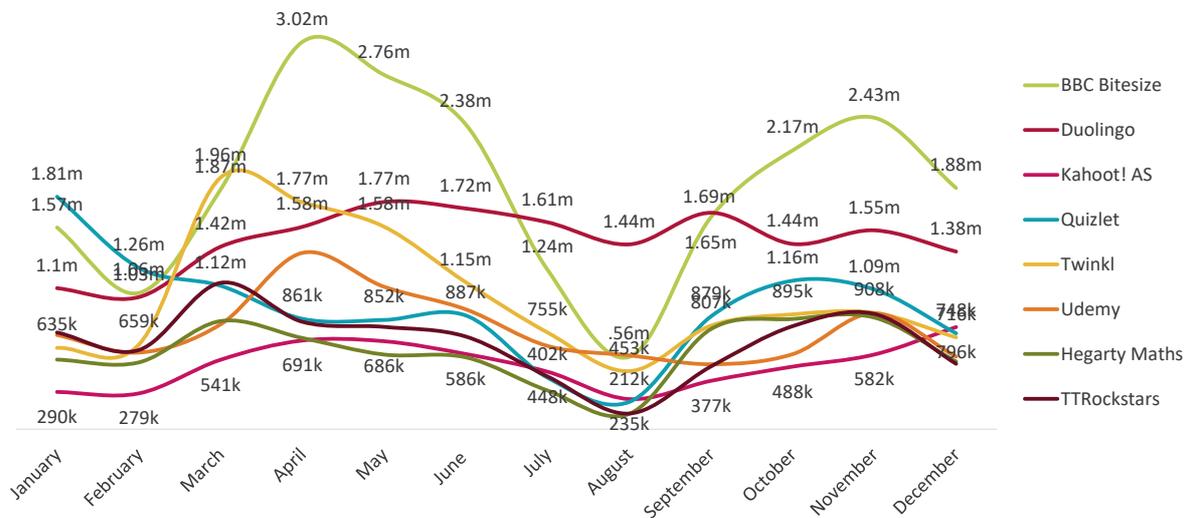
⁸⁰ Ofcom / Reality Mine, September 2020 to February 2021

⁸¹ Comscore MMX Multi-Platform, Duolingo app, Age: 18+, May 2020, UK

⁸² Duolingo Blog, [2020 Duolingo Language Report: Global Overview](#), 15 Dec 2020

⁸³ BBC News, [Welsh is fastest growing language in UK, says Duolingo](#), 17 Dec 2020

Figure 1.38: UK adults' use of selected learning/educational sites and apps: Jan-Dec 2020



Source: Comscore MMX Multi-Platform, Age: 18+, Jan-Dec 2020, UK
 Note: Custom list of entities defined by Ofcom.

Online harms and attitudes to regulation

Two in three adult internet users say they usually accept website or app terms and conditions without reading them...

Our research suggests that most people skip service terms and conditions, where the ways in which services collect and use their users' data may be set out. In 2020, 66% agreed with the statement "when I visit websites or apps I usually accept the terms and conditions without reading them". Those aged 16-54 were more likely than over-54s (35% vs. 25%) to agree strongly with this statement.⁸⁴

...but one in five adult internet users say they are not happy about companies collecting and using their personal information

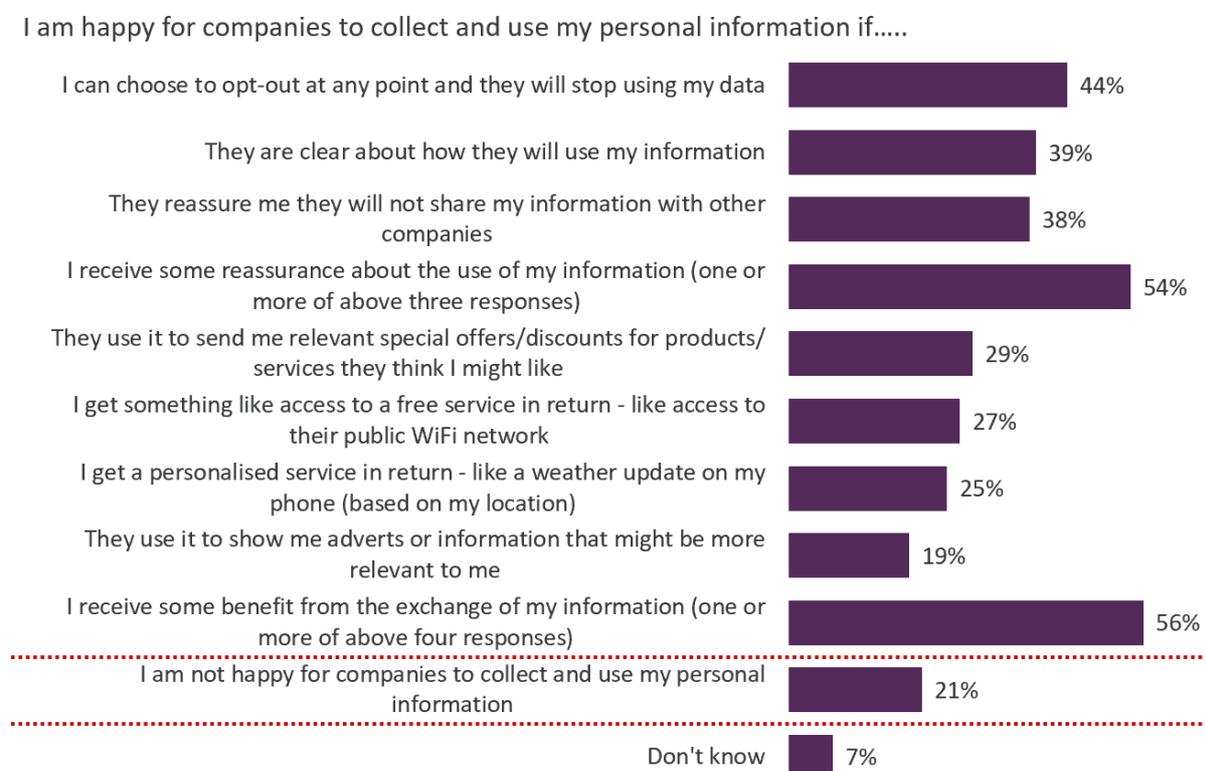
In 2020, 21% of adult internet users said they were not happy for companies to collect and use their personal information under any circumstances. Younger internet users were less likely than average to say this (9% for 16-24s).⁸⁵ However, just over half (54%) of users were happy if they were reassured about the use of this data; for example, having clarity on how the information would be used. Additionally, more than half (56%) are happy if they receive a benefit of some kind as a consequence of allowing access to the data; for example, getting access to a free service. More

⁸⁴ Ofcom, Adults' Media Literacy Tracker 2020

⁸⁵ Ofcom, Adults' Media Literacy Tracker 2020

young people are motivated by receiving benefits in exchange – 73% of 16- to 24-year-olds said they would exchange information in return for a benefit, compared to 38% of those aged 65+. ⁸⁶

Figure 1.39: Attitudes towards online companies collecting users’ personal information online: 2020



Source: Ofcom Adults’ Media Literacy Tracker 2020 IN53. Please read the full list of statements below about how people feel about online companies collecting and using their personal information (e.g. their name, address, telephone number etc). If you agree with any of these statements, please just select them. I am happy for companies to collect and use my personal information if... (multi-coded)
 Base : All who go online, excluding those responding by post. (2776 in 2020)

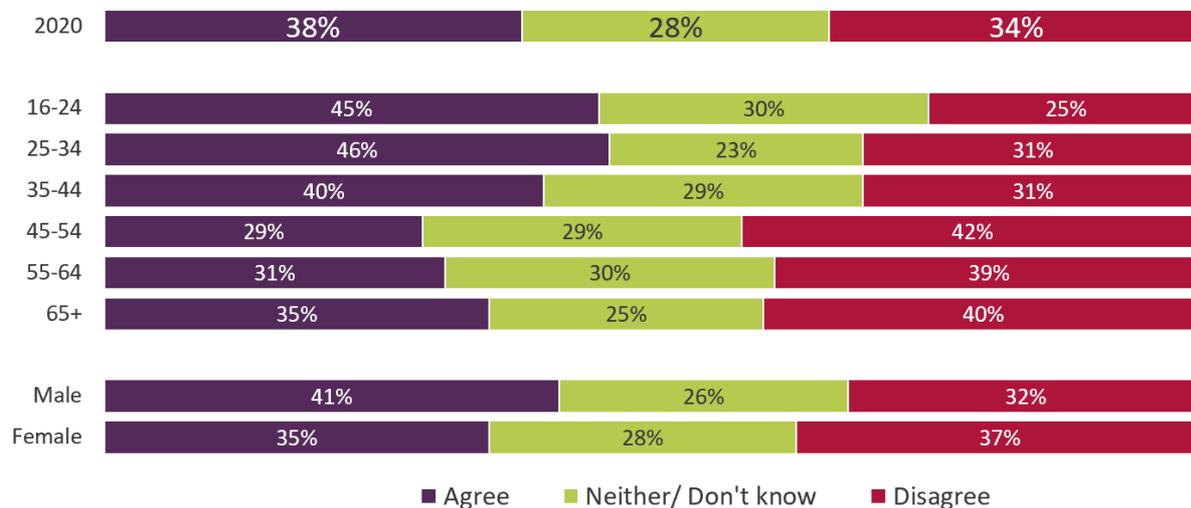
Younger adult internet users were more likely to agree that people should be able to hide their identity online to express their views anonymously

Debate around the ability to express one’s views anonymously has increased in the past year, including in the wake of anonymous racist abuse directed towards sportsmen and sportswomen online. Adult internet users in the UK were slightly more likely to agree (38%) than disagree (34%) that people should be able to express their views anonymously, although 28% chose ‘neither/don’t know’. Those in the younger age brackets are more likely to value anonymity, as are men, while over-44s are more likely to value transparency of views. ⁸⁷

⁸⁶ Ofcom, Adults’ Media Literacy Tracker 2020
⁸⁷ Ofcom, Adults’ Media Literacy Tracker 2020

Twenty-one per cent of adult internet users think that sites have an important role in supporting people to express their views freely, even when some users might find the content offensive, with 38% of adults thinking it is important for sites to monitor and delete offensive views and to protect their users.⁸⁸

Figure 1.40: Agreement with the statement: “I think people should have the right to hide their identity online in order to express their views anonymously”, by age and demographic group: 2020



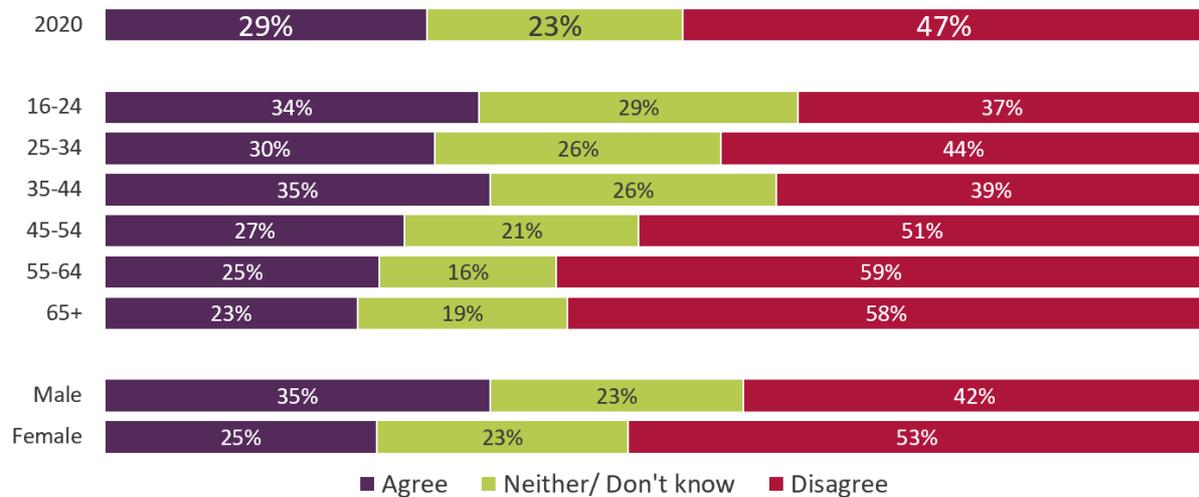
Source: Ofcom Adults’ Media Literacy Tracker 2020 IN35C. We’re going to show some things that other people have said about being online. To what extent do you agree or disagree with each statement - I think people should have the right to hide their identity online in order to express their views anonymously.
 Base: Adults aged 16+ who go online, excluding those responding by post (2776 aged 16+, varies by demographic).

Nearly half of internet users disagreed that people should be allowed to say what they want online

The increased use of the internet and the popularity of social media services have given individuals opportunities to express themselves, but many argue that there should be limits on what can be said online. In 2020, nearly half (47%) of adult internet users disagreed with: “I think it is important that people can say what they want online even if it is controversial or hurtful to others.” Disagreement is more prevalent among women and those over the age of 44.⁸⁹

⁸⁸ Ofcom, Adults’ Media Literacy Tracker 2020
⁸⁹ Ofcom, Adults’ Media Literacy Tracker 2020

Figure 1.41: Agreement with the statement: “I think it is important that people can say what they want online even if it is controversial or hurtful to others.”, by age and gender: 2020



Source: Ofcom Adults' Media Literacy Tracker 2020

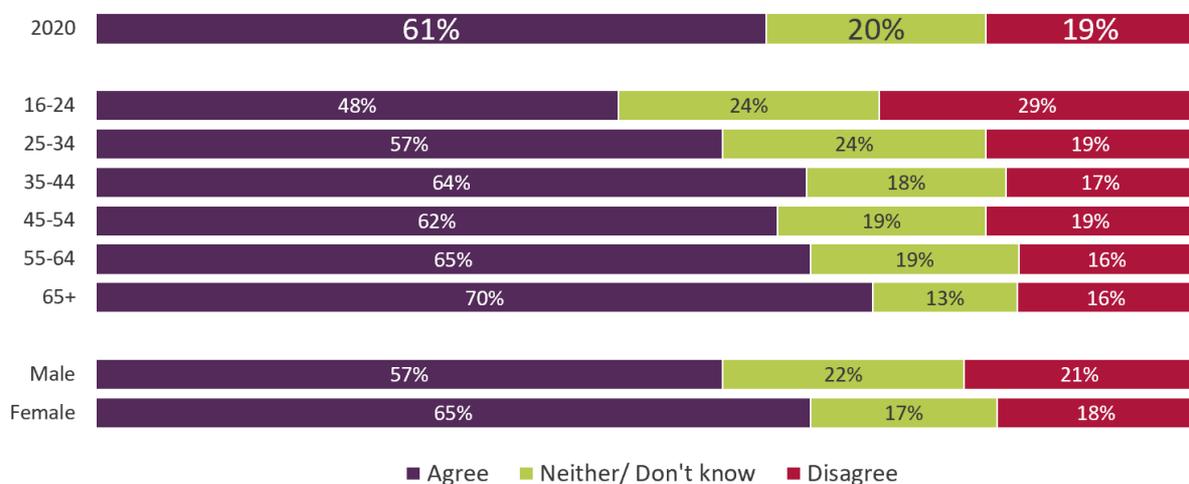
IN35D. We're going to show some things that other people have said about being online. To what extent do you agree or disagree with each statement – I think it is important that people can say what they want online even if it is controversial or hurtful to others.

Base: Adults aged 16+ who go online, excluding those responding by post (2776 aged 16+, varies by demographic).

Three in five adult internet users agree that people must be protected from seeing inappropriate or offensive conduct

Concern about protection from inappropriate or offensive content is high across all age groups. Seven in ten of those over 64 agreed that internet users should be protected, while 29% aged 16-24 disagreed.

Figure 1.42: Agreement with the statement: “Internet users must be protected from seeing inappropriate or offensive content”: 2020



Source: Ofcom Adults' Media Literacy Tracker 2020

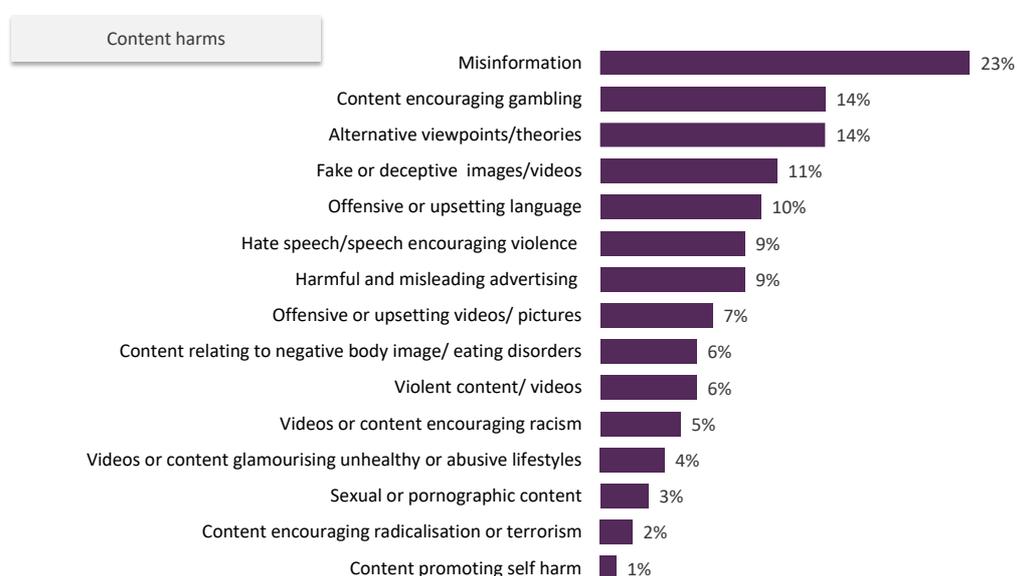
IN35A. We're going to show some things that other people have said about being online. To what extent do you agree or disagree with each statement. – Internet users must be protected from seeing inappropriate or offensive content (single coded)

Base: All adults aged 16+ who go online, excluding those responding by post (2776 aged 16+, varies by demographic).

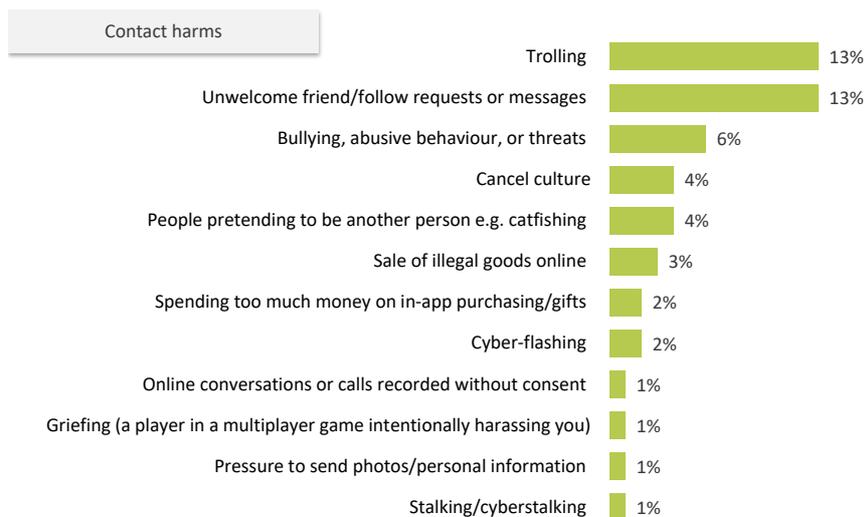
76% of people say they have been exposed to at least one potential harm

The majority of respondents (54%) cited spam email as the type of potential harm they had been exposed to; 45% had been exposed to content-related harm such as negative body image, with 38% exposed to contact harm such as bullying.⁹⁰ Figure 1.43 below shows the proportion of people who came across different types of content or contact harms.

Figure 1.43: Proportion who had experienced harm in the past four weeks



⁹⁰ Pilot Online Harms Survey (Nov 20 – Feb 21). Q5. 'Which, if any, of the following have you seen or experienced online in the last 4 weeks?'



Source: Pilot Online Harms Survey (Nov 20 – Feb 21)

Q5. Which, if any, of the following have you seen or experienced online in the last 4 weeks?

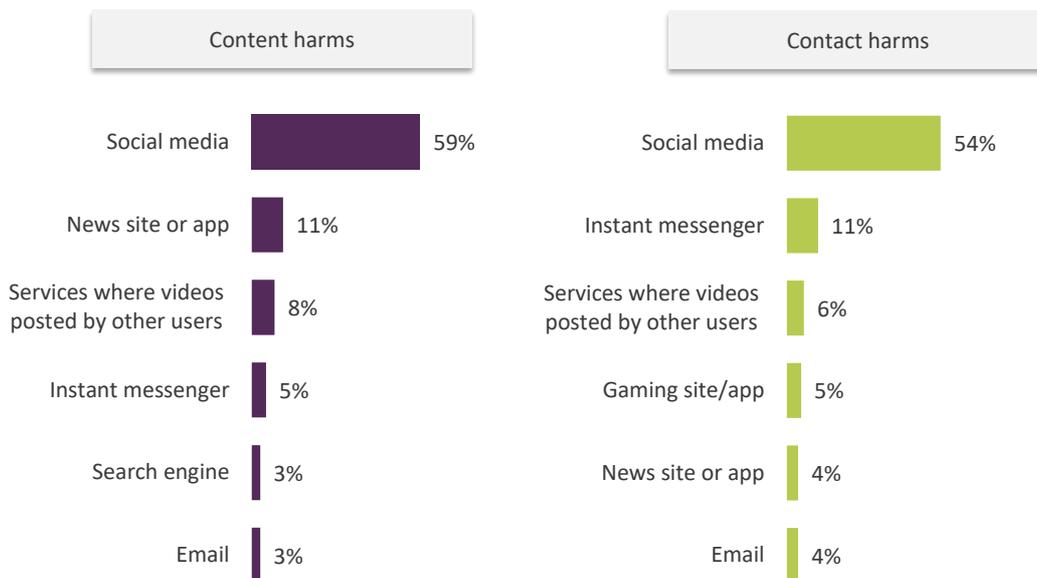
Base: All respondents, (n 4,242)

Note: Spam/fraud is not categorised as a content or contact harm and is therefore not presented in this figure.

The most common source of potential harm was email (45% of those who had seen or experienced any of the potential harms); this is linked to the number who cited spam email as the harm they had encountered. Of those who had encountered a harm via email, 84% said that this had been a spam email. Twenty-seven per cent had seen a harm on social media, 4% on instant messenger and 4% on an online video-sharing service such as YouTube or TikTok. The majority of those who had experienced content or contact harm had seen it on social media.⁹¹ Figure 1.44 shows where people have come across harms, categorised by content and contact harms. Spam/ fraud does not fall into either of these categories.

⁹¹ Pilot Online Harms Survey (Nov 20 – Feb 21)

Figure 1.44: The online service where harm was seen

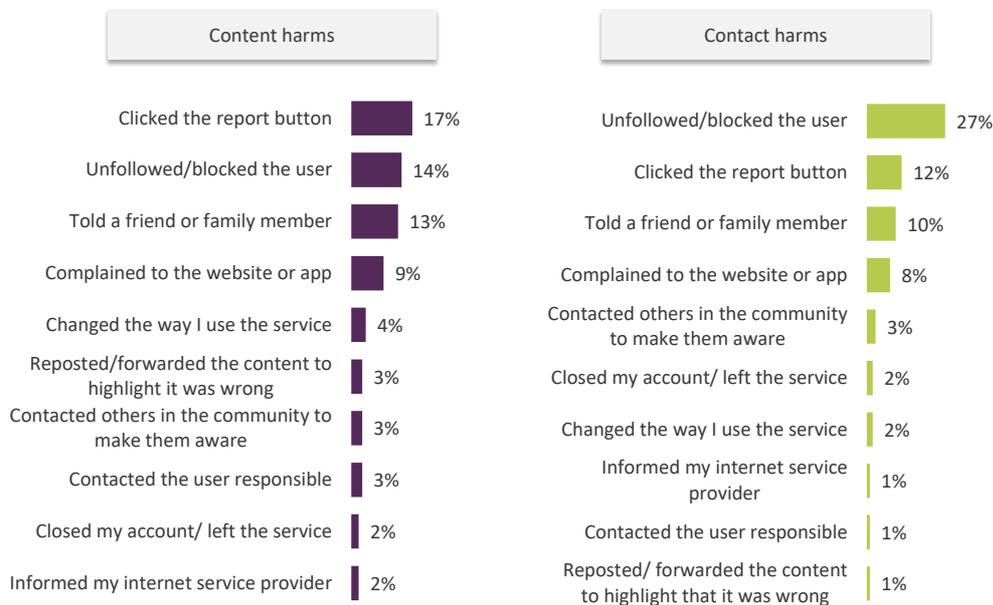


Source: Pilot Online Harms Survey (Nov 20 – Feb 21)

Q9.: Site service used when experienced harm.

Base: All who experienced at least one content harm most recently in the last four weeks, Wave 1-4 n=880; All who experienced at least one contact harm most recently in the last four weeks through a social media website or app, Wave 1-4 n=523

Figure 1.45: Top ten actions taken after seeing content or contact harms



Source: Pilot Online Harms Survey (Nov 20 – Feb 21)

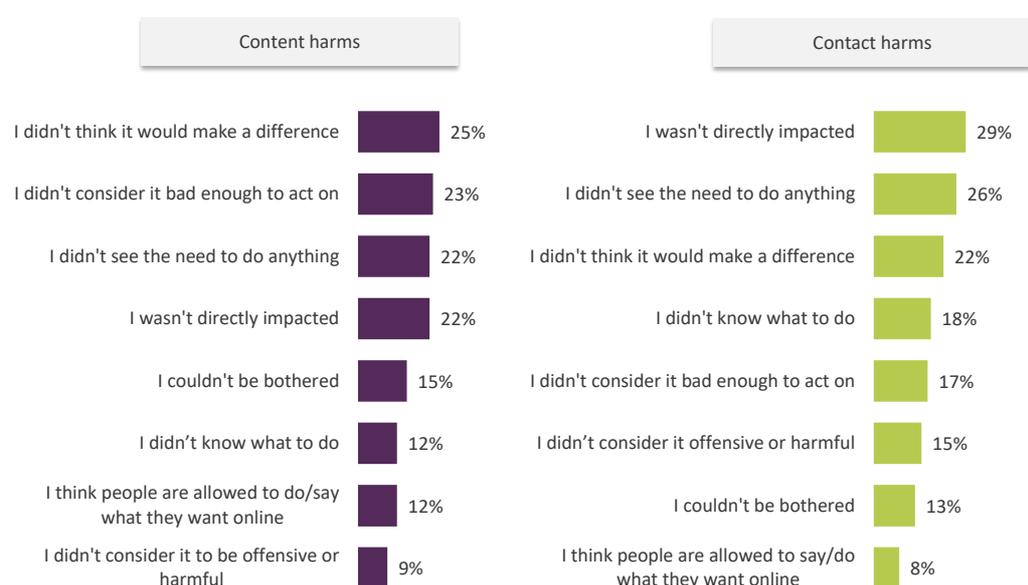
Q19. When you saw ... on that occasion, which of the following actions did you take, if any?

Base: All who experienced at least one content harm most recently in the past four weeks, wave 1-4 n=880, All who experienced at least one contact harm most recently in the past four weeks, wave 1-4 n=546

Users who experienced contact harms were more likely than those experiencing content harms to cite ‘not directly impacted’ as a reason not to act

‘Not being directly impacted’ was the most common reason users gave for taking no action after coming across any type of harm. Our research found that 26% of people who saw something harmful online didn’t take action because they weren’t directly affected, 25% didn’t see the need to do anything, 20% didn’t think it would make a difference and 18% said they couldn’t be bothered. Figure 1.46, below, ranks the top reasons for users not taking action, based on the type of harm they saw online.⁹²

Figure 1.46: Top barriers to taking action against content or contact harms



Source: Pilot Online Harms Survey (Nov 20 – Feb 21)

Q20. You mentioned you did not take any action. Why was this?

Base: All who experienced at least one content harm most recently in the past four weeks and took no action, wave 1-4 n=395; All who experienced at least one contact harm most recently in the past four weeks and took no action, wave 1-4 n=232

Two in five of those who had reported a harm said they were aware of the result of the report

The majority (70%) who had reported a harm said that nothing yet had happened, while 17% said the content had been removed, 6% had received a written response and 3% had been asked to provide further information. Seventy-six per cent of those who had seen spam emails said that

⁹² Pilot Online Harms Survey (Nov 20 – Feb 21)

nothing yet had happened as a result of their reporting. Figure 1.47 looks at the results of reporting, dependent on the type of harm seen by respondents.⁹³

Figure 1.47: Result of reporting content and contact harms

NET: Aware of result	38%
Nothing yet	62%
The content was removed	26%
I got a written response	6%
I was asked to provide further information	6%

Source: Pilot Online Harms Survey (Nov 20 – Feb 21)

Q21. You mentioned you reported the What happened as a result?

Base: All who experienced at least one content harm most recently in the last four weeks and reported it, Wave 1-4 n=236, All who experienced at least one contact harm most recently in the last four weeks and reported it, Wave 1-4 n=119

⁹³ Pilot Online Harms Survey (Nov 20 – Feb 21)

2. Children

Introduction

Figure 2.1: UK children online key metrics 2020

	Aged 5-15	Aged 5-7	Aged 8-11	Aged 12-15
Used social media	55%	30%	44%	87%
Used messaging services	65%	33%	64%	91%
Watched content on video-sharing platforms	97%	95%	96%	99%
Were aware of online reporting functions	-	-	-	69%
Had a negative experience online	-	-	-	55%

Source: Ofcom's Children's and Parents' Media Literacy Tracker 2020/21 – Surveys 1 and 2, 2020/21.

This chapter, using research conducted by Ofcom and others, as well as industry data, examines the take-up and use of online services and technologies by children in the UK, and children's attitudes to, and experiences of, using those services. It looks at how children are served by online content providers and platforms, and how the providers' business models monetise children's use of online services. Finally, it looks at the risks to children online and the measures children themselves, and online platforms, take to mitigate the risk of harm online.

This chapter reports on data from 2020 and early 2021, a period in which children and young people's lives were heavily disrupted by the coronavirus pandemic and lockdowns. As a result, even for the generation of children that we consider to be 'digital natives', online communications and media played a more central role in many of their lives than ever before. Access to reliable broadband and online services allowed many children to join online classrooms, to keep in touch with their friends and extended family, and to keep themselves entertained. But experiences over the past year have differed significantly among children and young people.

Children and young people are not, of course, a homogenous group: their offline and online behaviours, attitudes and experiences differ due to a range of factors. These include age and developmental stage, gender, location, socio-economic background, health conditions, levels of literacy and education, and family situation. This chapter focuses primarily on children aged 5-15 years old living across the UK, drawing out the differences, where the data allow, that may shape online behaviours, attitudes and experiences. For detail on pre-school-age children, please see our [Children and parents: media use and attitudes 2020/21 report](#), which takes an in-depth look at the online use and behaviours of children aged 3-4 years.

Children’s internet take-up and use

Almost all UK children have access to the internet at home

Most children today are active online from a very early age, having been born into an online world. In many instances children and young people are the early adopters of popular websites and apps, driving the trends we later see among adults: many have never known a world without the iPhone (launched in 2007), the iPad (launched in 2010) or even the smart speaker (launched in 2014). In 2003, the year in which 2021’s 18-year-olds were born, just half of UK homes were connected to the internet.⁹⁴

Ofcom’s 2021 Technology Tracker indicated that 99% of households with children aged under 18 had access to the internet at home.⁹⁵ However, this does not necessarily mean that all connections were reliable, or adequate for the needs of the household. Four per cent of households with children who had internet access at home did not have fixed broadband and only had internet access via mobile data (e.g. a 3G, 4G or 5G connection) or mobile broadband (e.g. a dongle).

A mobile internet-only connection might not be sufficient for many families, with data use typically constrained (compared to the ‘unlimited’ data typical of fixed broadband services), generally slower download speeds and potentially more than one child relying on a single point of connection. Relying on a mobile-only connection can also be costly, particularly if a user on a post-pay subscription exceeds their data allowance. Ofcom’s Covid-19 Affordability Tracker showed that in 2020, 8% of mobile internet-only households said they had experienced an affordability issue with their mobile service.⁹⁶

Figure 2.2: Internet access in UK households with and without children: 2021

Children aged 0-17 in the household	Access to internet in the household		Method of connecting the internet at home, among households with internet access				
	Yes	No	Fixed broadband	Mobile broadband	Mobile data	Tethering ⁹⁷	Mobile internet only ⁹⁸
Yes	99%	<1%	94%	16%	57%	26%	4%

⁹⁴ Ofcom, [Internet and Broadband Update](#), January 2004

⁹⁵ Ofcom Technology Tracker CATI omnibus survey, March 2021 (fieldwork 12 February to 5 March 2021)

⁹⁶ Ofcom Covid-19 Affordability Tracker, fieldwork June to October 2020, For more information on our research on the affordability of communications services, please see [Affordability of communications services: A summary of initial findings](#), 18 December 2020

⁹⁷ ‘Tethering’ refers to accessing the internet on a device, such as a laptop or tablet, using a mobile phone’s internet connection

⁹⁸ ‘Mobile internet-only’ refers to households that do not have a fixed broadband connection, and whose only methods of accessing the internet is through a mobile phone or other mobile broadband device (for example, a dongle)

No	92%	8%	91%	15%	45%	19%	6%
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Source: Ofcom Technology Tracker CATI omnibus survey, fieldwork 12 February to 5 March 2021. KDR06: Do you or does anyone in your household have access to the internet at home (via any device, e.g. PC, mobile phone)? (Base: 3126). KDR07: Which of these methods does your household use to connect to the internet at home? (Base: 2918).

7- to 16-year-olds who go online said they spent 3 hours 48 minutes a day online

Self-reported data from CHILDWISE found that between September and November 2020, children aged 7- to 16-years old who went online estimated that they spent 3 hours 48 minutes a day online on average.⁹⁹ Time spent online increased with age, rising from the 2 hours 54 minutes spent by 7-to 8-year-olds to the 4 hours and 54 minutes spent by 15- to 16-year-olds. Of all groups, older boys spent the most amount of time online on average. Half of 15- to 16-year-old boys said they spent more than six hours a day online, compared to a third of 15- to 16-year-old girls.¹⁰⁰

Lockdown affected both children’s screen time and how their parents managed it. Ofcom’s *Life in Lockdown* study found that the disturbance to children’s routines meant that children’s time became much less structured, and they tended to spend longer online.¹⁰¹ Perhaps unsurprisingly, given the unusual circumstances brought about by the Covid-19 pandemic, parents adjusted how they managed their children’s online use. Ofcom’s quantitative children’s media literacy research showed that half of parents of 5- to 15-year-olds who went online felt the need to relax some of the rules about what their child did online because they were at home more than usual.¹⁰² But despite increases in children’s screen time over 2020, the majority of parents said that their child had a good balance between screen time and doing other things (59%).¹⁰³

⁹⁹ CHILDWISE Monitor Report 2021, fieldwork September 2020 to November 2020. For more information, please see: <http://www.childwise.co.uk/>

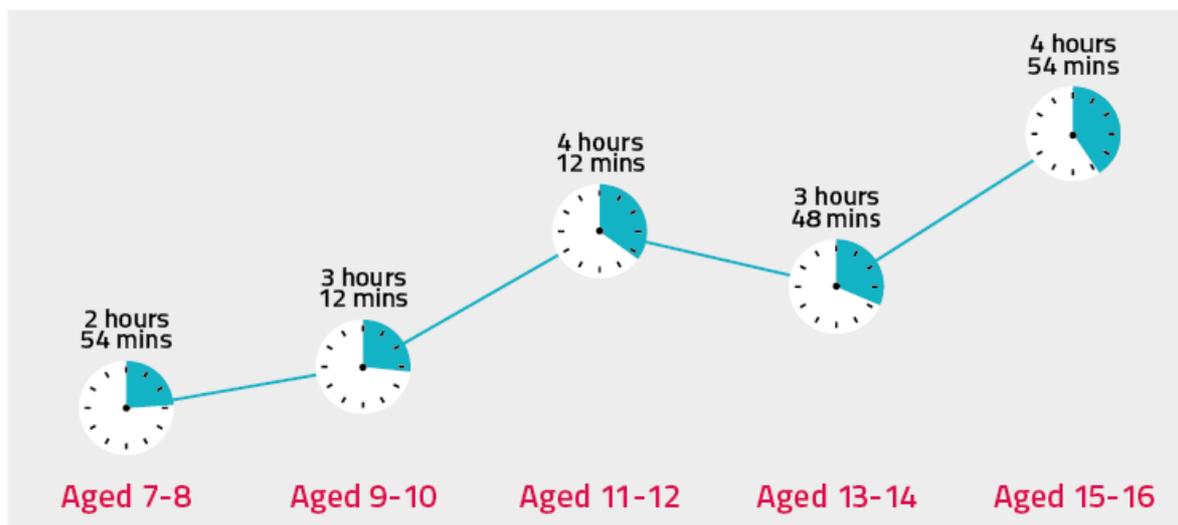
¹⁰⁰ CHILDWISE Monitor Report 2021

¹⁰¹ Ofcom, *Children’s Media Lives: Life in Lockdown*, August 2020

¹⁰² Ofcom, Children’s and Parents’ Media Literacy Tracker 2020/21

¹⁰³ Ofcom, Children’s and Parents’ Media Literacy Tracker 2020/21

Figure 2.3: Children’s estimated time spent online



Source: *CHILDWISE Monitor Report 2021*

Device take-up and use

Tablets are the starter device for young children

Tablets are an important device for young children to access the internet, probably because of the larger screen size, making them easy for young children to use and for parents to monitor. Our quantitative children’s media literacy research found that seven in ten 5- to 15-year-olds used a tablet to go online in 2020, compared to half of adults.¹⁰⁴ Tablets were the device younger children most commonly used to go online, but as children got older and became mobile phone owners, use of a mobile phone outstripped use of a tablet. In 2020, half of children owned their own phone by the age of ten, and ownership was nearly universal by the age of 13 (95%).¹⁰⁵

Three-quarters of 5- to 15-year-olds used a gaming device (console or player) in 2020, marking an increase on the previous year as children sought to keep themselves entertained at home. Use of gaming devices was higher among older children and boys, with 12- to 15-year-old boys most likely using one (93%).¹⁰⁶ According to research by CHILDWISE, boys aged 5-16 were more likely than girls of the same age to own a console (76% of boys vs. 43% of girls), while girls were more likely than boys to share access. A fifth of girls aged 5-16 (22%) said they used someone else’s console to play games at home, compared to 8% of boys.¹⁰⁷

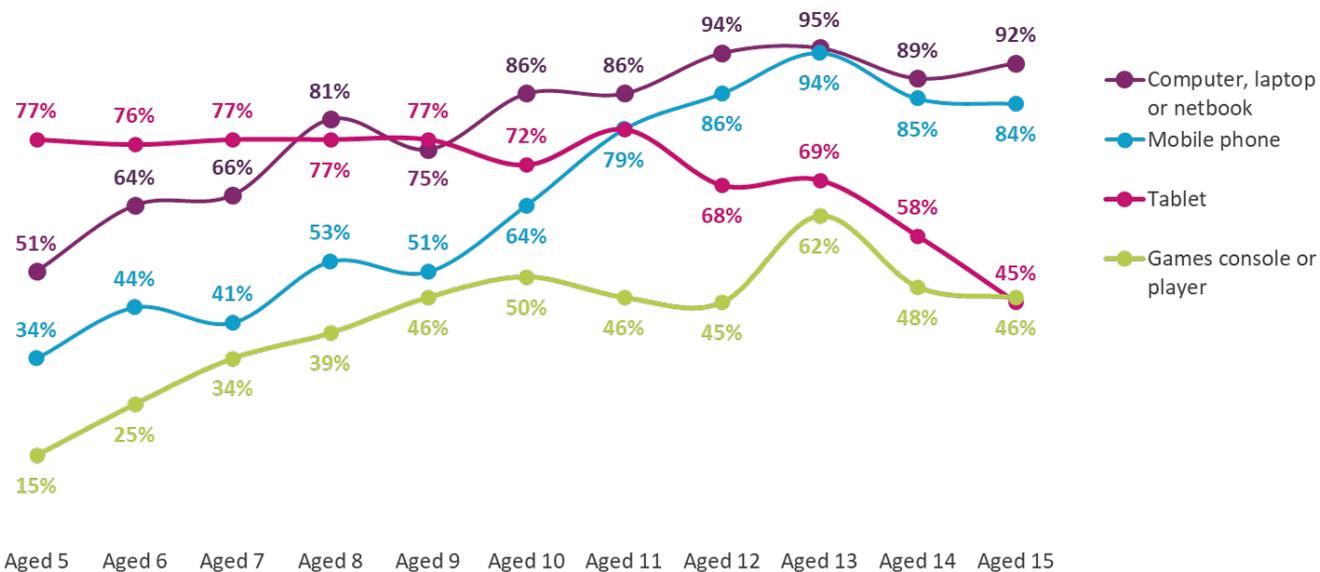
¹⁰⁴ Ofcom, *Adults’ Media Literacy Tracker 2020*

¹⁰⁵ Ofcom, *Children’s and Parents’ Media Literacy Tracker 2020/21*

¹⁰⁶ Ofcom, *Children’s and Parents’ Media Literacy Tracker 2020/21*

¹⁰⁷ *CHILDWISE Monitor Report 2021*

Figure 2.4: Devices used to go online by children, by age: 2020



Source: Ofcom’s Children’s and Parents’ Media Literacy Tracker 2020/21, Survey 1. Question: QP23. Now some questions about the internet and going online. Please think about any reason your child may have for going online – maybe to look at a website or use an app, watch a TV programme or video clip on sites or apps like YouTube, to play games online, to visit a social media site or app, or to do school or homework. Does your child ever use any of the following devices to go online at home or elsewhere? (Responses from parent for 5- to 7-year-olds and from children aged 8 to 15) (multi-code). Base: 2190 5- to 15-year-olds

Digital parenting: ‘Baby Tech’ services and devices

Many pre-schoolers use digital devices and are active online. According to parents of pre-schoolers, eight in ten 3- to 4-year-olds used a tablet and a quarter used social media or messaging apps in 2020.¹⁰⁸ But some children have an online presence long before that; in some cases before they are even born, due to the evolving online services and technology market catering to expectant and new parents.

There are a range of social spaces catering specifically for parents online. Examples include Mumsnet, which reached 16% of 25- to 44-year-old online women (1.36 million) in the UK in September 2020.¹⁰⁹ Peanut, a UK-based social networking app for those who have, or want to have, children, reached 24,000 25- to 44 year-old online women in the UK on mobile devices, who spent more than an hour on average on the platform in September 2020 (73 minutes).¹¹⁰

There are also many ‘Baby Tech’ apps and devices. Examples include pregnancy-tracking apps, which tend to be free to download and into which users input health data, such as Philips’ Pregnancy+ app and Ovia Health, which had 167,000 and 118,000 UK online adult visitors in September 2020 respectively.¹¹¹ Baby Tech devices, including connected socks, nappies and bottles, sync with a parent’s smartphone and track their baby’s health-related information. Several UK-based companies cater for this market, including BT, which offers smart baby monitors.

While these might seem like niche products and services, more than 500,000 babies were born in the UK in 2020.¹¹² Many new parents are tech-literate millennials, with an appetite for tracking metrics on most aspects of their lives. These services may be helpful for many parents, especially those with concerns about their child’s health.

But it is worth noting that through these apps and devices, users are providing companies with valuable data – including health and medical data – about themselves and their babies.¹¹³ The National Cyber Security Centre has published advice to parents to help protect their smart baby monitors from cyberattacks, and smart baby monitors have been included in the proposed scope for UK legislation to improve the cybersecurity of connected consumer products.¹¹⁴

Use of internet services

YouTube is the app 7- to 17-year-olds were most likely to name as their favourite

According to research by The Insights Family in the first quarter of 2021, 7- to 17-year-olds were the most likely to name YouTube as their favourite app, with more than one in ten saying it was their favourite.¹¹⁵ But the popularity of apps among children was heavily influenced by age and gender.

¹⁰⁸ Ofcom, Children’s and Parents’ Media Literacy Tracker 2020/21

¹⁰⁹ Comscore MMX Multi-Platform, Mumsnet, Females: 25-34, September 2020, UK

¹¹⁰ Comscore Mobile Metrix, Peanut – Moms, Meet (mobile app), females: 25-34, September 2020, UK

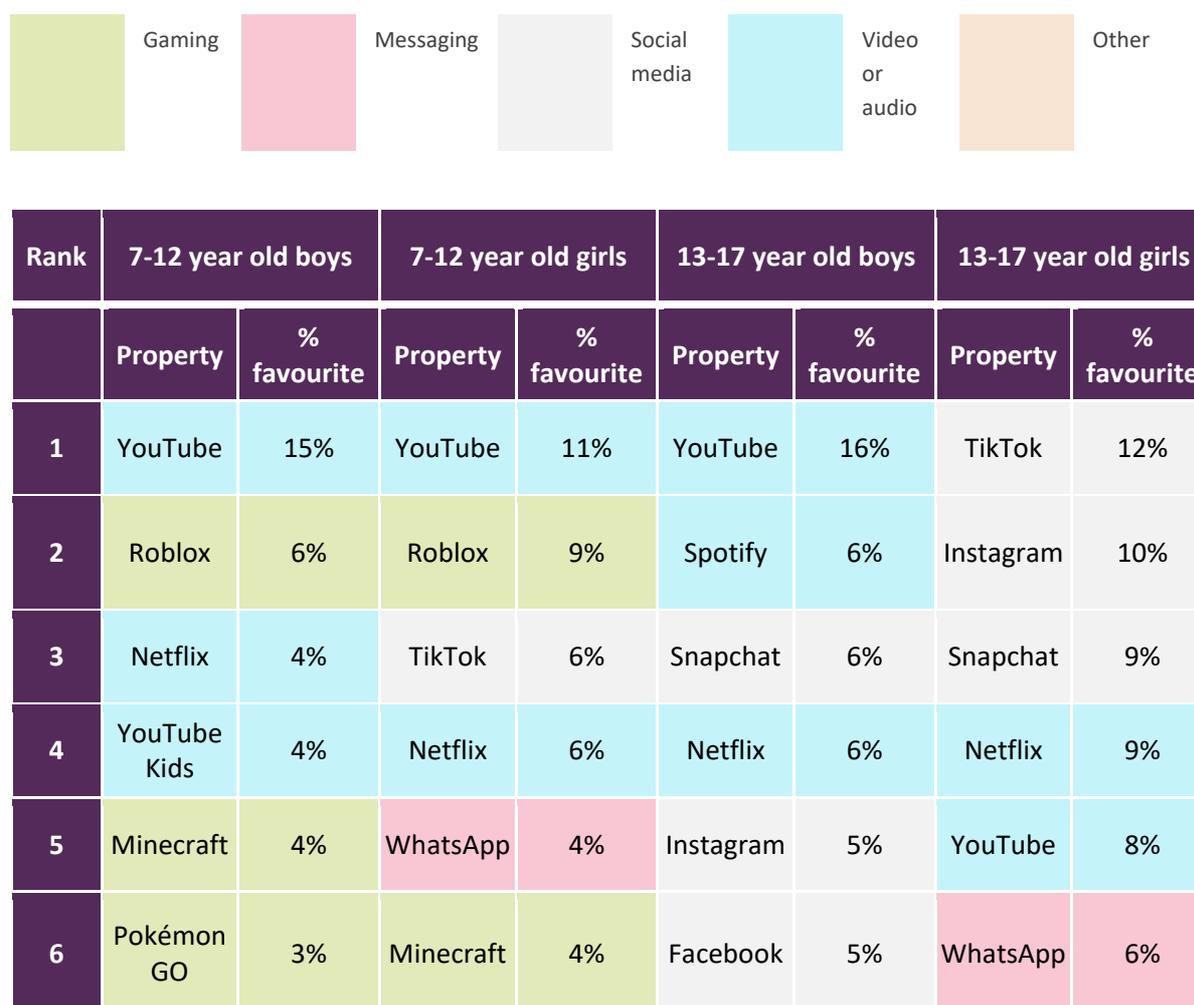
¹¹¹ Comscore MMX Multi-Platform, Pregnancy+ (app) and Ovia Health, Age: 18+, September 2020, UK

Among 7- to 12-year-olds, games such as Roblox, Minecraft, Pokémon GO and Candy Crush featured heavily among their favourites. But these gaming apps barely featured among 13- to 17-year-olds' favourites.

A notable proportion of children aged 12 and under named social media or messaging services with a minimum user age of 13 as their favourite apps, including TikTok and Instagram.

Among teenagers, social media and messaging apps made up most of their top ten favourites. Gender played a bigger role in determining 13- to 17-year-olds' favourites than younger children's; TikTok and Instagram ranked higher among teenage girls than teenage boys.

Figure 2.5: Top ten favourite apps, by age and gender: Q1 2021



¹¹² ONS, [Provisional births in England and Wales: 2020](#), 7 December 2020. National Records of Scotland, [Births, Deaths and Other Vital Events – Quarterly Figures](#), 10 March 2021. NISRA, [Monthly Births](#), 12 April 2021. Birth registrations were disrupted by the Covid-19 pandemic, so these estimates are based on provisional figures

¹¹³ Barassi, V. (2017) [‘BabyVeillance? Expecting Parents, Online Surveillance and the Cultural Specificity of Pregnancy Apps’](#), Social Media + Society

¹¹⁴ NCSC, [Consumers urged to secure internet connected cameras](#), 3 March 2020. DCMS, [Government response to the call for views on consumer connected product cyber security legislation](#), 21 April 2021

¹¹⁵ The Insights Family UK, Question: Which is your favourite app?, Q1 2021, Base: 7-12s 1000, 13-17s 844

7	TikTok	3%	Disney+	3%	WhatsApp	4%	Spotify	3%
8	WhatsApp	2%	YouTube Kids	3%	Minecraft	3%	Facebook	3%
9	Disney+	2%	Spotify	3%	Amazon	3%	Disney+	2%
10	Instagram	2%	Candy Crush	2%	TikTok	3%	YouTube Music	2%

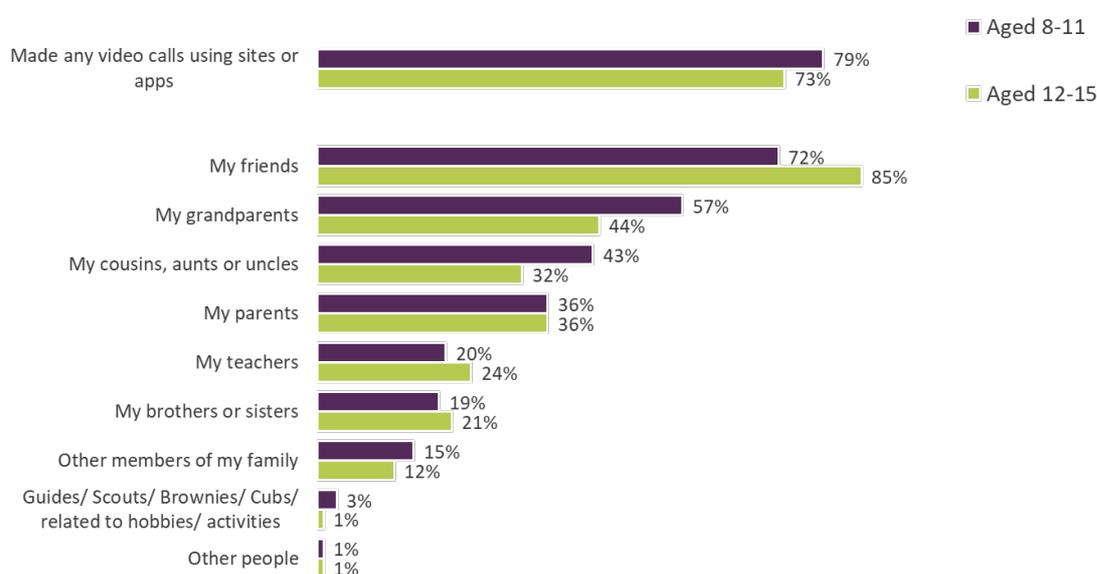
Source: The Insights Family UK. Question: Which is your favourite app? Q1 2021, Base: 1000 7-12s, 844 13-17s.

Online messaging and calling services

Online messaging and calling services played an important role for many children throughout 2020

The internet helped keep children connected in 2020, allowing them to keep in touch with extended family and to maintain and even build new friendships while apart. Three in four 8- to 15-year-olds used video calls in 2020, most commonly to speak to their friends or grandparents.

Figure 2.6: Use of video calling apps or sites during 2020, by age: 2020

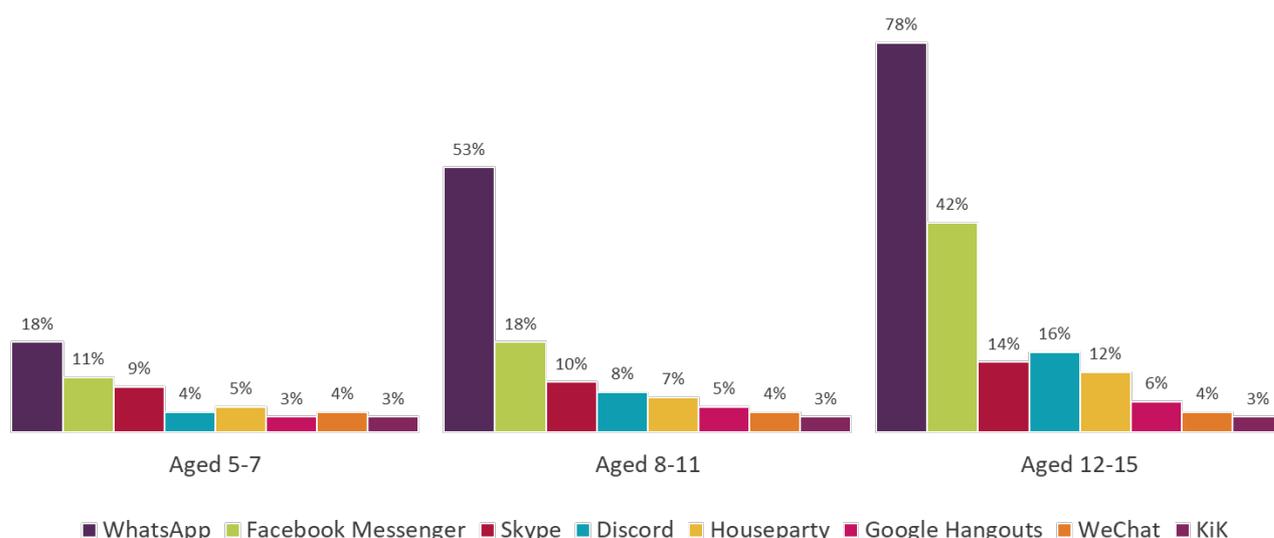


Source: Ofcom's Children's and Parents' Media Literacy Tracker 2020/21, Survey 2. QC38D. Due to the situation with COVID this year, many children have been at home more than usual and may have seen less of their friends or family. One way that people have kept in touch during this time is by making video calls using sites or apps like Zoom, Houseparty, Skype, FaceTime, WhatsApp or Snapchat. Have you made any video calls during this time? (single coded) Base: Children aged 8-15 (696 aged 8-11, 699 aged 12-15). QC38E. And who have you had video calls with during this time? (multi-coded). Base: Children aged 8-15 who have used video calling apps or sites during 2020 (556 aged 8-11, 516 aged 12-15).

Children use a wide range of online messaging and calling apps, with WhatsApp the most popular (used by 52% of 5-15s, rising to 78% of 12-15s). Two-thirds of 8- to 15-year-olds said they used messaging services more in 2020 than before.¹¹⁶

But a significant minority of older children use a range of less mainstream messaging services. Sixteen per cent of 12-15s said they used Discord, a messaging service usually associated with gaming.¹¹⁷ According to research by The Insights Family in Q4 2020, around one in ten 13- to 17-year-olds said they used the messaging app Telegram.¹¹⁸

Figure 2.7: Use of chat or messaging services: 2020¹¹⁹



Source: Ofcom Children’s and Parents’ Media Literacy Tracker 2020/21 – Survey 2, showing responses given by <2% of 5-15s. QP44B: And which, if any, of these chat or messaging apps or sites does your child use? (multi-coded). Responses from parents of 5-7s and children aged 8-15. Base: (756 aged 5-7, 694 aged 8-11, 740 aged 12-15).

All online messaging and chat services use technical measures such as encryption to protect their users’ privacy and security. Some online messaging services, such as WhatsApp and Telegram, use end-to-end encryption. End-to-end encryption encrypts messages and files using specific keys which are known only by the devices participating in the communication; the service provider cannot access data from the message that is sent. This secures data from third-party access in transit, but still enables the online communication services to access the data from the message that is sent.

When prompted, just over half of children aged 7-17 correctly identified what end-to-end encryption meant, with 16- to 17-year-olds most likely to correctly identify the meaning of the

¹¹⁶ Ofcom, Children’s and Parents’ Media Literacy Tracker 2020/21

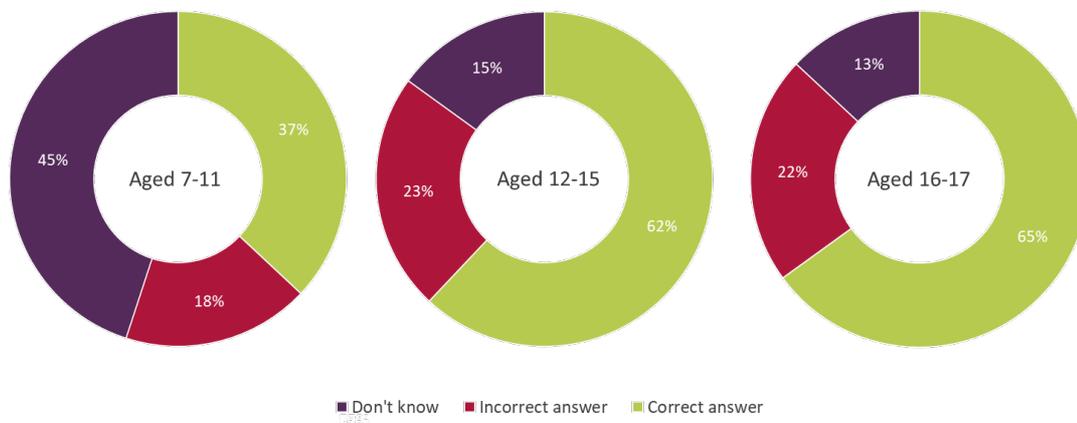
¹¹⁷ Ofcom, Children’s and Parents’ Media Literacy Tracker 2020/21

¹¹⁸ The Insights Family UK, Chat platforms used, Q4 2020

¹¹⁹ The chat or messaging services we included in this question were: Discord, Facebook Messenger, Google Hangouts, HouseParty, Kik, Line, Skype, Threads (from Instagram), Viber, WeChat, WhatsApp

term.¹²⁰ The most common incorrect response was that end-to-end encryption meant that “the people that run the app can read your messages”, which 8% of respondents selected.¹²¹

Figure 2.8: Awareness of end-to-end encryption among 7- to 17-year-olds: 2021



Source: CHILDWISE Spring Omnibus, March 2021. Question: Some messaging apps such as WhatsApp, Signal and Telegram are end-to-end encrypted. What do you think it means? Base: 1060 7- to 17 year-olds (420 7-11s, 421 12-15s, 219 16-17s)

Social media and social video

Social media is an integral part of most teenagers’ lives, with Instagram the most-used service

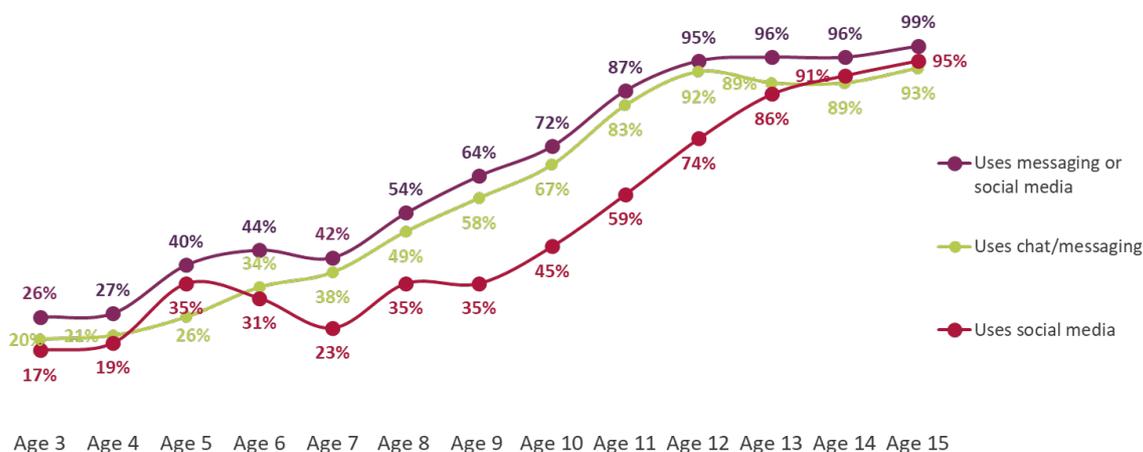
Although most social media platforms set their minimum user age at 13, more than two in five 8- to 11-year-olds used social media apps in 2020. Use of social media rises with age and was almost universal by age 15, at 95%¹²², probably due to a combination of factors including ownership of smartphones, parent’s or guardian’s permission to use social media, platforms’ age restrictions, and a desire to connect with friends through social media, particularly during the Covid-19 lockdowns.

¹²⁰ The correct answer code in the survey was: “The messages you send are private, so they can only be read by you, and the person you send the message to”. The answer code wording was adopted from a blog that set out to explain end-to-end encryption in a way that a five-year-old could understand. It describes end-to-end encryption as meaning that “only you and the person you’ve sent the message to can actually read it. It is a secure communication between you (one ‘end’) and your opponent (the other ‘end’). It was created as a means of communication that keeps eavesdroppers out of a conversation. Even if the data is somehow intercepted on the way from one ‘end’ to another ‘end’, it will make no sense to the eavesdropper (usually referred to as ‘man-in-the-middle’ or MITM) because it is encrypted.” Source: <https://medium.com/@cossacklabs/eli5-end-to-end-encryption-ae46821db74f>

¹²¹ CHILDWISE Spring Omnibus, March 2021

¹²² Ofcom, Children’s and Parents’ Media Literacy Tracker 2020/21

Figure 2.9: Incidence of use of social media and messaging apps, by age: 2020



Source: Ofcom Children’s and Parents’ Media Literacy Tracker 2020 – Survey 2. QP44A. Which, if any, of these social media apps or sites does your child use? / QP44B. And which, if any, of these chat or messaging apps or sites does your child use? Responses from parents for 3- to 7-year-olds and from children aged 8-15. Base: Parents of children aged 3-15 (136 aged 3, 125 aged 4, 96 aged 5, 84 aged 6, 83 aged 7, 180 aged 8, 155 aged 9, 195 aged 10, 166 aged 11, 174 aged 12, 176 aged 13, 172 aged 14, 177 aged 15).

Like many adults, most 8- to 15-year-olds who use social media or messaging and chat apps use these services to see what their friends are doing (52% of 8-11s, 76% of 12-15s). About half said they used them to follow celebrities (48% of 8-11s, 55% of 12-15s) and a sizeable minority used them to share or discuss news stories (19% of 8-11s, 24% of 12-15s).¹²³

Children’s social media use is much less Facebook-oriented than adults’. As set out in the [Consumer chapter](#), eight in ten adult social media users said they used Facebook.¹²⁴ In 2020, half of 12-15s and a fifth of 8-11s used Facebook¹²⁵. In our *Children’s Media Lives* research, teenagers were using Facebook for different purposes compared to their other social media platforms - either buying and selling items on Facebook Marketplace or interacting with more distant connections, such as work colleagues or extended family, rather than interacting with close friends.¹²⁶ It is possible that some children’s use of Facebook is historical, in that they set up a profile a number of years ago and now use it primarily to log in to other sites.

Children are, however, keen users of Facebook’s Instagram; a fifth of 8-11s and two-thirds of 12-15s said they used Instagram. Snapchat is also popular with six in ten 12- to 15-year-olds saying they used Snapchat.¹²⁷

¹²³ Ofcom, Children’s and Parents’ Media Literacy Tracker 2020/21

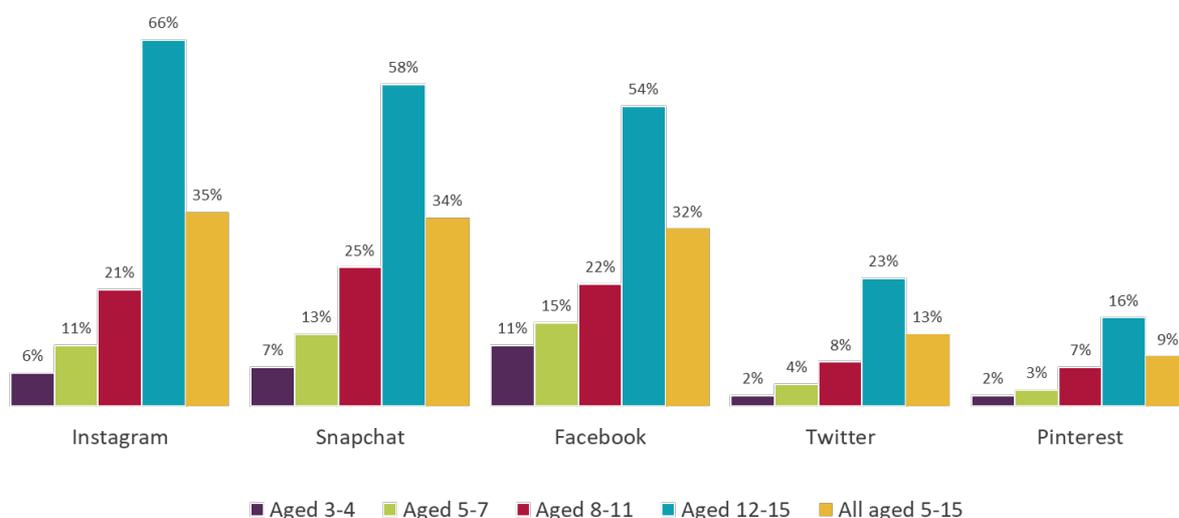
¹²⁴ Ofcom, Adults’ Media Literacy Tracker 2020/2021.

¹²⁵ Ofcom, Children’s and Parents’ Media Literacy Tracker 2020/21

¹²⁶ Ofcom, *Children’s Media Lives: Year 7*, 2020/21

¹²⁷ Ofcom, Children’s and Parents’ Media Literacy Tracker 2020/21

Figure 2.10: Top five social media sites/apps used, by age: 2020¹²⁸



Source: Ofcom's Children's and Parents' Media Literacy Tracker 2020 - Survey 2. QP44A: Which, if any, of these social media apps or sites does your child use? (multi coded). Responses from parents of 3-7s and children aged 8-15. Base: Parents of children aged 3-15 (782 aged 3-4, 756 aged 5-7, 694 aged 8-11, 740 aged 12-15). Note: TikTok not included as an answer code.

The majority of children felt pressure around their use of social media

Social media plays an important role in children's and young peoples' lives; about nine in ten 8- to 15-year-olds who used social media said that it helped them to feel closer to their friends in 2020.¹²⁹ But there are social pressures around the use of social media. In our quantitative children's media literacy research, nine in ten 12- to 15-year-olds who used social media, or chat and messaging apps, said they felt pressure to be popular on these sorts of apps or sites.¹³⁰

Like many adults, children and young people use filters to edit pictures they post, such as the tools on Instagram and Snapchat. In our *Children's Media Lives* research, the majority of girls and boys across all age groups used filters to edit the pictures and videos they posted on social media. Some used 'fun filters' to give themselves animal ears or a tongue, for example. But even the younger children in the sample, like 10-year old Suzy and 9-year old Freddie, used what they considered to be 'subtle' filters to change their appearance in pictures they then shared online, such as smoothing out their skin.¹³¹

A couple of the older teenage girls in the sample used specific image editing apps to change their appearance in the content they posted to social media, again in ways they thought were subtle and

¹²⁸ The social media sites or apps asked about in this question (QP44A) were: Instagram, Snapchat, Facebook, Twitter, Pinterest, Reddit, PopJam, Tumblr, MySpace, GoBubble, YuBo, Momio, Whisper

¹²⁹ Ofcom, Children's and Parents' Media Literacy Tracker 2020/21

¹³⁰ Ofcom, Children's and Parents' Media Literacy Tracker 2020/21

¹³¹ Ofcom, *Children's Media Lives: Year 7*, 2020/21

'light-touch'. Sixteen-year-old Shirya tended to use a range of apps, including FaceTune, to edit how different parts of her body looked, and 17-year-old Sarah used the AirBrush app to smooth out her 'smile lines'. While we do not have quantitative data on the reach of image editing apps among children, we know that apps such as PicsArt and VSCO reach thousands of 18- to 24-year-olds in the UK. This reach increased in April and May 2020 during the spring 2020 lockdown.¹³² Data on image editing apps among adults is in the [Online Nation interactive report](#).

These behaviours are both indicative of, and can feed into, a sense of self-consciousness or potentially problematic thinking about body image. Both boys and girls in the sample reported feeling under pressure to look good online and thought that people who looked a specific way online tended to get more positive attention, such as more likes or positive comments.¹³³ According to research by Family, Kids and Youth, in April 2021 two-thirds of boys (67%) and three-quarters of girls (77%) aged 7 to 16 agreed that "social media can make people worry about their body image".¹³⁴

Much of children's social media use is centred on social video, with TikTok use growing in 2020

The line between social media and social video services is becoming increasingly blurred. Platforms like Instagram, Snapchat and TikTok have a heavy emphasis on photo and video content, alongside interactive features such as links and comments, and direct messaging. In 2020, almost all online children used social video services, rising from 92% of 3- to 4-year-olds to 99% of 12- to 15-year-olds.¹³⁵ While children's online use and behaviour are shaped by a diverse range of factors, such as age and development, the one constant in children's internet use, from toddlers to teenagers, is YouTube. This is by far the most popular video service; nearly nine in ten 5- to 15-year-olds reported that they use it. Although YouTube does offer a specific platform for children aged under 13, only a minority of children used YouTube Kids rather than the main YouTube platform, even among the younger cohorts. More than half of 5- to 7-year-olds used the main YouTube platform (58%), compared to four in ten (42%) who used only YouTube Kids.¹³⁶ According to research by CHILDWISE, the heaviest YouTube users were 13- to 16-year-old boys, eight in ten of whom used YouTube every day (81%), compared to just under half (47%) of girls the same age.¹³⁷

¹³² Comscore MMX Multi-Platform, Age: 18-24, April-May 2020, UK

¹³³ Ofcom, [Children's Media Lives: Year 7](#), 2020/21

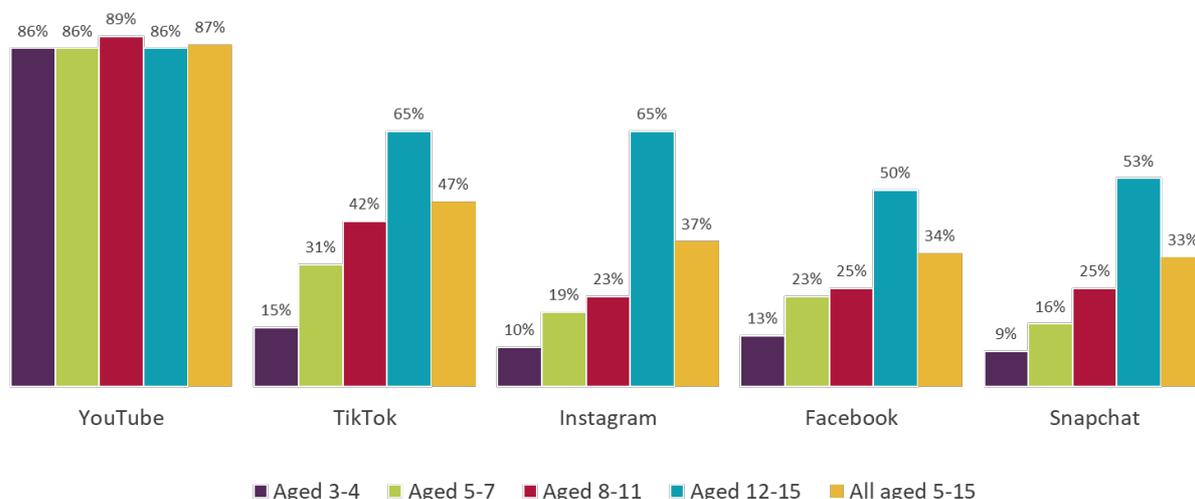
¹³⁴ Family Kids and Youth, Wellbeing and the Internet: wave 4, fieldwork: April 2021

¹³⁵ Ofcom, Children's and Parents' Media Literacy Tracker 2020/21. In our Children's and Parents' Media Literacy Tracker, these services are referred to as video-sharing platforms (VSPs)

¹³⁶ Ofcom, Children's and Parents' Media Literacy Tracker 2020/21

¹³⁷ CHILDWISE Monitor Report 2021

Figure 2.11: Top five apps/sites for watching content, by age: 2020¹³⁸



Source: Ofcom, Children’s and Parents’ Media Literacy Tracker 2020/21 – Survey 2. Showing responses given by >2% of 5-15s.QP22A: Which, if any, of these apps or sites does your child ever watch videos on? (multi coded). Responses from parents of 3-7s and children aged 8-15. Base: Parents of children aged 3-15 (782 aged 3-4 756 aged 5-7, 694 aged 8-11, 740 aged 12-15).

In 2020 TikTok experienced significant growth among children as well as adults (see the [Social video chapter](#) for adult use). Two-thirds of 12- to 15-year-olds said they used it for watching videos (70% of 12-15 girls and 58% of 12-15 boys).¹³⁹

Research by The Insights Family UK found that reach of TikTok to children increased in 2020, but the story was different for Instagram and Snapchat. Between January 2020 and March 2021, the number of 10- to 15-year-olds using TikTok increased by 44%, while use of Snapchat fell by 17% and Instagram by 4%.¹⁴⁰

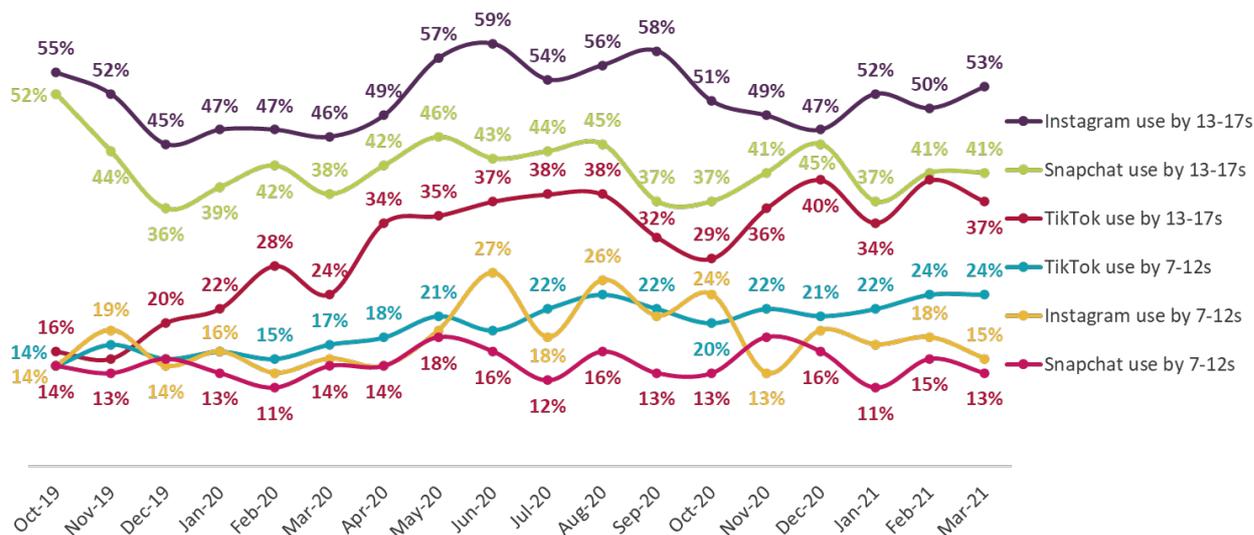
The chart below suggests that reach of TikTok continued to increase among 7-to 12-year-olds and 13- to 16-year-olds beyond the spring 2020 lockdown, before stabilising in early 2021. Neither Instagram nor Snapchat increased reach among either age group over the same period. In March 2021, more 7- to 12-year-olds said they used TikTok than Instagram or Snapchat, but Instagram was the most used of the three among 13-to 16-year-olds. There was some seasonal variation in use of these three services, possibly because more parents permit use of these platforms during the school holidays.

¹³⁸ The online services we asked about in this question (QP22A) were: YouTube, TikTok, Instagram, Facebook, Snapchat, GoNoodle, Vimeo, Dailymotion, Dubsmash, GROM Social, Imgur, Triller, LiveLeak.

¹³⁹ Ofcom, Children’s and Parents’ Media Literacy Tracker, 2020/21

¹⁴⁰ The Insight Family UK, Question: Which of these sites and social networks do you use?, January 2020 to March 2021

Figure 2.12: Use of TikTok, Snapchat and Instagram, 7- to 17-year-olds: 2019-2021



Source: The Insights Family UK, 1/10/2019 – 31/3/2021. Question: Which of these sites and social networks do you use? Base: 6,200 7-to 12-year-olds, 5,200 13- to 17-year-olds.

Children are highly engaged with video content online

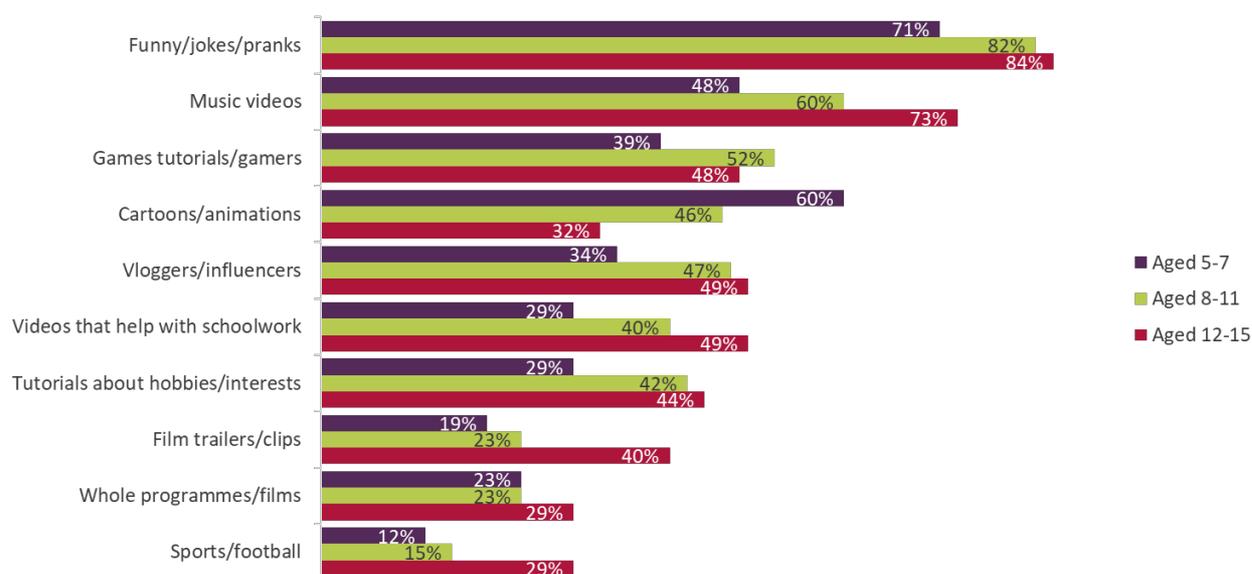
Social video services provided entertainment, education and fitness tutorials for children throughout the Covid-19 lockdowns. Seven in ten children aged 8-15 said they had used video services more in 2020 as they had been at home more than usual.¹⁴¹

Funny videos such as pranks or challenges were the most popular type of online video content across the 5-15 age group in 2020. But there were some differences by age in the type of content watched. ‘Cartoons and animation’ videos were most popular among children aged 5-7, while half of 12- to 15-year-olds said they watched videos that helped with their schoolwork or homework (see [education section](#) for further discussion).¹⁴²

¹⁴¹ Ofcom, Children’s and Parents’ Media Literacy Tracker 2020/21

¹⁴² Ofcom, Children’s and Parents’ Media Literacy Tracker 2020/21

Figure 2.13: Type of content watched on video-sharing platforms, by age: 2020



Source: Ofcom Children’s and Parents’ Media Literacy Tracker 2020 - Survey 2. QP22C. Below is a list of the sorts of videos that your child may have watched on these video sites or apps. Which, if any, of these types of things do they watch? (multi coded). Responses from parents of 3- to 7-year-olds and from children aged 8-15. Base: Parents of 3-15s whose child watches videos on video-sharing platforms (248 aged 5-7, 672 aged 8-11, 687 aged 12-15, 1607 aged 5-15).

Content aimed at children is among the highest-viewed content on YouTube

According to data from Tubular Labs, YouTube videos classified as ‘children’s content’ have, on average, 359,000 views within 30 days of being uploaded, higher than any other category of content.¹⁴³ This is probably because younger children may watch the same content repeatedly, such as toddlers watching videos of nursery rhymes and cartoons.

As of March 2021, four of the top ten most-viewed videos globally on the main YouTube platform were songs, nursery rhymes or cartoons aimed at younger children, with *Baby Shark Dance* at number one with more than 8 billion views.¹⁴⁴ Cocomelon Nursery Rhymes was the YouTube channel with the largest global reach, at 303 million unique viewers, and the second-largest watch time, at 13.4 billion minutes.¹⁴⁵ In December 2020, Cocomelon passed 100 million global subscribers on YouTube, the third highest of any channel, and 100 billion total views, the second-highest figure ever recorded.¹⁴⁶

¹⁴³ Tubular Labs, [Made for Kids: Special Report](#), August 2020. Tubular Labs, [Covid-19: Know what the world is watching \(Kids\)](#), March 2020

¹⁴⁴ YouTube, [Baby Shark Dance](#), accessed 23 April 2021

¹⁴⁵ YouTube, [Cocomelon – Nursery Rhymes](#), accessed 23 April 2021. Tubular Labs, Audience Ratings, YouTube, All Creators, Unique viewers (based on 30 second quality views), Global Audience, March 2021

¹⁴⁶ Forbes, [100 Billion Views And Counting: ‘CoComelon’ Is Absolutely Dominating Netflix And YouTube](#), 14 Dec 2020

Some of the most successful UK-based social video content creators catering to children are traditional children’s broadcasters, such as Nickelodeon, Cartoon Network and Disney. These broadcasters’ content sits alongside content by ‘kidfluencers’ such as brother and sister ‘Mister Max’ and ‘Miss Katy’, and ‘Emily Tube’. All three of these accounts are run by these children’s parents, with the channels featuring scripted videos of the children playing and dressing up.

Some academics have raised questions about the potential risks to children from vlogging or ‘sharenting’ (parents sharing images, videos or information about their child online) on sites such as YouTube. These include concerns about children’s privacy and safety, potential emotional harms and potential exploitation risks arising from the sharing of videos and images of children online.¹⁴⁷

Figure 2.14 Top ten UK-based children’s entertainment and animation creators, by average monthly global unique viewers on YouTube and Facebook: February 2020 to January 2021

	Creator	Creator Type	Average monthly unique viewers	Global total watch time (minutes)	Average viewing time per monthly viewer (minutes)	Global total video views
1	Little Baby Bum - Nursery Rhymes & Kids Songs	Media Company	105.1m	23.9bn	227.1	5.9bn
2	Nick Jr.	Media Company	62.6m	16.2bn	258.1	4.1bn
3	Disney Junior UK	Media Company	40.7m	3.6bn	88.3	1.6bn
4	Cartoon Network UK	Media Company	28.3m	6.0bn	211.8	2.0bn
5	Miss Katy	Influencer	26.0m	11.2bn	428.9	1.9bn
6	Mister Max	Influencer	25.4m	10.6bn	417.8	1.9bn
7	Disney Channel UK	Media Company	25.2m	4.8bn	192.6	2.3bn
8	More EmilyTube	Influencer	23.1m	610m	26.5	324m
9	Peppa Pig Surprise	Brand	23.0m	2.8bn	120.1	572m
10	Nickelodeon UK	Media Company	20.7m	2.9bn	140.4	1.5bn

¹⁴⁷ Claire Bessant, Emma Nottingham, Marian Oswald, *Sharenting in a socially distanced world*, LSE Blog: Parenting for a Digital Future, 12 August 2020. Van der Hof, S., Lievens, E., Milkaite, I., Verdoodt, V., Hannema, T., & Liefwaard, T. (2020) *The Child’s Right to Protection against Economic Exploitation in the Digital World*, The International Journal of Children's Rights, 28(4), 833-859. Veronica Barassi, *Against Sharenting*, Child Data Citizen, 18 March 2019. Alicia Blum-Ross & Sonia Livingstone (2017) *“Sharenting,” parent blogging, and the boundaries of the digital self*, Popular Communication, 15:2, 110-125

Source: Tubular Labs, Audience ratings, Cross-platform (YouTube+Facebook). Rankings based on monthly unique viewers average in the last 12 months ending January 2021. Unique viewer numbers are based on 30-second quality views. Video views are videos watched for 30 seconds (or a video watched to completion for videos shorter than 30 seconds).

Gaming

Three-quarters of UK online 5- to 15-year-olds played games online in 2020, allowing them to socialise and chat to friends while apart

Three-quarters of UK online 5- to 15-year-olds played games online in 2020. As children get older, more of them play games online. Among 12-15s, eight in ten played games online in 2020, compared to half of 5- to 7-year-olds.¹⁴⁸

Gaming allows children to play with and chat to their friends, as well as being a source of entertainment and a potential creative outlet. Research by CHILDWISE found that 7- to 16-year-old children spent more time playing on their games consoles at home in 2020: 3 hours 6 minutes a day on average, up from 2 hours 42 minutes in 2019.¹⁴⁹ Console multi-player gaming networks had record user numbers in 2020, with both Xbox Live and the PlayStation Network surpassing 100 million monthly active users globally.¹⁵⁰

Gaming is likely to have become an even more important form of communication in 2020. Seven in ten 8- to 11-year-olds and eight in ten 12- to 15-year-olds who game online used in-game chat in 2020, with the vast majority doing so to chat to their friends.¹⁵¹

While most children who use in-game chat talk to friends they know outside gaming, a sizeable minority also interact with people whom they know only through gaming. This was more common among older children and teenagers.

Figure 2.15: Ways of playing games online and use of in-game chat: 2020



¹⁴⁸ Ofcom, Children's and Parents' Media Literacy Tracker 2020/21

¹⁴⁹ CHILDWISE Monitor Report 2020

¹⁵⁰ Microsoft, [Earnings Call Transcript FY21 Q2, 26 January 2021](#). Sony Interactive Entertainment, [PlayStation Network monthly active users reaches 103 million, 7 January 2020](#)

¹⁵¹ Ofcom, Children and Parents' Media Literacy Tracker 2020/21

Source: Ofcom Children's and Parents' Media Literacy Tracker 2020/21 – Survey 1. QP70A: Many games can now be played online, either through games consoles, or through other devices such as tablets, mobile phones and smart TVs. Some popular online games include Minecraft and Fortnite. Does your child ever play games online? (single coded) QP70B. When your child plays games online, which of these describe how they are playing? (multi coded). Responses from parent for 3-7s and from child aged 8-15. Base: Parents of children aged 3-7 whose child plays games and children aged 8-15 who ever play games (613 aged 3-4, 699 aged 5-7, 680 aged 8-11, 688 aged 12-15, 2067 aged 5-15). QC43: When you play games online do you ever chat through the game to other people who are playing through instant messaging or using a headset? QC44: And when you chat, who do you chat to? Base: Children aged 8-15 who ever play games online (549 aged 8-11, 588 aged 12-15).

Children played a wide range of games online, with use of Roblox growing in 2020

In 2020, children and young people drove many of the big trends in gaming, such as the considerable spike in *Among Us* downloads, covered in more detail in the [Consumer chapter](#), and Roblox use, covered in more detail below.

Research by CHILDWISE found that the games children said they played varied according to age. *Roblox* and the multi-player competitive game *Fortnite* were more likely to be played by under-12s, while games with higher PEGI ratings such as *Call of Duty*, *Grand Theft Auto* and *Rainbow Six Siege* (all PEGI 18+) were more likely to be played by older children.¹⁵² Almost six in ten parents of 5-to 15-year olds (58%) said they had rules in place about their child only playing games with an age-appropriate rating. This was highest among parents of 5- to 11-year olds at more than six in ten, compared to just over four in ten parents of 12- to 15-year-olds.¹⁵³

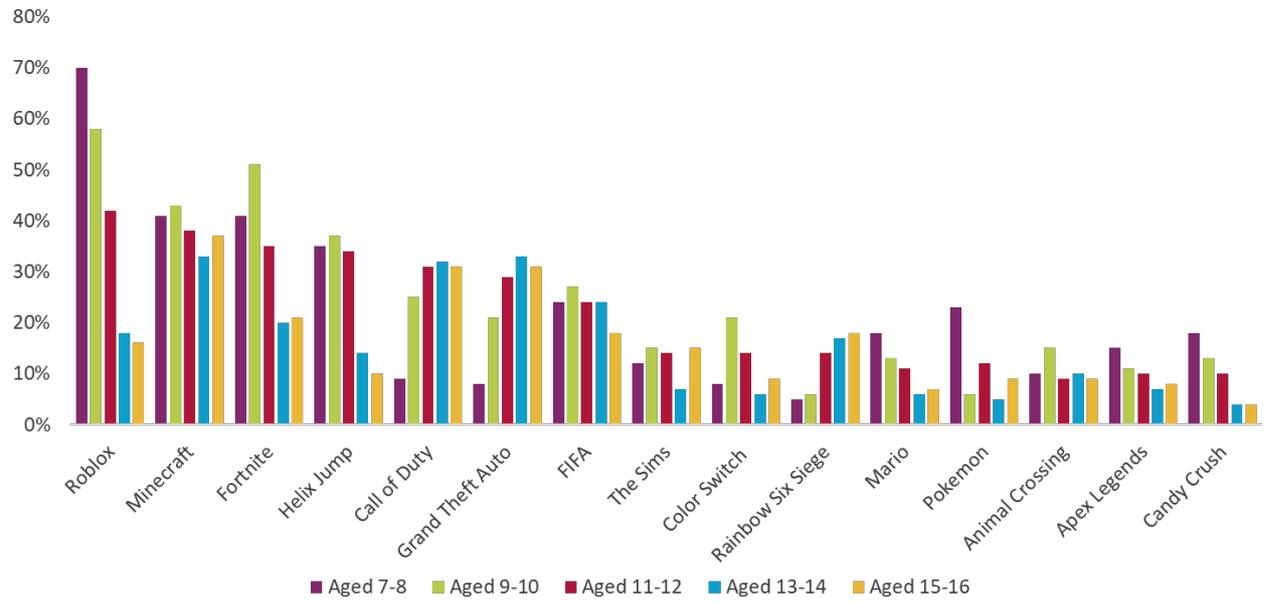
There were also differences by gender in girls' and boys' preferences. Boys were more likely to say they played action-adventure and battle games such as *Call of Duty* and *Grand Theft Auto*, while social simulation games like *The Sims* and *Animal Crossing* and mobile-phone based quiz games tended to be more popular among girls.¹⁵⁴

¹⁵² Pan European Game Information (PEGI), www.pegi.info, accessed 15 February 2021

¹⁵³ Ofcom, Children's and Parents' Media Literacy Tracker 2020/21

¹⁵⁴ CHILDWISE Monitor Report 2021

Figure 2.16: Top 15 games played in the past week by 7- to 16-year-olds, by age



Source: CHILDWISE Monitor Report 2021, Fieldwork: September to November 2020. Question: Selected games played in the last week. Base: 853. Note: Among Us not included as an answer code.

Case study: Roblox

Roblox is a Silicon Valley-based game-creation platform that is particularly popular among children. Originally released in 2006, Roblox relies on user-created games; players create their own games using Roblox Studio, which other Roblox users can then play. One of the most popular user-created games is *Adopt Me!*, where players adopt and raise virtual pets. *Adopt Me!* had the most visits and the highest global play time of all Roblox games in 2020.¹⁵⁵ As of May 2021, *Adopt Me!* had been visited 22.2 bn times, roughly double that of the second-ranked game *Tower of Hell* (11.4 bn).¹⁵⁶

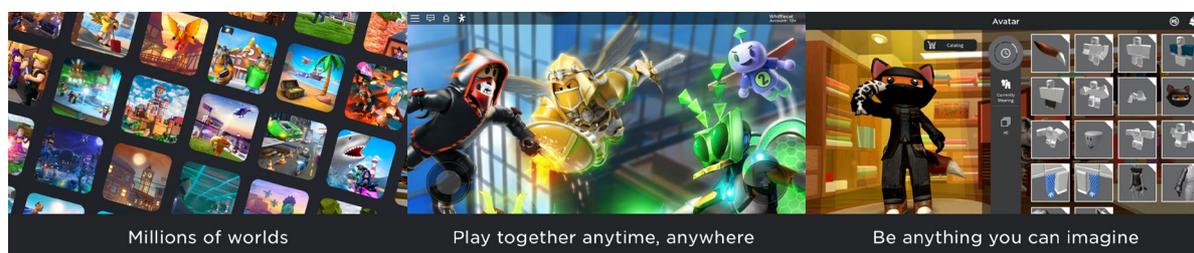
Covid-19 related restrictions led to increased take-up and time spent on the platform. In the nine months to September 2020, Roblox's global daily active users increased by 82% to reach 31.1 million. Hours spent on the platform increased by 122% over the same period, to a daily average of 2 hours 36 minutes per daily active user.¹⁵⁷ On the back of this growth over 2020, Roblox listed on the New York stock exchange in March 2021, ending its first day of trading with a market capitalisation of £28bn (\$38.3bn).¹⁵⁸

According to research by CHILDWISE, four in ten 7- to 16-year-olds in the UK said that they played on Roblox. Its popularity is largely driven by younger children and girls; 70% of 7- to 8-year-olds said they played it (vs. 17% of 13-16s), as did 46% of girls (vs. 38% of boys).¹⁵⁹

It is available on a range of devices, from PCs to consoles, but the bulk of hours spent on the platform in the nine months to September 2020 (68%) were from users who downloaded Roblox from the Apple App Store and Google Play Store.¹⁶⁰ This indicates that a significant proportion of users play on their phones or tablets.

While it is free to play, Roblox makes money through a subscription-based premium version of the game and in-game purchases made using the virtual 'Robux' currency. Game creators in turn earn money based on use of their games. Nearly 250 Roblox developers each earned £73,265 (\$100,000) or more in 2020, including some UK developers who began making Roblox games as teenagers.¹⁶¹ However, research on behalf of the Children's Commissioner for England identified problematic practices around the use of Robux, with some children reportedly being offered access to 'Robux generators', a scam whereby other users promise access to a tool to make free Robux in exchange for personal information or passwords.¹⁶²

Figure 2.17: Screenshots of Roblox interface and gameplay



¹⁵⁵ Roblox Blog, [8th Annual Bloxy Awards: Complete Winners List](#), March 2021

Source: Roblox Corporation, [Google Play Store](#), accessed 26 April 2021.

Education

The internet was key in helping most children continue their education in 2020

The Covid-19 pandemic and related lockdowns caused huge disruption to children's education throughout 2020 and early 2021. According to data from the ONS, between May and June 2020 nearly nine in ten parents in Britain with a school-age child in the household (87%) said their child had been home-schooled in the past week because of the Covid-19 pandemic, and so a large proportion of children were using the internet to some extent to help with their schoolwork.¹⁶³ A similar proportion of parents (90%) were home-schooling their child in January and February 2021.¹⁶⁴

Several organisations took steps to help make it easier for children and their parents to continue their education from home online. BBC Bitesize made tailored educational content available and mobile network operators zero-rated access to online educational resources such as the Oak National Academy.¹⁶⁵ In March 2020, as the world entered into lockdown, YouTube launched Learn@Home, a website with learning resources for children.¹⁶⁶ Some content creators on social video platforms also began providing educational content as demand rose from March 2020 and educational videos became an important learning resource.

For instance, UK primary school teacher Jacob Mitchell began live-streaming lessons via YouTube during the pandemic as 'MC Grammar'. He uses rap and rhyme to teach 6- to 11-year-olds about the English language.¹⁶⁷ He had previously visited schools as his *alter ego*, but when schools closed in 2020, he set up a studio at home to produce live video content. His YouTube success resulted in him creating the first World Book Day song.¹⁶⁸ As of April 2021, his YouTube channel had over 10,000 subscribers and his 76 videos had been viewed 1.75 million times.¹⁶⁹

There is also a host of online UK-based educational resources which children drew on to help with their online learning, including Hegarty Maths, which began in 2011 when two London-based maths

¹⁵⁶ Roblox, [Games: Adopt Me!](#), accessed 5 May 2021. Roblox, [Games: Tower of Hell](#), accessed 5 May 2021.

¹⁵⁷ Roblox Corporation, [Form S-1 Registration Statement](#), Securities and Exchange Commission, November 2020.

¹⁵⁸ Financial Times, [Roblox closes at \\$38bn valuation on first day of trading](#), 10 March 2021

¹⁵⁹ *CHILDWISE Monitor Report 2021*

¹⁶⁰ Roblox Corporation, [Form S-1 Registration Statement](#), Securities and Exchange Commission, November 2020

¹⁶¹ Roblox Corporation, [Form S-1 Registration Statement](#), Securities and Exchange Commission, November 2020. BBC News, [Roblox: 'We paid off our parents' mortgage making video games'](#), 12 March 2020

¹⁶² The Children's Commissioner for England, [Gaming the system](#), October 2019

¹⁶³ ONS, [Coronavirus and homeschooling in Great Britain: April to June 2020](#), 22 July 2020

¹⁶⁴ ONS, [Coronavirus and the social impacts on Great Britain: 19 February 2021](#), 19 February 2021

¹⁶⁵ BBC Media Centre, [BBC delivers biggest Education offer in its history](#), 5 January 2021. BT Newsroom, [Our Lockdown Learning Support Scheme](#), 8 January 2021. BBC News, [Mobile networks to make Oak lessons site data-free](#), 19 January 2021.

¹⁶⁶ YouTube official blog, [COVID-19: Resources to help people learn on YouTube](#), 20 March 2020

¹⁶⁷ Metro, ['Where I Work: Jacob, the teacher filming rapping videos as MC GRAMMAR in front of a green screen'](#), 29 April 2020

¹⁶⁸ World Book Day, [MC Grammar presents the World Book Day song](#), accessed 26 April 2021

¹⁶⁹ Social Blade, [YouTube: MC Grammar TV](#), accessed 26 April 2021

teachers made YouTube videos to support their students.¹⁷⁰ It is now an online platform that schools can subscribe to.

Figure 2.18: Top five high-reaching educational sites visited by UK online children on desktop computers in September 2020

6- to 12-year-olds, desktop only					13- to 17-year-olds, desktop only			
		Reach	Reach (%)	Avg. time spent in Sep 20		Reach	Reach (%)	Avg. time spent in Sept 20
1	Hegarty Maths	127k	4.4%	42 mins 2 secs	BBC Bitesize	238k	9.1%	9 mins 2 secs
2	Times Tables Rock Stars	113k	4%	25 mins 1 sec	Hegarty Maths	232k	8.9%	59 mins 1 sec
3	BBC Bitesize	107k	3.8%	7 mins 7 secs	Quizlet	158k	6.1%	20 mins 2 secs
4	Quizlet	65k	2.3%	14 mins 1 sec	Seneca Learning	133k	5.1%	12 mins 1 sec
5	Pearson Education	43k	1.5%	1 min 7 secs	Pearson Education	70k	2.7%	2 mins 2 secs

Source: Comscore MMX Multi-Platform, desktop only, age: 6-17, September 2020, UK. Note: custom list defined by Ofcom.

2020 saw the rapid adoption of digital remote education by teachers, parents and children

The enforced shift to online learning required teachers, parents and children to adapt to using online technology, such as video conferencing, and to get to grips with using platforms for setting and collecting work. The global audience for Google Classroom, a platform for teachers to distribute and mark schoolwork and communicate with students, grew to 150 million students and teachers in February 2021, up from 40 million the previous year.¹⁷¹ In the first few weeks of lockdown in spring 2020, two-thirds of children in England were not receiving any live or recorded lessons. By January 2021, this was down to just one in ten.¹⁷²

Although the scale of the use of technology for education will probably fall as fewer children are learning from home, it is likely to have practical uses that will outlive the Covid-19 pandemic. For

¹⁷⁰ BBC News, [UK teacher in final for global prize](#), 13 March 2016

¹⁷¹ Google Blog, [A peek at what's next for Google Classroom](#), February 2021

¹⁷² The Sutton Trust, [Learning in Lockdown](#), January 2021

instance, digital tools such as live or recorded lessons could be used to support children who may not be able to attend school in-person due to illness, or to provide additional revision materials.¹⁷³

While technology has been a positive enabler for education throughout the Covid-19 pandemic, it can also serve as a distraction. In our *Children's Media Lives* qualitative research, many children multi-screened throughout the school day. For instance, a few children in the sample played YouTube videos or Netflix shows as background noise when doing schoolwork, while others spent lots of time scrolling through TikTok and messaging friends during school hours.¹⁷⁴

But some children struggled with remote learning due to inadequate access to the internet and devices

Experiences of home schooling were very different for different children; some struggled to keep themselves engaged and motivated¹⁷⁵, while a significant proportion lacked adequate internet access and the digital devices to be able to engage with their schoolwork at all.

As noted at the start of this chapter, in early 2021, 4% of online households with children in the UK only have access to the internet via a mobile network.¹⁷⁶ This potentially presented problems for families with children who were trying to join virtual classrooms, access online resources, or submit their schoolwork.

Our Technology Tracker research also found that while eight in ten school-aged children (4-18) had access to appropriate devices for their schoolwork all the time, more than one in ten had access only some of the time (13%), 2% rarely had access and 2% never had access. Two per cent of households with school-aged children had internet access only via a smartphone. Children in the most financially vulnerable households were less likely than those in the least vulnerable households to have access to appropriate devices for their schoolwork, as were children who lived in households where their parent or guardian had a condition that impacted or limited their daily activities.¹⁷⁷

¹⁷³ Ofsted, *Research and analysis: Remote education research*, 18 February 2021. The Observer, *After Covid, will digital learning be the new normal?*, 23 January 2021

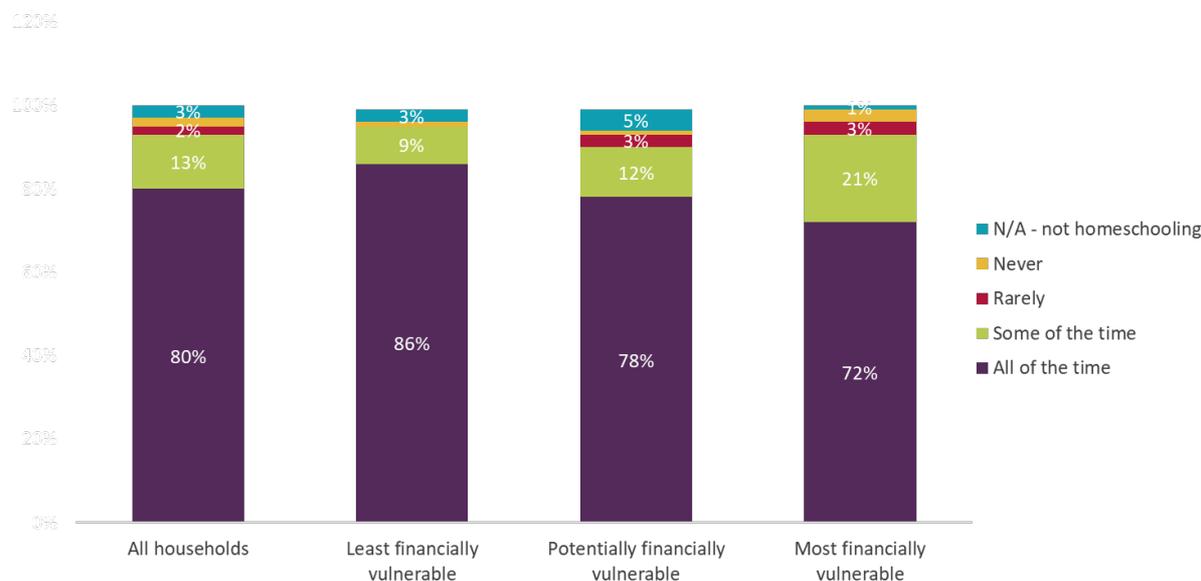
¹⁷⁴ Ofcom, *Children's Media Lives: Year 7 2020/21*, April 2021

¹⁷⁵ Ofcom, *Children's Media Lives: Year 7 2020/21*, April 2021

¹⁷⁶ Ofcom Technology Tracker CATI omnibus survey, 12 February to 5 March 2021

¹⁷⁷ Ofcom Technology Tracker CATI omnibus survey, 12 February to 5 March 2021

Figure 2.19: Access to appropriate devices for schoolwork in households with school-age children (4-18), by financial vulnerability: 2021¹⁷⁸



Source: Ofcom Technology Tracker CATI omnibus survey, 12 February to 5 March 2021. KDR04: To what extent do the children in your household have access at home to appropriate devices based on their schooling requirements, to enable them to connect to the internet for online schooling or online learning as needed? Base: 1109. Response for each school aged child (age 4-18). Note: not household level – multiple answers per household in some cases.

Those children who lacked access to the devices they needed to do their schoolwork usually managed by sharing access to a device with others (65%). But for 3% of those children lacking access to devices, not having access to an appropriate device meant that they simply could not do their schoolwork.

According to data from the ONS, in January and February 2021, 8% of households with children learning from home said they were using devices provided by their child’s school, while the large majority (66%) said that their child used devices provided by the household. One in five (22%) parents said their child was using non-digital resources provided by school and the same percentage were using non-digital resources they had found themselves.¹⁷⁹ Throughout the lockdown periods, several initiatives around the UK provided devices to disadvantaged children for their schoolwork. For instance, as part of their Make A Difference campaign, BBC local radio stations across the UK connected households and businesses with devices to donate to specialist charities that could wipe the devices and distribute them to schools.¹⁸⁰

¹⁷⁸ Ofcom has developed a bespoke measure of financial vulnerability using a combination of questions: number of children under 18 in the household, household income and household size

¹⁷⁹ ONS, [Coronavirus and the social impacts on Great Britain: 19 February 2021](#), 19 February 2021

¹⁸⁰ BBC Media Centre, [The BBC’s Make A Difference: Give A Laptop campaign raises more than £700,000 to give kids home schooling tech](#), 28 January 2021

Market context and business models

Children have online purchasing power...

Children are an important cohort of online consumers, with both their own money to spend online and the ability to influence household spending online.¹⁸¹

Research by CHILDWISE indicates that six in ten 5- to 16-year-olds received pocket money or an allowance (61%) in 2020. Seventeen per cent of 5-to 16-year-olds said they received money for doing a paid job, which could include being paid for doing chores around the home, as well as part-time work from the age of 13 upwards.¹⁸² RoosterMoney, a pre-paid debit card and app service for children aged six and above, used data based on its users to suggest that children in the UK aged 4-14 received £6.18 a week on average in pocket money in early 2021. The amount rose as children get older, up to an average of £10.11 per week for 14-year-olds. Children's spending power was also increased by ad-hoc presents, such as cash from relatives, and special visitors such as the tooth fairy.¹⁸³

A significant proportion of children's money is spent on digital devices or online entertainment. Research by CHILDWISE indicated that that a third of 7- to 16-year-olds have spent their own money on computer games (29%), while one in five have spent their own money on apps (21%). Boys aged 11-16 were most likely to have spent their money on computer games (52%).¹⁸⁴ Similarly, using data from the savings goals of its users, RoosterMoney suggests that children's savings goals are digitally-oriented, perhaps due to the expense of most consoles and devices and the prevalence of in-game currencies in the online games popular with children. The top six items that children using RoosterMoney were saving for as of November 2020 were: Lego, phones, Fortnite, Roblox, Nintendo Switch, and PlayStation.¹⁸⁵

...and are also online shoppers

Many children are keen online shoppers. While children aged 7-16 tended to say they preferred going to the shops to shopping online (24% vs. 16%), among 15- to 16-year-olds the proportion evened out (30% prefer online, 29% prefer in-person).¹⁸⁶ Since the spring 2020 lockdown, with much of the retail and hospitality sector closed, teenagers have been spending more money online than offline, and this trend has continued into 2021. The same has applied to many adults (see our [Industry chapter](#) for more detail on e-commerce trends).

¹⁸¹ SuperAwesome, [The emergence of the 13-15 market: The world's most powerful household influencer](#), 2020

¹⁸² CHILDWISE Monitor Report 2021

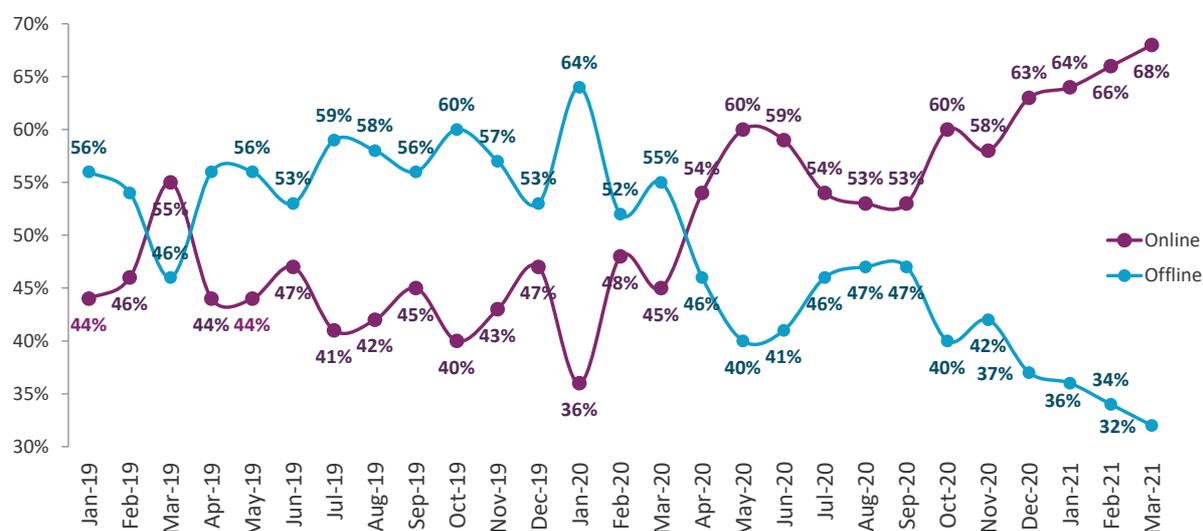
¹⁸³ RoosterMoney, [Money Index UK 2021](#), March 2021

¹⁸⁴ CHILDWISE Monitor Report 2021

¹⁸⁵ FT, [Digital gifts dominate children's Christmas wish lists](#), 6 November 2020. Rooster Money, [Pocket Money Index UK 2021](#), March 2021

¹⁸⁶ CHILDWISE Monitor Report 2021

Figure 2.20: 13- to 17-year-olds' online and offline spend, as a proportion of total spend: January 2019 to March 2021



Source: *The Insights Family UK, offline versus online spend, 1/1/2019 – 31/3/2021, Total surveyed: 7700, see the [interactive report](#) for this chart by age groups*

While many children use their parents' debit cards to shop online, children's independent online spending has been enabled by the arrival of digital pocket money apps and pre-paid debit cards tailored for children and their parents, such as the UK-based GoHenry, RoosterMoney, and Starling's Kite card. GoHenry launched in 2012, offering a pre-paid debit card for children aged 6 and over, which can be controlled by parents through an app. In December 2020 GoHenry announced a \$40m financing round to accelerate its expansion in the UK and the US.¹⁸⁷ The digital bank Starling launched its Kite card in September 2020 for children aged 6 to 16, linked to a parent's or guardian's own Starling account.¹⁸⁸

Some online platforms have developed services to take advantage of children's spending power and their growing digital autonomy. For instance, in the US, Amazon Teen provides 13- to 17-year-olds with their own Amazon login, linked to their parent's account, so that they can shop or stream content, paying via their parent's card, subject to parental approval through a text or email notification.¹⁸⁹

¹⁸⁷ City AM, [Pocket money app GoHenry secures \\$40m in funding round](#), 8 December 2020

¹⁸⁸ Sterling Bank Blog, [Starling Kite launches as schools reopen to help teach children money management skills](#), 10 September 2020

¹⁸⁹ SuperAwesome, [The emergence of the 13-15 market: UK](#), 2020. Amazon, [Amazon Teen](#), accessed 1 April 2021

Business models

Social media and online gaming services popular with children operate a range of income-generating methods

Many services used by children rely on in-app monetisation strategies, either through advertising or transactions. Social media and social video services rely on advertising as a core revenue stream, while in-app or on-site transactions range from buying a film on YouTube, sending 'digital gifts' to content creators on TikTok, or buying products from companies on Instagram, from which Instagram takes a commission.¹⁹⁰

Within online gaming, transactions can be used to enhance a player's capabilities, unlock content in the game, or improve the look of the player's avatar. Transactions tend to be made through the game's own currency, such as Robux on Roblox, Minecoins on Minecraft and Fortnite V-Bucks. Concerns have been raised by groups such as Parent Zone about the use of in-game monetisation and the effect on children of techniques to persuade players to spend money in games.¹⁹¹

Some services face restrictions on how they monetise some of their child user base. For instance, from 1 January 2020, to comply with US regulation, YouTube adopted its 'Made For Kids' rules across its YouTube and YouTube Kids platforms globally. This meant that it could no longer serve *personalised* adverts alongside content designated as being directed at children aged under 13. However, it still runs non-personalised adverts.¹⁹²

Some YouTube content creators with an under-13 target audience use monetisation methods other than advertising to boost revenue, such as licensing or merchandising deals. For instance, popular cartoon YouTube channel 'Masha and The Bear' has distribution deals with UK broadcast TV channel Tiny Pop and with Netflix, as well as a line of toy merchandise.¹⁹³ Similarly, the Cocomelon brand, which was acquired by London-based media company Moonbug Entertainment in July 2020, has a content deal with Netflix and sells a range of toys and clothing.¹⁹⁴ YouTube's top earner in 2020, nine-year-old Ryan Kaji, reportedly earned \$29.5m in 2020 from 12.2 billion views of his YouTube channel, as well as from a Nickelodeon TV series and his range of toy and clothes merchandise.¹⁹⁵

Online platforms are valuable to brands and advertisers because of their popularity with young consumers

Social media platforms offer companies and brands a direct channel to engage with young consumers, either through paid-for advertising or by creating their own social media profiles. In

¹⁹⁰ Internet Matters, [Spending Money Online: Advice for Parents & Carers](#), accessed 1 April 2021

¹⁹¹ ParentZone, [The Rip-Off Games](#), 29 August 2019

¹⁹² Federal Trade Commission, [Google and YouTube will pay record \\$170 million for alleged violations of children's privacy law](#), 4 September 2019. SuperAwesome, [Everything brand and creators need to know about YouTube's new policy on kids](#), 15 January 2020

¹⁹³ Tubular Labs, [Made for Kids: Special Report](#), August 2020

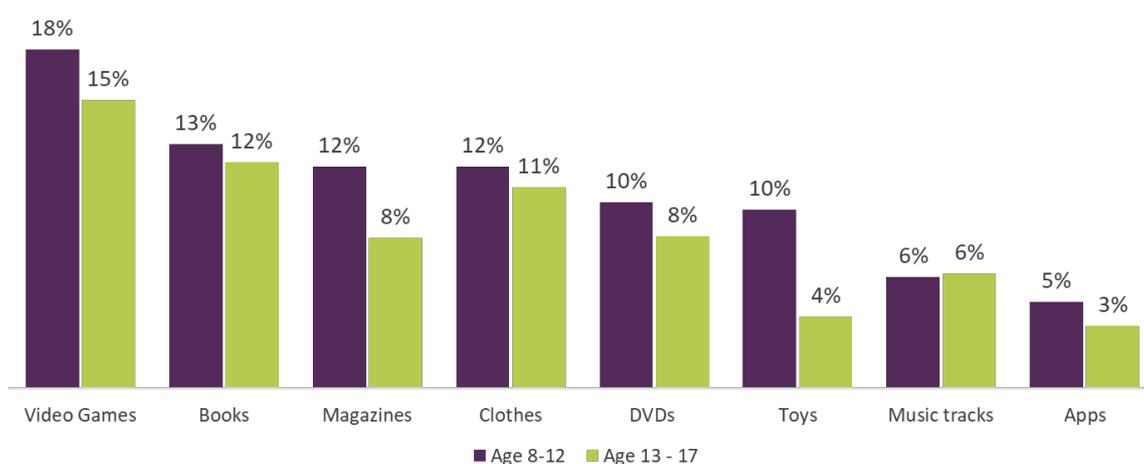
¹⁹⁴ Forbes, [100 Billion Views and Counting: 'CoComelon' is absolutely dominating Netflix and YouTube](#), 14 December 2020. The Verge, [YouTube's biggest kids show is about to take over streaming services](#), 19 October 2020.

¹⁹⁵ Forbes, [The Highest-Paid YouTube Stars of 2020, December 2020](#). The Guardian, [Ryan Kaji, 9, earns \\$29.5 million as this year's highest paid YouTuber](#), December 2020

2020, a sixth of 8- to 11-year-olds and a third of 12 to 15s said they used social media and messaging services to follow companies or brands that they like.¹⁹⁶

Brands also rely on the power that influencers and content creators have in indirectly marketing to children. About half of 8- to 15-year-olds said they use social media and messaging apps to keep up with what celebrities and YouTubers are doing.¹⁹⁷ Teenagers in our *Children’s Media Lives* research tended to follow influencers whom they found ‘relatable’ because they had similar interests or backgrounds, or because the lives these content creators were leading matched their own aspirations.¹⁹⁸ According to research by The Insights Family, more than half of 8- to 17-year-olds said they had bought products related to their favourite YouTubers, including video games, books, clothes and toys.¹⁹⁹

Figure 2.21: Products purchased by 8- to 17-year-olds related to their favourite YouTuber: 2020



Source: Kids Insight UK, 1/1/2020 – 31/12/2020. Question: Have you bought any of the following which relate to your favourite YouTuber? Base: 3454

Children often do not fully understand how online advertising is tailored to their interests

Our research suggests that children often do not fully understand the online advertising and marketing they are targeted with. For instance, just 40% of 8- to 11-year-olds and 49% of 12- to 15-year-olds who used search engines recognised paid-for-advertising in Google search results and understood that the only reason these results were displayed first was because the listings were adverts.²⁰⁰

Similarly, while two-thirds of 12- to 15-year-olds recognised that influencers might say positive things about a product or brand because they are paid to do so, a third thought that this could be

¹⁹⁶ Ofcom, Children’s and Parents’ Media Literacy Tracker 2020/21

¹⁹⁷ Ofcom, Children’s and Parents’ Media Literacy Tracker 2020/21

¹⁹⁸ Ofcom, *Children’s Media Lives: Year 7*, April 2020

¹⁹⁹ The Insights Family, 2020, Question: Have you bought any of the following which relate to your favourite YouTuber?

²⁰⁰ Ofcom, Children’s and Parents’ Media Literacy Tracker 2020/21

because influencers just wanted to share information with their followers, and a further third thought it was because the products or brand were good or cool to use.²⁰¹

The children in our *Children's Media Lives* research understood that they were being advertised to online, and that influencers were paid to promote brands and products. Some said they found social media advertising helpful because it showed them products that were aligned with their interests, and they saw more value in the products promoted by influencers. For example, 16-year-old Shirya said she often made purchases by clicking directly through from adverts for clothing and jewellery on Instagram, and liked following people such as 20-year-old LA-based influencer Victoria Loopz because she posted affordable fashion 'hauls' that Shirya might then buy herself.²⁰²

Children's experience of online harms, and action taken

Experience of online harms

More than half of 12- to 15-year-olds had a negative experience online in 2020

While the internet undoubtedly has many benefits for children – as it does for adults – it also carries risks, and while not all risks lead to harmful experiences, unfortunately children do come across content and behaviour from others online that have the potential to cause harm.²⁰³

Our research finds that more than half of 12-15s say they have had a negative experience online, the most common being contacted by a stranger who wanted to be their friend (30%). One in five 12-15s said they had accidentally spent money online that they didn't want to, and a similar proportion (17%) reported seeing something of a sexual nature that made them feel uncomfortable.²⁰⁴

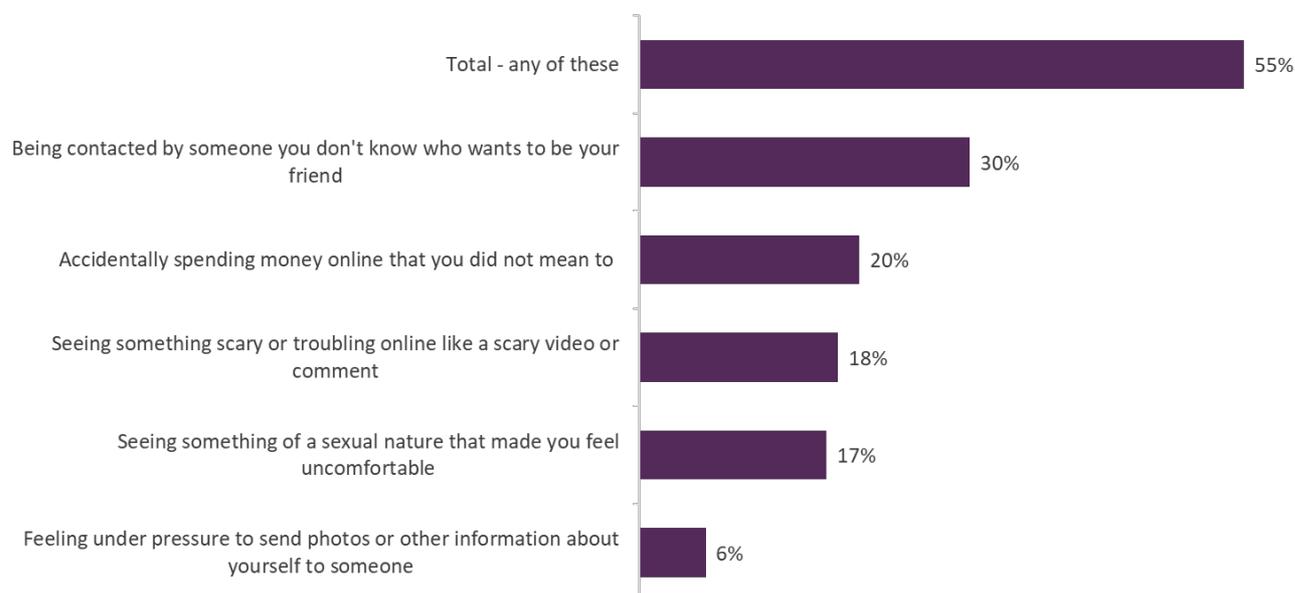
²⁰¹ Ofcom, Children's and Parents' Media Literacy Tracker 2020/21. Note: multi-coded answer

²⁰² Ofcom, [Children's Media Lives: Year 7](#), April 2020

²⁰³ Media@LSE blog, [More online risks to children, but not necessarily more harm: EU Kids Online 2020 survey](#), 11 February 2020.

²⁰⁴ Ofcom, Children's and Parents' Media Literacy Tracker 2020/21

Figure 2.22: Experience of negative types of online or mobile phone activity, among children aged 12-15: 2020



Source: Ofcom Children's and Parents' Media Literacy Tracker 2020/21 Survey 1. QC56 – Please look at the list of things below and think about whether they have happened to you, either online or on a mobile phone (multi coded). Base: Children aged 12-15 who opted to answer the question (675).

When asked a further question as to whether they had ever seen anything online that they found worrying or nasty, around three in ten said they had (27% of 8-11s, 31% of 12-15s).²⁰⁵ When asked if they had seen hateful content online over the past year that was directed at a particular group of people, based, for example, on their gender, religion, disability, sexuality or gender identity, half of 12- to 15-year-olds (51%) said they had.²⁰⁶

Half of 12- to 15s and a quarter of 8- to 11s who had experienced bullying said they had experienced it on social media

A quarter of the 8- to 11-year-olds and a third of 12- to 15-year-olds who answered the question in our survey about bullying said that they had personally experienced being bullied, either on or offline.²⁰⁷ More than half of the 12- to 15-year-olds who had experienced bullying said they had

²⁰⁵ Ofcom, Children's and Parents' Media Literacy Tracker 2020/21 – Survey 1. QC31: And, have you ever seen anything online that you found worrying or nasty in some way that you didn't like? Base: Children aged 8-15 who go online (693 aged 8-11, 729 aged 12-15)

²⁰⁶ Ofcom, Children's and Parents' Media Literacy Tracker 2020/21 – Survey 1. QC59: In the past year have you seen anything hateful on the internet that has been directed at a particular group of people, based on, for instance, their gender, religion, disability, sexuality or gender identity? Examples of these sorts of things might be nasty or hateful comments or images that have been posted on social media, comments in response to an article that you read online, or videos posted on sites like YouTube. Base: Children aged 12-15 who go online (729)

²⁰⁷ Ofcom, Children's and Parents' Media Literacy Tracker 2020/21 – Survey 1. QC53: People can be nasty or hurtful. It could be behind someone's back, to their face, through calls or texts. It could be by calling people names, leaving them out, or through sharing photos or videos that upset them. It could be threatening to hurt or actually hurting them. It could be

experienced bullying by text or messaging apps (54%) or on social media (53%). Although 8- to 11-year-olds were less likely than older children to say they had experienced bullying in either of these ways – probably linked to the use of different services by different age groups – a significant minority had experienced bullying through text or messaging apps (29%) or via social media (24%).²⁰⁸

Gaming can also be a forum for negative and potentially harmful behaviour. Nearly half of 8-11s (48%) who said they had been bullied when using mobile phones or going online said it was through an online game, as did almost a third of 12-15s (31%). Across the age groups, boys were more likely than girls to say they had experienced bullying when playing games online (49% of boys vs. 29% of girls). For more information on how children and their parents mediate the risks of potential harms while gaming online, see our [Children and parents: media use and attitudes 2020/21](#) report.

Steps taken to protect children from online harms

More than half of 12- to 15-year-olds have blocked messages from others on social media

Many children – particularly older children – are aware of potential harmful experiences online and take steps to try to protect themselves and prevent potentially harmful experiences online. Our quantitative children’s media literacy research found that a third of 12- to 15-year-olds had changed their privacy settings on their social media profile, while more than half (55%) had blocked messages from people they did not want to engage with. Four in ten 12-15s said they had blocked people when playing games online. Six in ten 12-15 year olds who said they had seen hateful content online over the past year said they had taken some action about it, with the most common action being to block the person who shared or made the hateful comments (25%).²⁰⁹

Parents are also taking steps to try to keep their children safe online. Three-quarters of parents of 5- to 15-year-olds (77%) said they felt they knew enough to help their child stay safe online, and more than eight in ten 8- to 15-year-olds said their parents had given them information or advice about using the internet safely. But some children know how to hide their online activity from their parents: a fifth of 12- to 15-year-olds said they deleted their browsing history, and the same proportion said they had used browser privacy features such as Google’s Incognito mode.²¹⁰

Most children say they would tell someone if they saw something worrying or nasty online

The majority of children say they would tell someone if they came across worrying or nasty content online, and would most likely to tell someone they trust, like a parent, teacher, or friend. Nine in ten 8- to 11-year-olds (92%) said that they would tell a family member, compared to 83% of 12-15s. Older children were more likely than younger children to tell a friend, while younger children are more likely than older children to tell their teacher.²¹¹

done on purpose or as a joke that goes too far. Has this ever happened to anyone you know? QC54: And has this ever happened to you? Base: Children aged 8-15 who opted to answer the question (626 aged 8-11, 675 aged 12-15)

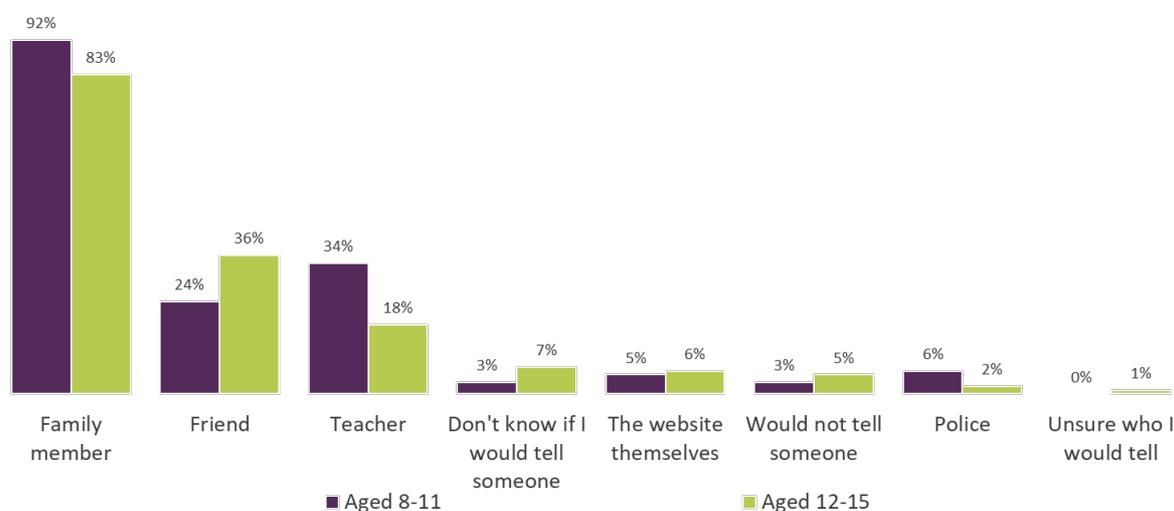
²⁰⁸ Ofcom, Children’s and Parents’ Media Literacy Tracker 2020/21

²⁰⁹ Ofcom, Children’s and Parents’ Media Literacy Tracker 2020/21

²¹⁰ Ofcom, Children’s and Parents’ Media Literacy Tracker 2020/21

²¹¹ Ofcom, Children’s and Parents’ Media Literacy Tracker 2020/21

Figure 2.23: Reporting online content considered by the child to be worrying or nasty, by age: 2020



Source: Ofcom’s Children’s and Parents’ Media Literacy Tracker 2020/21 – Survey 1. QC30A: If you saw something online that you found worrying or nasty in some way (that you didn’t like) would you tell someone about it? / QC30B. Who would you tell about the worrying or nasty thing that you saw online?? (Shows responses from >2% of all internet users aged 8-15) (multi coded). Base: Children aged 8-15 who go online (683 aged 8-11, 729 aged 12-15).

Seven in ten 12- to 15-year-olds were aware of reporting functions on the online services they use

On most online services, children have the option to report worrying or nasty content to the site or app they are using, typically through a button or online form. Seven in ten 12- to 15-year-olds were aware that reporting functions existed on the online services they used, while 14% said they had ever reported something they had seen online that they considered worrying or nasty, using these reporting functions. Eight per cent of 12-15s said that they had seen something worrying or nasty but had not been aware that online reporting functions existed.

More information about children’s experiences of harms online and their responses to those experiences can be found in our [Children and parents: media use and attitudes 2020/21](#) report.

Three-quarters of children have a social media profile by age 12

Most online communications and social media platforms have a minimum age requirement of 13, but take a variety of approaches to verify users’ age. Facebook uses different approaches to age verification on each of its platforms: WhatsApp, Facebook and Instagram.

It is clear from what children tell us about the platforms they use that significant proportions of them bypass the verification checks. In our quantitative children’s media literacy research for 2020/21, three-quarters of children had a social media profile by age 12. Sixteen per cent of online 12- to 15-year-olds said they knew how to ‘get round’ controls designed to stop them visiting certain

sites or apps, while 8% admitted to doing this.²¹² The vast majority of parents of 5- to 15-year-olds were aware that there are minimum age requirements on social media platforms (86%). But about half (48%) were unaware of what that minimum age was, and a third of parents were willing to let their child use social media services before reaching the minimum age.²¹³

Figure 2.24: Overview of minimum age requirements, and verification mechanisms on platforms popular with UK children

Service	Minimum age requirement	Age verification mechanisms in place
WhatsApp ²¹⁴	16	Age or date of birth not requested on sign-up. The terms of service requires users to be at least 16 years old.
Facebook Messenger ²¹⁵	13	Asks for date of birth on sign-up; user not allowed to set up account if under 13.
Facebook ²¹⁶	13	Asks for date of birth on sign-up; user not allowed to set up account if under 13.
Telegram ²¹⁷	16	Age or date of birth not requested on sign-up. The terms of service requires users to be at least 16 years old.
Discord ²¹⁸	13	Asks for date of birth on sign-up; user not allowed to set up account if under 13.
Snapchat ²¹⁹	13	Asks for date of birth on sign-up; user not allowed to set up account if under 13.
TikTok ²²⁰	13	Asks for date of birth on sign-up; user not allowed to set up if under 13. If user then enters age of 13 or over, they are still unable to set up an account on the same device.
Instagram ²²¹	13	Asks for date of birth on sign-up; user is not allowed to set up account if under 13. If age under 18 is entered, user is asked to gain parental consent via email so they can be shown personalised adverts, but this step can be skipped.

Sources: Platforms' Terms of Service, *Net Aware*, and UCD and CyberSafe Ireland, *Technical Report: A Review of Age Verification Mechanisms for Ten Social Media Apps*, May 2020.

Platforms use a range of measures to try and protect children on their services. Platforms with a significant number of child users in the UK provide a range of safety features, but some have more

²¹² Ofcom, Children's and Parents' Media Literacy Tracker 2020/21

²¹³ Ofcom, Children's and Parents' Media Literacy Tracker 2020/21

²¹⁴ WhatsApp, [Terms of Service](#), accessed 13 May 2021. In 2018, WhatsApp raised its minimum age in Europe from 13 to 16. BBC News, [WhatsApp to raise minimum age limit to 16 in EU](#), 25 April 2018

²¹⁵ Facebook, [Terms of Service](#), accessed 17 May 2021

²¹⁶ Facebook, [Terms of Service](#), accessed 17 May 2021

²¹⁷ Telegram, [Terms of Service](#), accessed 17 May 2021. Net Aware, Telegram Messenger, <https://www.net-aware.org.uk/networks/telegram-messenger/>

²¹⁸ Discord, [Trust & Safety: Why is Discord asking for my birthday?](#), accessed 17 May 2021

²¹⁹ Snapchat, [Terms of Service](#), accessed 17 May 2021

²²⁰ TikTok, [Terms of Service](#), accessed 17 May 2021

²²¹ Instagram, [Terms of Use](#), accessed 17 May 2021

features than others, as the summary below sets out. The most common feature is the ability to report or block users or content that the child might find potentially harmful, usually through a button or online form.

Figure 2.25: Summary of safety features available on online services popular with UK children

	Parental controls within service	Limits on direct messaging ²²²	Limit on content user comes across ²²³	Limit on transactions ²²⁴	Limits on time spent ²²⁵	Reporting and blocking function
YouTube ²²⁶	Yes		Yes	Yes		Yes
YouTube Kids	Yes		Yes		Yes	Yes
TikTok	Yes	Yes	Yes		Yes	Yes
Snapchat		Yes				Yes
Instagram ²²⁷						Yes
WhatsApp						Yes
Roblox	Yes	Yes	Yes			Yes
Among Us ²²⁸		Yes				Yes

²²² This refers to the ability to limit or disable the ability to use chat or messaging within the service, or to filter the content of messages

²²³ This refers to options to restrict access to some of the content on the service, such as limiting access to potentially inappropriate content by age or allowing parents to restrict the access to certain categories of content

²²⁴ This refers to options offered by the online service to restrict or prevent in-app or on-site spending. For some of the services listed in this table, spending can be restricted at the app store level (e.g. Apple App Store, Google Play Store) but not in the online service itself

²²⁵ This refers to the ability to set a limit within the online service on the amount of time a user spends on that service. Here we have focused on features that lock or prevent the service being used once the limit screen time has been exceeded and require a passcode to keep using the service, rather than features that offer notifications or reminders about the time spent on the service which can be dismissed by the user

²²⁶ Neither the YouTube nor YouTube Kids platforms offer direct messaging capabilities. In terms of parental controls, in February 2021, YouTube announced that it planned to offer a ‘supervised account’, so that parents can set content settings for their children on YouTube. It has since launched in a beta form. YouTube Official Blog, [A new choice for parents of tweens and teens on YouTube](#), 24 February 2021. In terms of limits on transactions, purchase verification can be turned on to prevent accidental purchases. YouTube Help, [Change your purchase verification settings for purchases on YouTube](#), accessed 30 April 2021

²²⁷ In a blog post in early 2021, Instagram said that ‘business and creator accounts...have the option to switch off DMs from people they don’t know’ and that this functionality may be rolled out to all personal accounts. Instagram blog, [An update to our work to tackle abuse on Instagram](#), 11 February 2021

²²⁸ At the start of April 2021, Among Us! developer Inner Sloth announced the introduction of a Code of Conduct and Account system, which introduced some reporting and moderation capabilities, including the ability to report other users for inappropriate conduct. Inner Sloth, [Let’s Go Airship: New update out now](#), 1 April 2021

Minecraft ²²⁹		Yes				Yes
Fortnite	Yes	Yes				Yes

Sources: [Net Aware](#), [Internet Matters](#)

Some platforms also provide separate tools for parents to help them keep their children safe online. For instance, in early 2020 TikTok introduced its ‘Family Safety Mode’ feature, which allows a parent to link their TikTok account to their child’s and remotely control aspects of how their child uses the app, including restricting or disabling the direct messaging feature.²³⁰ A third of parents of 5-15s say they are aware of and use tools to restrict access to inappropriate content online, such as Google SafeSearch, YouTube restricted mode or TikTok Family Safety Mode.²³¹

Parental controls are often available on devices, particularly to set limits on screen times and transactions. In May 2020, Microsoft launched the Xbox Family Settings app, to help parents set limits on children’s time on Xbox consoles, as well as adding content filters and helping to manage whom children could play games with.²³² Apple offers ‘Family Sharing’ across its devices, which allows parents to set up notifications so that App Store purchases requested by a child’s device must be approved by the parent’s device, and to monitor and set limits on children’s screen time.²³³

Internet service providers also offer parental controls. For example, BT Parental Controls allow parents to set a range of filters to restrict access to potentially unsuitable sites.²³⁴ In our quantitative children’s media literacy research, just over a third of parents of 5-15 year olds said they were aware of and used the content filters offered by their internet service provider.²³⁵

Safety technology is an evolving area, and platforms are trialling new uses and approaches. Instagram recently announced that its moderation system will aim to limit interaction between teenagers and adults on its platform, and it is developing artificial intelligence and machine learning technology to identify users aged under 13.²³⁶ But it is unlikely that safety technology alone will ever be fully effective in protecting children from harm online; media literacy plays a vital role in helping children navigate these risks.

For more information on children’s media literacy and the steps parents take to protect their children online, please see our [Children and parents: media use and attitudes 2020/21 report](#).

²²⁹ Some parental controls (e.g. disabling the chat function) for Minecraft multiplayer mode are offered through the Xbox Live platform, rather than the game itself

²³⁰ TikTok, [Introducing Family Safety Mode and Screentime Management in Feed](#), 19 February 2020

²³¹ Ofcom, Children’s and Parents’ Media Literacy Tracker 2020/21

²³² Microsoft News Centre UK, [New Xbox app lets parents manage their children’s gaming, 27 May 2020](#)

²³³ Apple, [Family Sharing](#), accessed 29 April 2021.

²³⁴ BT, [How to keep your family safe online with BT Parental Controls and the different blocking categories](#), accessed 29 April 2021

²³⁵ Ofcom, Children’s and Parents’ Media Literacy Tracker 2020/21

²³⁶ Instagram, [Continuing to make Instagram safer for the youngest members of our community](#), 16 March 2021

3. Social video

Introduction

Figure 3.1: UK social video services: key metrics

	Proportion of UK internet users who use video-sharing services	Estimated size of UK influencer market
2020	97% ¹	400,000 ²

Average number of social video services used by UK internet users aged 13+ ¹		
At least daily	At least weekly	At least yearly
2.82	4.08	5.56

Time spent on YouTube per adult user per day in September ³			
	2018	2019	2020
Age: 18+	28 mins	29 mins	35 mins
Age: 18-24	59 mins	1 hour 5 mins	1 hour 16 mins

Source: ¹Ofcom, Video-sharing platform use and experience of harms survey 2021. ²In 2020, more than 400k influencers from the UK uploaded content to social video platforms. Source: Tubular Labs | Intelligence | Social Video | UK based Influencers | Based on uploads in 2020. ³Comscore MMX Multi-Platform, YouTube.com, Age: 18+, 18-24, Sep 2018, 2019 & 2020, UK. Excludes TV set and smart device use.

Social video platforms are a type of online video service where users can upload and share videos

Social video platforms host videos generated by users. Their features typically enable users to: upload and edit video content; share content either publicly or privately with their own network and interact with content (e.g. like or comment on videos). In some cases users can send direct messages to other users. Another important feature of social video services is that the platforms determine how content is organised and presented to users.

This chapter will explore social video services across a variety of sectors, including social media services (e.g. Instagram and TikTok), livestreaming services (e.g. Twitch) and adult video-sharing services (e.g. Pornhub). YouTube and Facebook are the most popular social video services in the UK, each with an adult reach of approximately 43 million in September 2020.²³⁷

Social video services offer huge benefits for users and the economy, providing a platform for self-expression through enabling user-generated content; serving as a means of entertainment and

²³⁷ Comscore MMX Multi-Platform, Age: 18+, Sep 2020, UK. YouTube = 43.8m, Facebook and Messenger = 43.3m. Note: Unique visitors does not equate to number of accounts/profiles in the UK

education for many; providing the opportunity to develop a business; and as an important method of marketing for businesses. Video content on such platforms may be uploaded by individuals who have produced the content themselves, some of whom may classify themselves as content creators or influencers,²³⁸ or it may be produced by a corporate entity (such as music corporations or TV broadcasters).

Advertising is the primary business model for most social video platforms, although revenues are often supplemented by subscription fees and/or in-app transactions. YouTube is an example of this, predominantly earning revenue through advertising on its platform, but also offering YouTube Premium, its subscription service.

On 1 November 2020, Ofcom acquired new regulatory duties for UK-established video-sharing platforms (VSPs) through the transposition of the European-wide [Audiovisual Media Services Directive](#). There are specific criteria in the new Part 4B of the Communications Act 2003 which determine whether a service meets the definition of a VSP and is within UK jurisdiction.²³⁹ While some social video services explored in this chapter may fall within this statutory definition of a ‘VSP’, this chapter does not apply the legal criteria. We have chosen to use the term ‘social video’ in this chapter to reflect the broadest range of platforms with video-sharing capabilities: these may or may not meet the statutory definition of a VSP.²⁴⁰

Understanding our terminology and research

Our analysis of platforms in this chapter draws on the findings of Ofcom’s video-sharing platform research,²⁴¹ which explores consumers’ use of and attitudes towards similar services. When referring to this research we use the same terminology as in the survey (‘video-sharing platforms’ or ‘VSPs’) to maintain consistency and accurately reflect its findings. By using this terminology we are not defining which platforms are in scope of the AVMSD regulation described above.

This chapter will predominately focus on adult use of social video services; however, children are also key users of social video platforms and in many instances are the first adopters of these services. Our research specifically on children’s social video use can be found in the [Children chapter](#).

²³⁸ The Advertising Standards Authority (ASA) defines a social media influencer as “anyone who has been paid by a brand to advertise a product on their own social media, because of their social media influence.” Source: ASA, [Recognising ads: Social media and influencer marketing](#), 31 July 2020

²³⁹ UK Government, [The Audiovisual Media Services Regulations 2020](#), 30 September 2020

²⁴⁰ On 6 April 2021 Ofcom issued guidance obliging VSP providers in the UK to self-assess and formally notify Ofcom by 6 May 2021 if they meet the legal definition of a VSP. In all other cases, providers are required to make an advance notification to Ofcom of their intention to provide a VSP service at least ten working days before its launch. Refer to: Ofcom, [Guidance: Video-sharing platforms – who needs to notify Ofcom?](#), 6 April 2021

²⁴¹ Ofcom, [User experience of potential online harms within video-sharing platforms: a report from Yonder](#), 24 March 2021

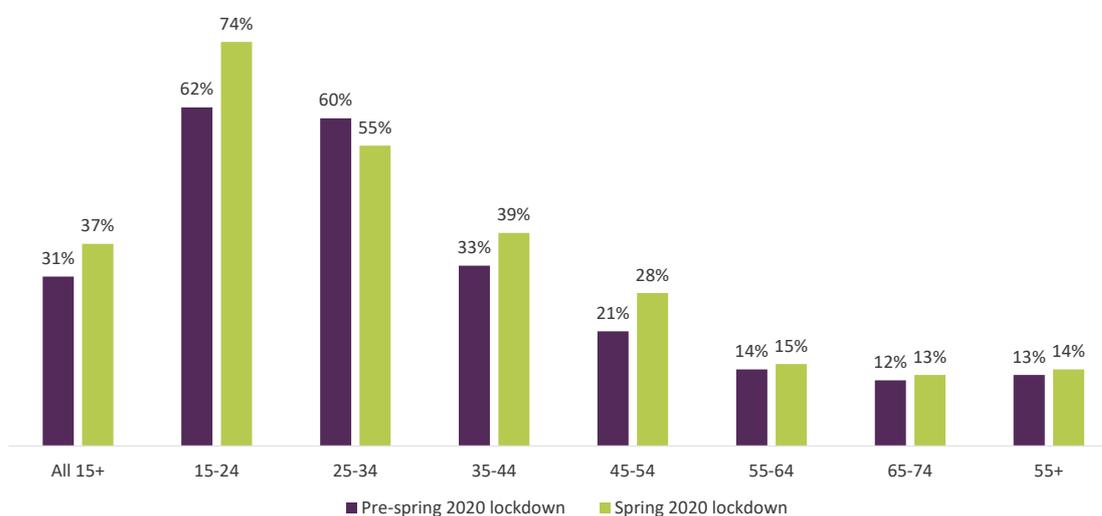
Take-up and use

Use and user demographics of social video platforms in the UK

Nearly three-quarters of 15-24s reported watching short video content online every day during spring lockdown 2020

Online users watched social video content more frequently during the UK spring 2020 lockdown than before it came into force in March that year. An increase in watching videos was reported among all age groups, but the increase was more pronounced among 15-24s in Britain, with 74% reporting that they watched short videos online at least once a day during the spring 2020 lockdown compared to 62% before the lockdown.²⁴²

Figure 3.2: Proportion of users aged 15+ watching short videos or online content shorter than ten minutes, on any device, at least once a day: 2020



Source: TouchPoints GB, spring 2020 lockdown. Base: all adults (15+) who have been online in past 12 months.

YouTube is the most popular social video service, increasing its reach in 2020

In the UK, YouTube and Facebook are the highest-reaching platforms with social video-sharing capabilities and increased their reach in September 2020 compared to September 2019 (YouTube increased by 4% to 43.8m and Facebook by 5% to 43.3m). YouTube videos can be found embedded on various sites other than the YouTube platform itself (e.g. on a news website), resulting in some viewers not necessarily being aware that they are watching a YouTube video.

TikTok experienced huge growth in 2020

The Chinese company Bytedance introduced TikTok to the UK market in 2018, and TikTok has seen significant growth in users over the past year. The spring 2020 lockdown accelerated its growth in

²⁴² TouchPoints GB, spring 2020 lockdown. Base: all adults (15+) who have been online in past 12 months

UK adult reach; between September 2019 and September 2020 the number of UK adult TikTok users increased by 263%, from 3.17 million to 11.51 million visitors; this compares to a 103% increase the previous year.²⁴³ TikTok has subsequently moved from the tenth highest-reaching position in September 2019 to sixth in September 2020 and sustained its reach throughout the rest of 2020, growing further during the winter 2021 lockdown and reaching 13.9 million UK adults in March 2021.²⁴⁴ Although adult use only is captured here, the app is also popular among teenagers and children, who were the first adopters of the service.

Triller, a music social video app, gained visitors in September 2020 following reports of President Trump planning to ban TikTok in the US,²⁴⁵ raising the profile of Triller as an alternative.²⁴⁶ ²⁴⁷ On Triller, like TikTok, users can record videos to songs, which can then be auto-edited by Triller into a professional-looking video. Unlike TikTok, users can use full songs for their videos, rather than being limited to a 15 second clip. Creators on Triller can earn money from their fanbase, from advertisers and from partnerships with music labels.²⁴⁸ Triller's growth in UK adult reach during summer 2020 was short-lived, peaking at 88,000 in September 2020, up from 16,000 in June 2020, before returning to previous levels in the autumn.²⁴⁹

Figure 3.3: Reach of selected social video sites and/or apps among UK online adults: September 2020

		Total population		Desktop		Mobile	
		Unique visitors	Reach	Unique visitors	Reach	Unique visitors	Reach
1	YouTube	43.80m	96.3%	23.28m	76.4%	39.47m	92.0%
2	Facebook	43.28m	95.2%	11.97m	39.3%	40.57m	94.6%
3	Instagram	27.38m	60.2%	3.52m	11.6%	25.69m	59.9%
4	Twitter	22.59m	49.7%	3.89m	12.8%	20.13m	46.9%
5	Pinterest	15.58m	34.3%	2.74m	9.0%	13.75m	32.0%
6	TikTok	11.51m	25.3%	600k	2.0%	11.22m	26.2%
7	Reddit	11.24m	24.7%	4.17m	13.7%	8.11m	18.9%
8	Snapchat app	10.06m	22.1%	-	-	10.06m	23.5%
9	Twitch	4.38m	9.6%	2.55m	8.4%	2.26m	5.3%
10	DailyMotion	3.39m	7.4%	1.70m	5.6%	1.97m	4.6%

²⁴³ Comscore MMX Multi-Platform, TikTok, Age: 18+, Sep 2018, 2019 & 2020 UK

²⁴⁴ Comscore MMX Multi-Platform, TikTok, Age: 18+, Mar 2021, UK

²⁴⁵ The Guardian, [Trump's bid to ban TikTok and WeChat: where are we now?](#), 29 September 2020

²⁴⁶ USA Today, [TikTok ban: here are 5 cool alternatives](#), 18 September 2020

²⁴⁷ Wired, [These apps are scrambling to become the next TikTok](#), 5 August 2020

²⁴⁸ [Triller](#), accessed 16 April 2021

²⁴⁹ Comscore MMX Multi-Platform, Triller, Age: 18+, Jan – Dec 2020, UK

11	Tumblr	2.97m	6.5%	819k	2.7%	2.34m	5.5%
12	Vimeo	2.31m	5.1%	759k	2.5%	1.71m	4.0%
13	Imgur	2.27m	5.0%	701k	2.3%	1.71m	4.0%
14	OnlyFans	1.88m	4.1%	221k	0.7%	1.72m	4.0%
15	Telegram app	1.20m	2.6%	1.20m	-	1.21m	2.8%
16	BitChute	299k	0.7%	98k	0.3%	216k	0.5%
17	9GAG	232k	0.5%	47k	0.2%	197k	0.5%
18	Yubo	189k	0.4%	-	-	189k	0.4%
19	Bigo Live	120k	0.2%	2k	0.3%	119k	0.2%
20	LiveLeak	56k	0.1%	20k	0.1%	37k	0.1%

Source: Comscore MMX Multi-Platform, Age: 18+, Sep 2020, UK.

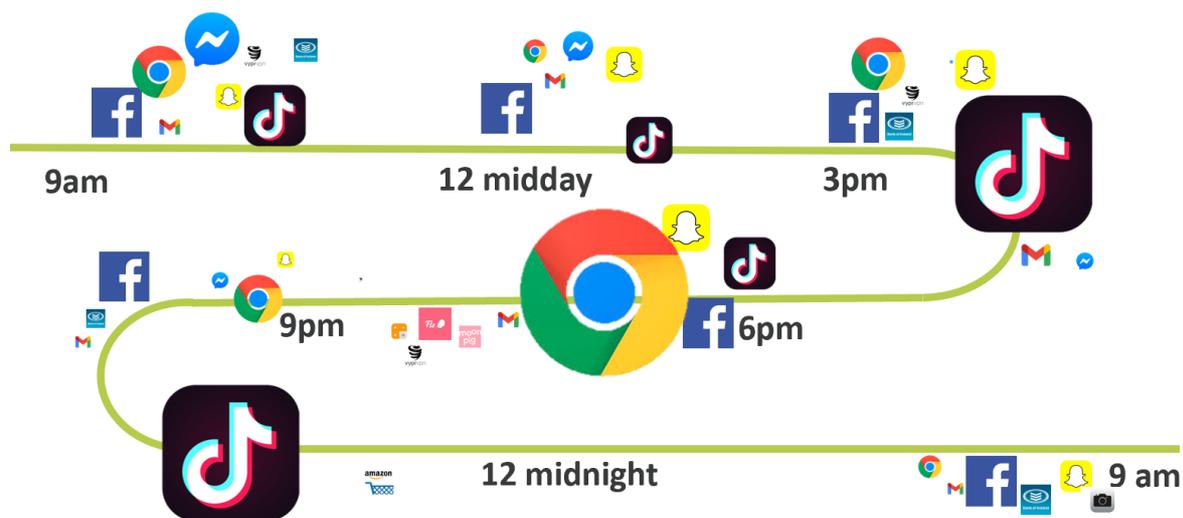
Notes: Custom defined list by Ofcom; for services beyond the 20 listed here see [Online Nation interactive report 2021](#); excludes adult sector sites; reach relates to site/app reach, not number of accounts / profiles and not necessarily to video viewing or uploading by the visitor; many sites provide various other functionalities such as photo sharing and messaging. The reach data covers use on desktops, laptops, tablets and mobile devices, but excludes use on a TV set. LiveLeak has shut down as of May 2021.

Video is a big part of how UK consumers spend time online. Ofcom conducted research to passively monitor²⁵⁰ participants' use of their smartphones or tablets. Figure 3.4 is a visual representation of a female panellist aged 25-34 who had the Reality Meter app on her smartphone. This demonstrates the amount of collated time during different periods during the day when the panellist was using a specific app, so the bigger the icon in the timeline, the longer the time spent on that app in that time period. Social video platforms such as Facebook, TikTok and Snapchat made up a substantial proportion of the time she spent on her smartphone: they are used at different times throughout the day. This panellist spends longer periods on TikTok, perhaps in part due to the enjoyment of the infinite scroll feature on TikTok, which to some can feel addictive.²⁵¹

²⁵⁰ Passive monitoring allows us to capture actual user data on a participant's device over a period of time.

²⁵¹ Forbes, [The science behind TikTok's success](#), 18 Jan 2020

Figure 3.4: A 'day in the life' user journey: one participant's smartphone use over 24 hours, a female aged 25-34



Source: Ofcom, Reality Mine passive monitoring via Reality Meter app. Female participant, age 25-34, smartphone. Saturday, 9am 13/2/2021 – 9am 14/2/2021.

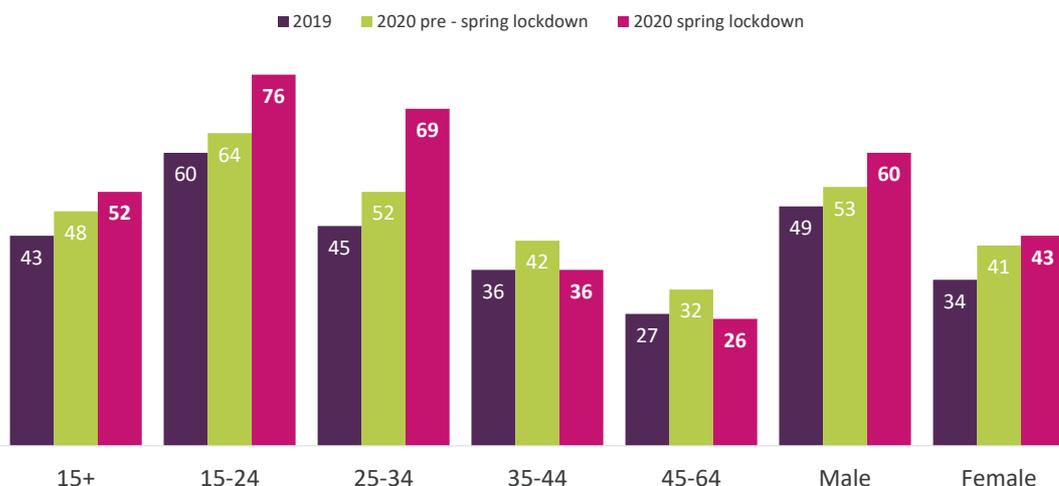
Younger audiences (15-24s) say they spent an average of 1 hour 16 mins each day during spring lockdown 2020 watching social video

Social video users in Britain over the age of 15 said they spent almost an hour a day watching videos on these services during the spring lockdown of 2020. The 15-24 age group said they watched 76 minutes in the first lockdown, an increase of 27% compared to 2019.²⁵² Older age groups (35-64s) spent less time watching videos after the spring lockdown began, widening the disparity in age-group use. Ofcom research found that male video site users said they tended to spend longer watching social videos daily than female users. Similarly, younger people said they spent longer watching social videos daily than older people. Sixty-six per cent of 13- to 17-year-old video site users reported an average of more than an hour a day watching videos on social video platforms.²⁵³

²⁵² TouchPoints, GB, 2018, 2019, pre-spring 2020 lockdown and spring 2020 lockdown. Base: those 15+ who watch any online video (short or long form, not on TV set)

²⁵³ Ofcom, Video-sharing platform use and experience of harms survey 2021

Figure 3.5: Minutes per day spent watching content on social video services by users in Britain



Source: TouchPoints, GB, 2018, 2019, pre-spring 2020 lockdown and spring 2020 lockdown, watching any online video (short or long form, not on TV set) - Mon-Sun reach ~ reach by day/week. Base: those 15+ who watch any online video (short or long form, not on TV set). Excludes SVoD and BVoD. See [Online Nation interactive report](#) for video type definitions.

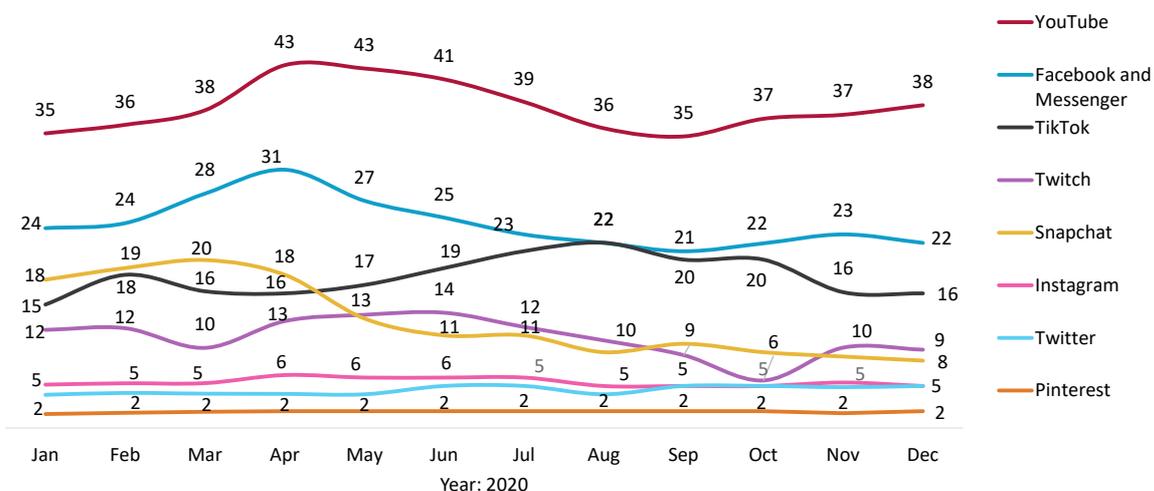
Time spent on Snapchat by UK adult visitors declined in 2020

UK adult users of YouTube and Facebook spent the most amount of time on average per day on the services, with each peaking during the spring lockdown. In contrast, TikTok use peaked in the summer months when there was some easing of restrictions in the UK. While most services broadly maintained average usage levels through the year, time spent on Snapchat declined by ten minutes per day between January and December 2020.²⁵⁴ These figures capture adult use only, but many of these social video platforms, particularly TikTok, are also popular among children and teenagers. Research from the Insights Family found that more than 37% of teenagers aged 13-17 said they used TikTok in Q1 2021, up from 25% in Q1 2020.²⁵⁵

²⁵⁴ Comscore MMX Multi-Platform, age: 18+, Jan-Dec 2020, UK

²⁵⁵ The Insights Family UK, Age 13-17. Question: Which of these sites and social networks do you use?

Figure 3.6: Average minutes per day spent by adults on selected social video sites and apps: 2020



Source: Comscore MMX Multi-Platform, Age: 18+, Jan-Dec 2020, UK.

Note: Custom list of entities defined by Ofcom.

Young adults are particularly heavy users of social video platforms, with YouTube users aged 18-24 spending an average of 1 hour 16 minutes on the service in September 2020 and TikTok users aged 18-24 spending on average of 38 minutes per day. The decline in use of Snapchat may be explained by people shifting their time to TikTok, as the majority (69%) of Snapchat users in September 2020 also visited TikTok.²⁵⁶

Figure 3.7: Average time spent on selected sites / apps with social video capabilities, UK adults: September 2020

Time spent rank	Reach	Platform	Time spent per day by adult platform user: Sep 2020			
			Age: 18+	Change since Sep 2019	Age: 18-24	Change since Sep 2019
1	43.80m	YouTube	34 mins 39 secs	↑ 5 mins 47 sec	1 hr 16 mins	↑ 11 mins 25 secs
2	43.28m	Facebook	21 mins 22 secs	↓ 4 mins 13 secs	11 mins 36 secs	↓ 6 min 49 secs
3	11.51m	TikTok	20 mins 10 secs	↑ 7 mins 47 secs	37 mins 47 secs	↑ 21 mins 13 secs
4	10.06m	Snapchat	9 mins 56 secs	↓ 36 secs*	19 mins 15 secs	↓ 15 mins 57 secs
5	4.38m	Twitch	8 mins 39 secs	↓ 2 mins 22 secs	8 mins 25 secs	↓ 3 mins 3 secs
6	27.38m	Instagram	5 mins 20 secs	↓ 2 mins 43 secs	10 mins 31 secs	↓ 4 mins 31 secs
7	22.59m	Twitter	4 mins 40 secs	↑ 1 min	7 mins 54 secs	↑ 3 mins
8	2.97m	Tumblr	3 mins 18 secs	↑ 29 secs	7 mins 19 secs	↑ 3 mins 5 secs

²⁵⁶ Comscore MMX Multi-Platform, Cross visiting, Snapchat and TikTok, Age: 18-24, Sep 2020, UK

9	11.24m	Reddit	2 mins 17 secs	↑ 11 secs	3 mins 6 secs	0 mins
10	41k	DLive	1 min 56 secs	↑ 42 secs	25 secs	↓ 59 secs
11	15.58m	Pinterest	1 min 55 secs	↑ 6 secs	2 mins 16 secs	↑ 27 secs
12	1.20m	Telegram	1 min 51 secs	↓ 42 secs	1 min 49 secs	↓ 32 secs
13	232k	Yubo	1 min 32 secs	↓ 1 min 30 secs	1 min 47 secs	↓ 14 secs
14	1.20m	BitChute	1 min 21 secs	↓ 2 mins 10 secs	11 mins	↑ 1 sec
15	3.39m	DailyMotion	49 secs	↓ 9 secs	50 secs	↑ 6 secs
16	299k	9Gag	48 secs	↓ 1 min 31 secs	16 secs	↓ 42 secs
17	2.27m	Imgur	39 secs	↑ 11 secs	21 secs	↓ 5 secs
18	1.88m	OnlyFans	24 secs	↑ 14 secs	15 secs	↑ 9 secs
19	2.31m	Vimeo	9 secs	↑ 1 sec	6 secs	↓ 4 secs
20	120k	LiveLeak	7 secs	↓ 1 min 1 sec	6 secs	↓ 24 secs

Source: Comscore MMX Multi-Platform, Age: 18+, 18-24, Sep 2020, UK.

Note: Custom defined list by Ofcom. Excludes TV set use. Time spent on platform does not equate to video viewing time as other activities may have been undertaken on the platforms. *Comparison with 2019 data for Snapchat was taken from November 2019 rather than September 2019, due to Comscore methodology enhancements.

International use demonstrates that YouTube and Facebook are the most widely-used platforms, but India is a higher adopter of Telegram than the UK, and Brazil a higher adopter of TikTok

Cultural and economic differences influence the use of services in different countries, although, with the exception of China, the major US-based platforms are all widely used. YouTube is the most-used of the platforms listed below in all the countries we looked at except China, with reach varying from 57% of internet users in Germany to 99% in Brazil. Use of Telegram²⁵⁷ ranges widely; it has significantly higher use in India, where it was visited by 33% of the adult population, compared to just 2% in the UK.²⁵⁸ Many of the services below are not available in China; instead, services originating in China are used. TikTok, for example, is used by nearly one in five adult internet users in China. Other social video services widely used in China include WeChat (57%) and QQ (46%).²⁵⁹

²⁵⁷ Telegram users can broadcast video messages via Telegram channels. Source: Telegram, [Telegram Channels](#), accessed 16 April 2021

²⁵⁸ Comscore MMX Multi-Platform, age: 18+, September 2020.

²⁵⁹ Comscore, age: 18+, September 2020, WeChat and QQ, China

Figure 3.8: Reach of social video platforms, by country, as a proportion of total internet population, age 18+: September 2020

YouTube		Facebook ²⁶⁰		Instagram		TikTok		Snapchat		Telegram	
	99%		95%		82%		31%		26%		33%
	98%		94%		70%		29%		25%		20%
	97%		93%		60%		27%		22%		17%
	97%		91%		58%		25%		14%		3%
	95%		79%		51%		19%		9%		2%
	79%		71%		38%		19%		7%		2%
	65%		29%		9%		2%				
	57%		28%		7%		2%				
							1%				

Source: Comscore MMX Multi-Platform, age: 18+, September 2020, Australia, Brazil, China, France, Germany, India, Spain, United Kingdom, United States.

User engagement and key genres

Platforms are launching new features to maintain and build engagement

The popularity of TikTok's format is driving other platforms to launch similar features in order to maintain or increase viewership. In August 2020 Snapchat allowed users to add music to the videos they record.²⁶¹ Later, in November 2020 Snapchat launched 'Spotlight', a separate section on Snapchat to highlight viral short public videos, similar to TikTok's 'For You' feed.²⁶² Creators can make videos up to 60 seconds long, using creative tools such as captions, sounds and gifs.²⁶³ Spotlight reportedly had 100 million users in January 2021.²⁶⁴ Snap offers a share of \$1m (£750,000) every day to creators, based on engagement metrics, to encourage them to post on Spotlight. The company has reportedly paid more than \$100m globally to Spotlight creators, as of March 2021.²⁶⁵

²⁶⁰ Includes Facebook and Messenger sites/apps

²⁶¹ The Verge, [Snapchat is adding a TikTok-style music feature](#), 3 August 2020

²⁶² TechCrunch, [Snapchat launches a TikTok-like feed called Spotlight, kick-started by paying creators](#), 23 November 2020

²⁶³ Snapchat, [Spotlight Guidelines & FAQ](#), accessed 9 April 2021

²⁶⁴ The Verge, [Snap says its TikTok competitor already has 100 million monthly users](#), 4 February 2021

²⁶⁵ CNBC, [Snapchat is paying \\$1 million a day to creators of popular short videos, and some are getting rich](#), 20 March 2021

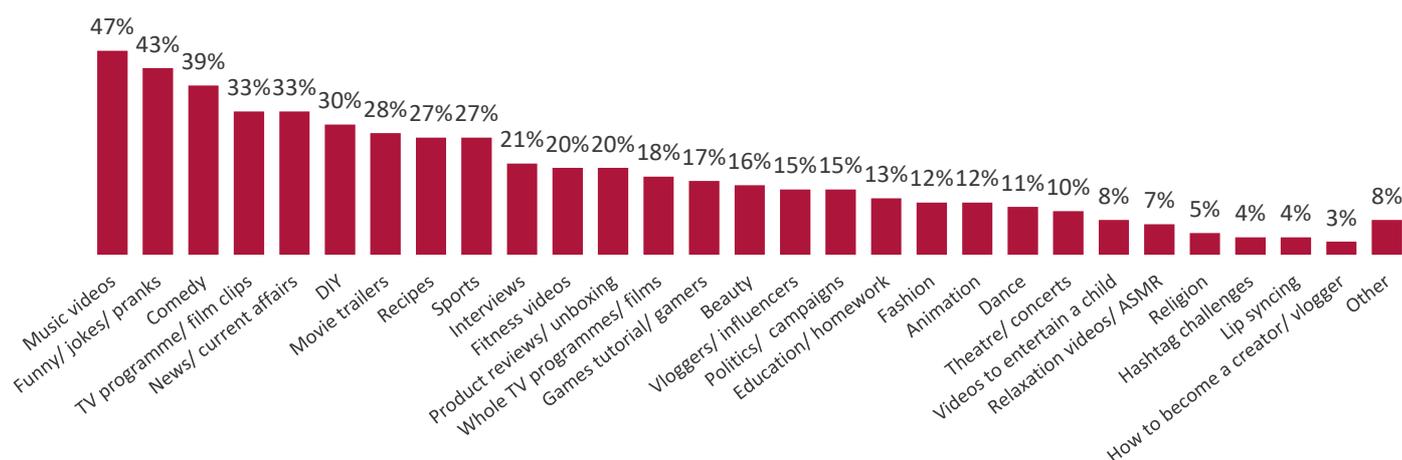
Meanwhile, Instagram and YouTube have launched equivalent tools in competition with TikTok. Instagram launched ‘Reels’²⁶⁶ in August 2020, and YouTube has introduced ‘YouTube Shorts’,²⁶⁷ through which users can record 15-second videos with audio effects and other creative add-ons. YouTube Shorts is aimed at smartphone users and is currently (March 2021) available in India and the US.²⁶⁸

Twitter is the latest platform to add a ‘Stories’ feature in the past year. Twitter introduced its own version in November 2020, called ‘Fleets’,²⁶⁹ allowing users to post videos, photos or text which disappears after 24 hours. Stories was first introduced by Snapchat and later adopted by others including Instagram, Facebook and YouTube.²⁷⁰

In the UK, music videos are the most popular type of content viewed on social video platforms

A wide variety of content is available to view on social video platforms. Music is the most popular category, reported as being watched by 47% of social video-using respondents aged 13+. More video site users aged 13-17 than adult users watch content across a range of categories; for example, 63% of 13-17 year old users watch music videos (compared to 46% of 18+ users), 45% watch games tutorials (vs. 15%), and 32% watch education/homework (vs. 12%).

Figure 3.9: Video content viewed on VSPs by social video-using respondents aged 13+



Source: Ofcom, Video-sharing platform use and experience of harms survey 2021. Q3b. In general, what type of videos do you watch on these video sites or apps? Base: used at least one VSP in the last 12 months, n=1,980.

²⁶⁶ Instagram, [Introducing Instagram Reels](#), 5 August 2020

²⁶⁷ YouTube Help, [Get started with YouTube Shorts](#), accessed 28 April 2021

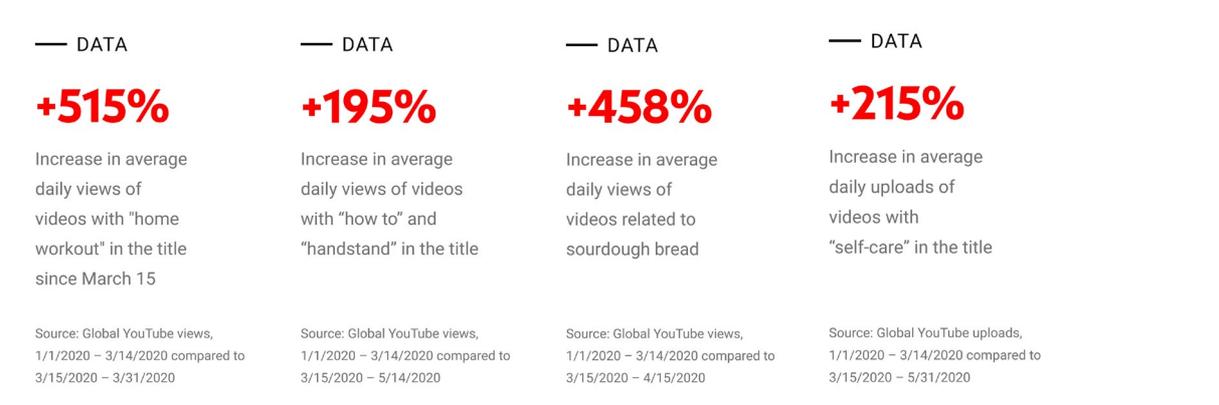
²⁶⁸ The Verge, [YouTube Shorts beta will launch in the United States in March](#), 17 February 2021

²⁶⁹ Twitter, [Fleets: a new way to join the conversation](#), 17 November 2021

²⁷⁰ TechCrunch, [Twitter starts testing its own version of Stories, called ‘Fleets’](#), 4 March 2020

The pandemic has given prominence to education, health and wellbeing videos

During the pandemic, certain genres have gained prominence and attention on social video platforms. YouTube found that the crisis accelerated global video views in a range of areas including wellbeing, fitness, cooking, financial support, and ‘learning something new’.²⁷¹ Similarly, Ofcom research (figure 3.9) found that nearly a third of video site users reported watching DIY videos, and 20% said they watched fitness videos.²⁷² Some social video platforms have used this new focus on learning and self-improvement as an opportunity to maintain and build their user base. For instance, TikTok launched its #LearnOnTikTok campaign in 2020, collaborating with experts to provide content focusing on learning new hobbies and skills.²⁷³



Source: YouTube Culture & Trends Report, [YouTube during Covid-19](#), published 25 June 2020

Global YouTube viewing of fitness and self-care videos increased as viewers adjusted to staying at home during lockdown. The top ten most-viewed YouTube videos in the UK in 2020 were a mix of broadcaster and creator content. The most-viewed YouTube video was the first episode of Joe Wicks’ *PE with Joe* fitness video with 7.2 million global views,²⁷⁴ and with the return of this series in January 2021, 120,000 tuned in to his livestream on the first day.²⁷⁵ Clips from ITV shows including *This Morning* and *Britain’s Got Talent* also feature in the top ten.

Figure 3.9: Top ten most-viewed YouTube videos in the UK: 2020

Rank	YouTube video	Channel	Year
1	PE with Joe, Monday 23 March 2020	The Body Coach	2020
2	Sidemen Reunited Mukbang	Sidemen	2020
3	Phillip Schofield opens up about being gay, This Morning	This Morning	2020

²⁷¹ YouTube Culture & Trends Report, [YouTube during Covid-19](#), published 25 June 2020

²⁷² Ofcom, *Video-sharing platform use and experience of harms survey 2021*. Q3b. In general, what type of videos do you watch on these video sites or apps? Base: used at least one VSP in the last 12 months, n=1,980

²⁷³ TikTok, [Investing to help our community #LearnOnTikTok](#), 28 May 2020

²⁷⁴ The Guardian, [Joe Wicks tops YouTube list of most popular UK videos in 2020](#), 14 December 2020

²⁷⁵ ITV News, [The Body Coach: Joe Wicks joined by 120,000 people for return of PE With Joe during Covid lockdown](#), 11 January 2021

4	I'm Coming Out	NikkieTutorials	2020
5	Making YouTubers Sing All Star – Smash Mouth Without Realising	WillNE	2020
6	Full Fight! Jake Paul vs AnEsonGib	Sky Sports Boxing	2020
7	\$250,000 Influencer Rock, Paper, Scissors Tournament	MrBeast	2020
8	Golden Buzzer! Sign Along With Us Put on the Greatest Show in Emotional Audition, BGT 2020	Britain's Got Talent	2020
9	Barcelona vs Bayern Munich (2-8), Uefa Champions League highlights	BT Sport	2020
10	We Broke Up	JeffreeStar	2020

Source: YouTube, 2020

The creative arts sectors also turned to social video to connect to UK audiences

The closure of theatres has led some to upload their productions onto social video platforms. For example, the National Theatre livestreamed pre-recorded plays on YouTube and kept them available free of charge for a week on YouTube between April and July 2020.²⁷⁶ This successful audience engagement led to the launch of an SVoD service later in the year.²⁷⁷ At its peak in April 2020 there were 3 million global unique viewers of content on the National Theatre's YouTube channel and Facebook page combined, 2.8 million of whom were watching on YouTube.²⁷⁸ This content was viewed mainly by 25-34s, who made up 33% of the National Theatre's total audience across YouTube and Facebook.²⁷⁹

Musical theatre also found a home on TikTok this year. In January 2021 TikTok streamed its first TikTok musical to paying customers: Disney's *Ratatouille*.²⁸⁰ This represented a new way of reaching audiences in the light of disruption to the theatre industry. This crowdsourced production, which starred Broadway actors, was created in response to events in summer 2020 when several videos of odes to fictional characters went viral on TikTok. The creators banded together to produce the musical, which raised \$2m for The Actors Fund, and had 350,000 global viewers.²⁸¹ The benefit concert inspired musical adaptations of other titles, such as popular Netflix show *Bridgerton*, in which a video of two TikTok creators duetting as the lead characters was reshared by Netflix itself.^{282 283} The

²⁷⁶ National Theatre, [NT at Home April to July 2020](#), accessed 17 March 2021

²⁷⁷ Official London Theatre, [NT launches new streaming service National Theatre at Home](#), 1 December 2020

²⁷⁸ This figure includes all National Theatre content posted on the National Theatre YouTube channel and Facebook page. This includes theatre shows as well as any additional footage or clips.

²⁷⁹ Tubular Labs | Audience Ratings | Cross-Platform (YouTube+Facebook) | Creator: National Theatre | Demographic split based on Monthly Unique Viewers Average in 2020 (includes months where minimum threshold was reached | Unique Viewer numbers are based on 30sec quality views

²⁸⁰ The Verge, [The delightful Ratatouille TikTok musical has already sold more than \\$1 million in tickets](#), 2 January 2021

²⁸¹ [Ratatousical.com](#), accessed 9 April 2021

²⁸² Playbill, [EXCLUSIVE: Bridgerton is TikTok's Latest Musical — The Writers Share a Track and Discuss Future Plans](#), 22 January 2021

²⁸³ Twitter, [Tweet by Netflix](#), 13 January 2021

design of TikTok, with its duetting feature, lends itself well to musical theatre. More detail on the features of social video platforms can be found in the [Online Nation interactive report](#).

Social video platforms have helped to support the music industry during the pandemic and have benefited from hosting music content

There is a symbiotic, mutually supportive relationship between the social video and music industries. As seen in figure 3.9 music videos are the most-watched type of content on social video platforms; 47% of video site users report watching music videos.²⁸⁴ Music is a key driver of users to platforms like YouTube and TikTok, which host music content from both established and upcoming artists. The music industry also uses these platforms to advertise music directly. Clips of songs often appear on Instagram news feeds, providing a link to listen to the full song on Spotify.

TikTok's format makes it easy to share music clips that accompany homemade videos. Much of the app's popularity can be attributed to its format, which enables users to make up and share dance routines and take part in lip-sync challenges. This appealed to many as a fun hobby during lockdown.²⁸⁵ As more users join in and create their own versions of songs and videos, these can go viral, which raises the profile of TikTok as well as the song. In some instances, singles have been propelled up international music charts after going viral on TikTok; for example, songs such as *drivers license* by Olivia Rodrigo and *Blinding Lights* by The Weeknd, which was the top-selling song in the UK in 2020.²⁸⁶

Social video can also help launch music careers for its creators. Former postman Nathan Evans gained viral popularity on TikTok with his sea shanty (traditional maritime folk song) *Wellerman* topping the UK singles chart in January 2021.^{287 288} The most-viewed music artist on TikTok in the UK in 2020 was Sam Ryder, whose popularity surge over the 2020 lockdowns led to him getting a recording contract and releasing a single.²⁸⁹

Artists can use social video to generate revenue when performing live is not possible. For example, US singer The Weeknd teamed up with TikTok to put on a livestreamed concert in August 2020.²⁹⁰ TikTok's account on Spotify hosts a variety of playlists such as TikTok Hits, featuring songs popular on TikTok.²⁹¹ However, despite the benefits that social video platforms can bring, there are ongoing movements to reform the law on royalties paid from music streaming, due to the argument that artists are not rewarded fairly when music is listened to via online streaming.²⁹²

²⁸⁴ Ofcom, *Video-sharing platform usage & experience of harms survey 2021*. Q3b. In general, what type of videos do you watch on these video sites or apps? Base: used at least one VSP in the last 12 months, n=1,980.

²⁸⁵ Time, [The Best TikTok Dances of 2020 So Far](#), 29 August 2020

²⁸⁶ Official Charts Company, [The Official Top 40 biggest songs of 2020](#), accessed 9 April 2021

²⁸⁷ BBC, [Sea shanty singer scores first number one hit](#), 20 March 2021

²⁸⁸ RollingStone, [Sea Shanty Sensation Nathan Evans: 'I'm an Actual Musician'](#), 26 January 2021

²⁸⁹ BBC, [Sam Ryder: TikTok's singing superstar](#), 28 February 2020

²⁹⁰ TikTok, [The Weeknd Experience, an innovative TikTok LIVE stream, draws over 2 million unique viewers](#), 12 August 2020

²⁹¹ Spotify, [TikTok public playlists](#), accessed 9 April 2021

²⁹² The Telegraph, [Paul McCartney and Chris Martin lead 150 artists demanding reform to music streaming laws](#), 19 April 2021

Social video services also provide a platform for societal and political movements

In 2020 social video services were used as a tool to share video content on societal issues, in particular the #BlackLivesMatter movement and climate change protests. Social video users can work together to influence how a platform is used, often using features to broadcast, promote and gather support for events and movements. In June 2020, the story function on apps such as Instagram was used by many to direct users to create donation pages in support of the #BlackLivesMatter campaign, and to share research and news resources to educate followers on systemic racism. During this time, Instagram news feeds were transformed in an international effort to show support, and for users to take part in the movement.

Video sharing functionalities have been adopted by the public to document and livestream political events; for example, during the Capitol riot in the US in January 2021. Videos were also shared of events in the UK such as anti-vaccine and anti-mask-wearing protests. However, in some instances, video sharing has been used to promote violence or hate crime or spread misinformation. This has resulted in platforms taking action, removing content or banning contributors. Interactions on posts criticising Covid-19 vaccines on six UK Facebook pages increased from 12,000 in July 2020 to 42,000 in August, according to the analytics tool CrowdTangle.²⁹³

Gaming content attracted more users and more views in 2020, providing escapism and social connection during lockdown

YouTube is the most popular platform for watching gaming content for 16-64 year olds; 42% of all UK respondents stated they watched games-related content on YouTube, while 15% reported watching this content on Twitch.²⁹⁴ YouTube global users watched a record 100 billion hours of gaming content in 2020, double the hours watched in 2018.²⁹⁵ Twitch users watched 17 billion hours of content globally, up from 9 billion in 2019.²⁹⁶ The streaming platform Facebook Gaming is emerging as a competitor to Twitch and YouTube, with 3.59 billion hours of watched content in 2020 globally, up from 1.35 billion the previous year.²⁹⁷ The Facebook Gaming mobile app launched in April 2020. In the UK in the second half of 2020, it had an average of 26,000 adult monthly visitors, each spending an average of 24 minutes on the app per day.²⁹⁸

While Twitch is largely known for gaming, it also hosts plenty of non-gaming content (e.g. Just Chatting,²⁹⁹ music, ASMR³⁰⁰) which are enjoyed by gamers and non-gamers alike. Music is a key area

²⁹³ The Guardian, [Engagement with anti-vaccine Facebook posts trebles in one month](#), 19 September 2020

²⁹⁴ Ampere Analysis Games – Consumer, Q2 2021, UK, age 16-64

²⁹⁵ YouTube Culture & Trends Report, [The Year in YouTube Gaming](#), 9 December 2020

²⁹⁶ Dot Esports, [Twitch reportedly totals 17 billion hours watched in 2020, Facebook Gaming hits 3.59 billion](#), 11 January 2021

²⁹⁷ Dot Esports, [Twitch reportedly totals 17 billion hours watched in 2020, Facebook Gaming hits 3.59 billion](#), 11 January 2021

²⁹⁸ Comscore MMX Multi-Platform, Facebook Gaming app, age: 18+, Aug-Dec 2020

²⁹⁹ Just Chatting is a top Twitch category that focuses on conversational streams. Source: StreamElements, [State of the Stream: Q4 2019](#), 9 January 2020

³⁰⁰ ASMR stands for autonomous sensory meridian response

of growth for Twitch. More than 24 million hours of the music category was watched globally in January 2021, up from 4.6 million in January 2020, representing 428% year-on-year growth.³⁰¹

FruitLab is an example of a game streaming platform, launched in the UK with a smaller UK reach. Creators generate revenue from pre-roll ads; 75% of the revenue from the ad is allocated to the creator. Revenue is provided in the form of ‘pips’. Pips are earned with every view, and 10,000 pips equates to \$1, which can be used to purchase digital gift cards or merchandise.³⁰² There is also a Community Pip Pot to give back ad revenue to users. When an ad is watched, pips enter the community pot and are distributed between users every week.³⁰³

One in three UK online adults visited adult content service Pornhub in 2020³⁰⁴

Adult sites are another genre of social video. Half (49%)³⁰⁵ of the UK adult population visited an adult content site and/or app in September 2020, which equates to 26 million unique adult visitors. The most popular site, Pornhub.com, was visited by a third of UK online adults (15 million) in September 2020, up by 1 million visitors since September 2019.³⁰⁶ According to Pornhub, the UK is the third highest source, by country, of traffic to the site. Pornhub’s average visit duration in the UK is 10 minutes 20 seconds.³⁰⁷ The most popular way to access Pornhub is by mobile phone; mobile devices made up 77% of Pornhub traffic in the UK in 2020.³⁰⁸

The owner of Pornhub, MindGeek, also owns several of the other top-reaching adult content sites in the UK

The Canadian company MindGeek, founded in 2004, owns three of the UK top ten sites: Pornhub, RedTube and YouPorn (see figure 3.10). MindGeek owns both adult content aggregator sites and production businesses. Its paid site, Pornhubpremium.com, had 3 million adult UK visitors in September 2020, 7% of the UK adult online population.³⁰⁹

³⁰¹ StreamElements, [“State of the Stream for January 2021: Record highs for Twitch and Facebook Gaming, Rust rises to the top, and Music continues to grow”](#), 16 February 2021

³⁰² Fruitlab, about us, accessed 23 April 2021

³⁰³ BeerMoney Mentor, [FruitLab Review: The Definitive Guide – Earn More Pips!](#), 24 March 2021

³⁰⁴ Comscore MMX Multi-Platform, Pornhub.com, age: 18+, September 2020, UK. Average monthly unique visitors aged 18+ to Pornhub in 2020 was 15.4 million (34%)

³⁰⁵ Ofcom modelling based on [ONS population data, mid-2019](#), 24 June 2020.

³⁰⁶ Comscore MMX Multi-Platform, age: 18+, September 2020 and September 2019, UK

³⁰⁷ Pornhub Insights, [2019 Year in Review](#), 11 December 2019

³⁰⁸ Pornhub Insights, [The Pornhub Tech Review](#), 11 April 2021

³⁰⁹ Comscore MMX Multi-Platform, Pornhubpremium.com, age: 18+, September 2020 and September 2019, UK

Figure 3.10: UK adult reach of top ten adult content sites: September 2020

	Site	Adult visitors	Online adult reach	Average minutes per visitor in Sept	Owner
1	Pornhub	15.0m	33%	37	MindGeek
2	XVideos	9.7m	21%	72	WGCZ Holding
3	Bongacams	8.7m	19%	3	Bongacams
4	XNXX	8.5m	19%	63	WGCZ Holding
5	XHamster	7.5m	16%	84	Hammy Media Ltd
6	LiveJasmin	6.6m	15%	4	Duodecad IT Services
7	Chaturbate	6.4m	14%	37	Multi Media LLC
8	XHamster Premium	4.2m	9%	16	Hammy Media Ltd
9	RedTube	4.1m	9%	21	MindGeek
10	YouPorn	3.8m	8%	19	MindGeek

Source: Comscore MMX Multi-Platform, XXX Adult, age: 18+, September 2020, UK.

Note: Custom defined list by Ofcom. The table does not feature Pornhub’s paid-for service, Pornhubpremium.com, which featured lower in the ranking with 3 million adult visitors in September 2020, compared to XHamster’s premium service, which had 4.2 million visitors.

Looking at use of Pornhub by demographic, more than half (55%) of young adults aged 18-24 in the UK visited Pornhub.com in September 2020. Use differs by gender; half of all UK adult males visited Pornhub that month, compared to 16% of females. Female use is higher among younger adult age groups. A third (33%) of 18-24 females and three-quarters (75%) of 18-24 males visited the site in September 2020.³¹⁰

³¹⁰ Comscore MMX Multi-Platform, XXX adult category, age: 18+, September 2020 and September 2019, UK

Figure 3.11: UK online adult reach of Pornhub, by demographic: September 2020



Source: Comscore MMX Multi-Platform, Pornhub.com, Ages: 18+, September 2020, UK

OnlyFans reported a 75% increase in new content creators in May 2020, driven by people looking to generate income during the pandemic

Founded in 2016, the UK-based subscription site OnlyFans gained popularity during the pandemic.³¹¹ OnlyFans does not market itself as an adult content site because it also hosts other kinds of content such as fitness and cooking tutorials. However, as OnlyFans’ terms allow adult sex content, it has become popular for its explicit and nude content. OnlyFans’ business model is based on direct-to-consumer selling, removing the intermediaries and allowing content creators to make more money. This makes OnlyFans an attractive option for creators wanting to generate an income. OnlyFans operates an 80:20 creator/platform split in revenue share,³¹² so for each transaction made on the site, content creators keep 80% of its value. Revenue for OnlyFans increased by a reported 553% in the year to November 2020, while the value generated by transactions made on the platform rose seven-fold to £1.7bn.³¹³

It has been reported that economic factors caused by the lockdowns may have led people to turn to sites such as OnlyFans to generate an income, in the context of rising unemployment or furlough, and financial uncertainty for many in the UK.³¹⁴

³¹¹ Financial Times, [OnlyFans feels the lockdown love as transactions hit £1.7bn](#), 25 April 2021
³¹² OnlyFans, [Help & Support Earnings](#), 8 April 2021
³¹³ Financial Times, [OnlyFans feels the lockdown love as transactions hit £1.7bn](#), 25 April 2021
³¹⁴ See, for example, BBC, [OnlyFans: 'I started selling sexy photos online after losing my job'](#), 15 July 2020

There are limitations to monetising content on adult sites since payment processors have disassociated themselves with these sites

Some payment companies such as PayPal will not process payments to adult sex material sites.³¹⁵ In 2018 Patreon announced that it was making efforts to disassociate itself with adult material creators, due to pressure from payment processors and banks.³¹⁶ Credit card companies Mastercard and Visa issued a payment freeze on MindGeek sites in December 2020, ceasing to process payments amid concerns over unlawful content found on these sites.³¹⁷

In December 2020 Pornhub reportedly removed all user-uploaded videos, which comprised most of the content on the site.³¹⁸ An estimated 10 million videos were removed in this process,³¹⁹ out of approximately 13.5 million videos on the site.³²⁰ The move came amid concerns³²¹ about the amount of unlawful content on the site, which were amplified by a New York Times article criticising the presence of violent content and child sexual exploitation material on Pornhub.³²² MindGeek-owned sites currently only allow videos uploaded from verified users. The videos removed were treated as ‘suspended’ rather than deleted, while MindGeek aims to introduce a verification system for users.³²³

Market context and business models

Business models and monetisation

Platforms earn revenue from a variety of sources, but primarily from advertising

Advertising is the main source of income for many social video platforms, but revenue can be earned from subscription fees and in-app transactions as well.

Advertising: Advertising space is sold by the platforms themselves or through intermediaries,³²⁴ with revenues usually shared between the platform and the content creators and, where relevant, intermediaries. YouTube and Facebook, for example, offer a 55:45 advertising revenue share between the platform and the content creator/partner.³²⁵ Some platforms leverage user information to serve targeted adverts distributed on the platform. Many platforms offer self-service interfaces (for example, an advertiser can purchase ad placements directly through Facebook Ads Manager or

³¹⁵ PayPal, [Acceptable Use Policy](#), 6 May 2021

³¹⁶ Vice, [Patreon Is Suspending Adult Content Creators Because of Its Payment Partners](#), 26 August 2018

³¹⁷ Visa has since lifted its ban on other MindGeek sites but said it would continue to decline payments on Pornhub. Source: Forbes, [Visa Resumes Processing Payments On Some MindGeek Sites But Maintains Freeze On Pornhub](#), 23 December 2020

³¹⁸ [Pornhub.com/blog](#), accessed 9 April 2021

³¹⁹ The Verge, [Pornhub just removed most of its videos](#), 14 December 2020

³²⁰ The night before the policy came into place, there were reportedly 13.5m videos on the site. Source: Vice, [Pornhub just purged all unverified content from the platform](#), 14 December 2020

³²¹ New York Times, [The Children of Pornhub](#), 4 December 2020

³²² New York Times, [The Children of Pornhub](#), 4 December 2020

³²³ BBC, [Pornhub removes all user-uploaded videos](#), 14 December 2020

³²⁴ Intermediaries run ad auctions on behalf of the publishers and advertisers.

³²⁵ Investopedia, [How YouTube Ad Revenue Works](#), 4 June 2020

Snapchat Ads Manager). Ofcom research found that 5% of social video users in the UK said they use these sites to buy physical goods, following ad links on the platform.³²⁶

Subscriptions: Some social video platforms offer subscriptions enabling users to access exclusive content, to connect directly with creators or to unlock features. For a monthly fee YouTube Premium offers exclusive original content and an ad-free experience, and background YouTube listening while using other apps, among other features.³²⁷ One per cent of UK households had a YouTube Premium subscription in 2020.³²⁸ There are also subscription models that directly benefit content creators, with revenue shared between the platform and the creators. The Twitch Affiliates Program, for example, allows streamers to earn income when users subscribe to their channel. Patreon is the most prominent membership service provider; similar services include Memberful and Buymeacoffee.

In-app transactions: Platforms earn revenue when users buy virtual goods; for example, in the form of gifts, tips or badges. TikTok users can buy coins to send gifts to other creators, while on Twitch users ‘tip’ their favourite streamers by sending ‘Cheer Bits’. Purchasing a badge during a live video on Instagram unlocks special features and allows users to stand out in comments. A small proportion of social video users said they made in-app purchases: in Ofcom research 3% of users in the UK said they buy virtual goods on video sites/apps.³²⁹

Both the platform and the creator need each other to generate revenue. Creators bring in viewers, and platforms provide the means of generating revenue. Creators can also earn incremental revenue independent of the platform, through brand sponsorships and affiliate links. For more detail, refer to the *Business Models and Monetisation* section on page 125 of the [Online Nation 2020 report](#).

Twitter’s move into paid-for content is an example of how platforms are developing new revenue streams for themselves and their contributors

In May 2021 Twitter launched its ‘tip jar’ feature, allowing users to send a tip to ‘creator’ users.³³⁰ The platform has also announced plans for a ‘super follow’ feature, to be launched in 2021, which will enable accounts to charge a fee for exclusive content.³³¹ Creators often use their Twitter accounts to attract followers, and then monetise these users on other platforms, but the new feature will allow content creators to show their content directly on Twitter. This may boost Twitter’s revenue and encourage creators to focus on posting on Twitter rather than across multiple platforms. Users will be encouraged to pay for premium content which could take the form of

³²⁶ Ofcom, *Video-sharing platform use and experience of harms survey 2021*. Q2. You mentioned that you have used the following video sites or apps in the last 12 months. In general, what do you tend to use these video services for? Base: used at least one VSP in the last 12 months, n=1,980

³²⁷ Other features include background play, watching offline, access to YouTube Music and YouTube Kids. Source: [YouTube Premium](#), accessed 6 April 2021.

³²⁸ Ofcom Technology Tracker 2020

³²⁹ Ofcom, *Video-sharing platform use and experience of harms survey 2021*. Q2. You mentioned that you have used the following video sites or apps in the last 12 months. In general, what do you tend to use these video services for? Base: used at least one VSP in the last 12 months, n=1,980

³³⁰ BBC, [Twitter adds 'tip jar' to pay for good tweeting](#), 7 May 2021

³³¹ BBC, [Twitter unveils 'super follow' feature](#), 26 February 2021

additional tweets, entry into a community group or receiving a newsletter.³³² As Twitter adapts to allowing paid-for content, it is developing monetisation models similar to other paid-content sites such as OnlyFans.³³³

Content delivery

Social video platforms typically use algorithmic content organisation to control how videos become visible to viewers.³³⁴ Often, the delivery of content is automated, with platforms using specific algorithms to sort and recommend content.³³⁵ Content delivery can be generic, i.e. arranging content in a way that is the same for all users based on time of posting or genre of content, or personalised, where the content is organised based on factors known about individual users; for example, their previous use of the platform or their location. Often platforms use both: they promote the most popular or newest content, as well as content aligned with individual preferences and sponsored content that has been paid for.

Algorithmic content ranking and personalised ads provide many benefits for users, businesses and the platform itself

“I watch content on YouTube and upload my own content too ... I’ve been using it for years. It’s very tailored to me which is why I keep going back to it”

Male, 29, heavy user of VSPs

Source: Ofcom, *Safety measures on video-sharing platforms standards 2021*

Algorithms are critical in many aspects of content creation, delivery and management. Personalised feeds are a feature of many social video platforms: individual users see content that is recommended according to their interests. The benefit of personalised algorithmic recommendation for platforms and businesses is that it aims to provide a more engaging user experience and increase the time users spend on the platform. This in turn increases

the likelihood of generating advertising revenue. For this reason, platforms have not made the data they use to train their systems known publicly.

Platforms use recommender systems for personalisation, which are information filtering systems that aim to predict the ‘rating’ or ‘preference’ a user would give to an item.³³⁶ Facebook, for example, uses collaborative filtering, a recommender system technique that helps users discover the pages, groups, events, games etc. that are most relevant to them. Collaborative filtering is based on the idea that the best recommendations come from people who have similar tastes. In other words, it uses historical item ratings of like-minded people to predict how someone would rate an item.³³⁷

³³² BBC, [Twitter unveils ‘super follow’ feature](#), 26 February 2021

³³³ The Telegraph, [How Twitter is becoming more like OnlyFans - and what that means for users](#), 4 March 2021

³³⁴ European Audiovisual Observatory, [Online video sharing: Offerings, audiences, economic aspects](#), 2018

³³⁵ Algorithms are a sequence of instructions written by engineers in computer programming language, run automatically by computers

³³⁶ Francesco Ricci, Lior Rockach, Bracha Shapira, [Introduction to Recommender Systems Handbook](#), Recommender Systems Handbook, Springer, 2011

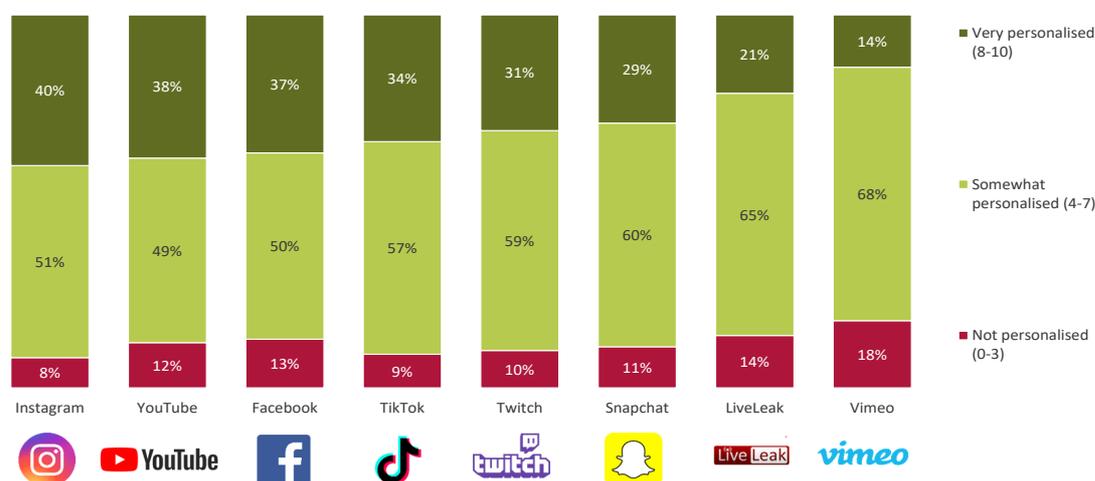
³³⁷ Facebook Engineering, [Recommending items to more than a billion people](#), 2 June 2015

The aim of personalisation in advertising is that the ads a user sees on the platform are likely to be of interest to that user, and therefore likely to drive sales for the advertiser. TikTok, for example, is introducing 'Dynamic Product Ads', which will automatically retarget relevant products to users according to their activities on the advertisers' own sites/apps.³³⁸

The most frequently used social video platforms are perceived to show the highest levels of personalised content to users

In our qualitative research, users tended to understand that video platforms can learn about each individual user, and this exposes them to content they are more likely to be interested in. Our quantitative research found that users of the more popular platforms reported having a personalised experience on the sites. However, this did not result in their feeling more protected from potentially harmful content on these sites, compared to sites perceived to be less personalised.

Figure 3.12: Perceived perception of the extent of personalisation, by platform



Source: Ofcom, Safety measures on video-sharing platforms survey (quantitative research) 2021. Q2. Thinking about the sites and apps listed below, on a scale of 0-10, to what extent would you say that the videos or content shown to you in your feed or homepage has been personalised for you, based on what you like, searches or viewing habits? Base: all who have used VSP in the last three months, YouTube: n=911, Instagram: n=559, TikTok: n=244, Facebook: n=852, Snapchat: n=315, Twitch: n=142, LiveLeak: n=50*, Vimeo: n=139. *CAUTION: Low base size for LiveLeak.

³³⁸ Social Media Today, [TikTok Previews Coming Ad and Product Display Options](#), 13 April 2021

The combination of automated and human moderation helps to increase user safety online

“... live content is flagged by either machine detection or user reports, to our team of content moderation professionals, who then issue ‘enforcements’ (typically a warning or timed channel suspension) for verified violations”

Twitch

Many social video platforms use a combination of automated detection technologies and human moderators to detect and remove inappropriate content from the platform. Many platforms follow a similar process to that set out by Twitch. On some platforms, such as Pornhub, content is reviewed before it is uploaded.

Source: Twitch, [Transparency Report 2020](#), February 2021

Platforms often use a number of content moderation tools. Pornhub, for example uses multiple technologies to identify child sexual image content, including: YouTube's proprietary child sexual abuse imagery detection technology, CSAI Match; Microsoft's PhotoDNA technology, which scans photos that might match previously-uploaded infringing content; Google's Content Safety API, which is Google's artificial intelligence technology designed to identify child sexual abuse material; MediaWise, a 'fingerprinting' software from Vobile; and Safeguard, Pornhub's own image recognition technology.^{339 340}

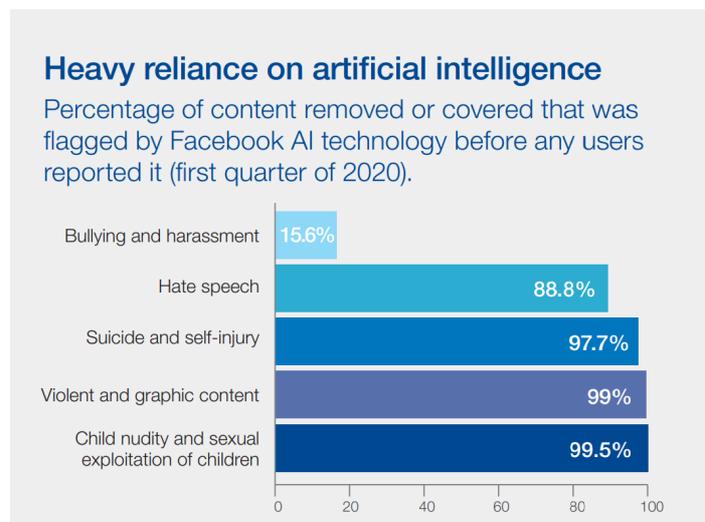
A New York University study found a heavy reliance on Facebook's artificial intelligence technology to remove pieces of harmful content on Facebook before any users reported them. According to the study in Q1 2020, Facebook removed or covered³⁴¹ 1.9 billion fake accounts, 1.7 billion pieces of spam content and 107.5 million pieces of other content, including nudity, violence and hate speech. Facebook's artificial intelligence identified 99.5% of child sexual content but just 15.6% of bullying and harassment content.

³³⁹ Vice, [Pornhub Just Released Its First Transparency Report](#), 2 April 2021

³⁴⁰ Pornhub, [2020 Pornhub Transparency Report](#), 2 April 2021

³⁴¹ Facebook covers some non-violating content and provides a warning that it may be disturbing. Source: NYU Stern, [Who Moderates the Social Media Giants? A Call to End Outsourcing](#), June 2020

Figure 3.13: Facebook AI content moderation: Q1 2020



Source: NYU Stern, [Who Moderates the Social Media Giants? A Call to End Outsourcing](#), June 2020

However, there have been instances when automated moderation has not been successful, so platforms may need to amend their algorithmic instructions frequently, to address harmful or inappropriate content. Human content moderators are also employed by many platforms to prevent harmful or inappropriate content reaching the public. Facebook reportedly employs about 15,000 content moderators globally.³⁴² The NYU report from June 2020 called for Facebook to double its number of human moderators and make them full employees, rather than outsourcing to third-party contractors.³⁴³ Natural language understanding is a focus area for development and research in the content moderation field, as detecting nuances in speech, such as sarcasm, slang and local dialects can be difficult.³⁴⁴

Platforms are also experimenting with preventive measures to encourage users to act within community guidelines when posting content

Platforms may³⁴⁵ use a combination of machine learning and artificial intelligence trained on a set of data to improve users' experience of the platform. Instagram, for example, uses artificial intelligence to discourage the posting of offensive comments or captions.³⁴⁶ When a user is typing a comment using words that could cause offence, a message appears explaining that their language is similar to that previously reported, prompting the user to consider if they wish to continue. This feature encourages the user to think about the effect the words they are typing may have in a public forum,

³⁴² Forbes, [Report: Facebook Makes 300,000 Content Moderation Mistakes Every Day](#), 9 June 2020

³⁴³ NYU Stern, Centre for Business and Human Rights, [Who Moderates the Social Media Giants? A Call to End Outsourcing](#), Paul M. Barrett, June 2020

³⁴⁴ Cambridge Consultants on behalf of Ofcom, [Use of AI in online content moderation](#), 2019

³⁴⁵ Use of sophisticated tools will vary depending on the size of the platform

³⁴⁶ Instagram, [Our Progress on Leading the Fight Against Online Bullying](#), 16 December 2019

and possibly change them. This feature serves as a preventive measure against the spreading of offensive comments, rather than moderating the content after it has been seen.

Twitch’s automation tool, AutoMod, allows content creators to adjust the chat filtering according to their preferences.³⁴⁷ It uses machine learning and natural language processing to block inappropriate content and flag it to a human moderator, moving these comments into a publishing queue until they are reviewed and confirmed as acceptable.

Content creators

Content creators are those who regularly post and upload their own content to social video platforms and generate revenue from this.³⁴⁸ For some, this can be a hobby or side-project, while for others creating videos can be a main source of income. Individuals who have a large following or who earn revenue from promoting products may define themselves as an ‘influencer’. Influencers tend to be individuals rather than established media organisations.

‘Influencer’ is a fluid and evolving term. The Advertising Standards Authority defines a social media influencer as “anyone who has been paid by a brand to advertise a product on their own social media, because of their social media influence”.³⁴⁹ Equally, some classify creators as influencers, depending on the size of their following, i.e. ‘micro influencers’ (audience size of 10k-100k) and ‘macro influencers’ (100k+).³⁵⁰ ³⁵¹ ‘Influencer marketing’ is now a well-established advertising technique whereby influencers promote a product by using it on their channel.

Content creators are essential to the social video sector, as they create a flow of video content that brings in audiences to the platform, and this in turn benefits both the platform owner and the creator. Many creators have a presence across multiple high-reaching platforms, usually diversifying across YouTube, Instagram, Facebook and TikTok. Often the same content is uploaded to each platform, i.e. it is common to find a video on Instagram that has previously been uploaded onto TikTok, marked by the TikTok logo.

In 2020, more than 400,000 influencers in the UK uploaded content to social video platforms³⁵²

Examples of popular UK-based content creators on Instagram across different genres include fashion vlogger Dina Torkia, who was named by YouTube as ‘Creator for Change’ in 2017;³⁵³ comedian Munya Chawawa, known for his satirical comedy sketches, who has now landed a Netflix deal,

³⁴⁷ The Verge, [Twitch introduces a new automated moderation tool to make chat friendlier](#), 12 December 2016

³⁴⁸ Creators can range from organisations to individuals. This section primarily explores individual creators rather than established media companies

³⁴⁹ ASA, [Recognising ads: Social media and influencer marketing](#), 31 July 2020

³⁵⁰ Iconosquare blog, [A Guide to Social Media Influencers: Mega, Macro, Micro, and Nano](#), published 17 Feb 2020

³⁵¹ See page 129 in [Online Nation 2020](#) on descriptions of different types of influencers

³⁵² Tubular Labs | Intelligence| Social Video | UK based Influencers | Based on uploads in 2020. Tubular Definition of Influencers: One of Tubular’s 3 main Creator Types, an influencer is defined as a personality, celebrity or public figure with significant social presence, as opposed to brands (=Organizations that sell primarily non-media goods or services) and media companies (=Organizations whose primary business model is in production and/or distribution of content)

³⁵³ YouTube, [Creators for Change - Role Models](#), accessed 8 April 2021

among other TV roles;³⁵⁴ ³⁵⁵ Mob Kitchen, which has expanded its food video production business with top-selling cookbooks;³⁵⁶ and fitness vlogger Grace Beverley, who, due to her social video success, now owns three businesses at the age of 24.³⁵⁷

Monetisation options available for creators depend on their audience size and their level of experience, and their access to professional and managerial guidance. Revenue sources include brand sponsorships, affiliate links, donations, subscriptions, merchandise offerings and providing services.³⁵⁸ OnlyFans, for example, has 300 content creators who have earned more than \$1m on the site, according to an interview published in April 2021.³⁵⁹ Content creators often migrate from social video to other forms of media and are increasingly sought by businesses.

Establishing their brand, and gathering fans and followers on one platform, can allow creators to transition to other platforms or even other media, including TV and film. In November 2020 Amazon secured its first partnership with a YouTuber, nine-year-old Ryan Kaji from the US. Currently YouTube's highest earner and known for his toy reviews, he will feature in a new show on Amazon Kids+, the subscription streaming service. In the UK, comedian creator Munya Chawawa, who posts mainly on Instagram, TikTok and YouTube, has a deal with Netflix, presenting the *Netflix News* show,³⁶⁰ and in 2021 he will star in BBC's *Celebrity MasterChef*.³⁶¹ UK YouTuber Joe Sugg starred in *Strictly Come Dancing* 2018, and in 2021 landed an acting role in the latest series of The BBC's *The Syndicate*.³⁶² Content from UK influencers received more than 178 billion views on YouTube in 2020.³⁶³

Content creators are sought by brands to promote their products; influencer marketing is an established advertising tool

Social display advertising (which can include video, banner and in-feed adverts) represents 68% of total display advertising in the UK in 2020, demonstrating the value of social platforms for marketers.³⁶⁴ This is driven particularly by video advertising, which was up 23% year on year to £2,744m in 2020 (compared to non-social video formats, where spend increased by only 6% to £654m).³⁶⁵

³⁵⁴ New York Times, [For a U.K. Satirist and His Online Fans, Comedy Is Catharsis](#), 9 April 2021

³⁵⁵ Croydon FM, [Munya Chawawa Signs Deal With Netflix For A Brand New Show Entitled 'Netflix News'](#), 24 September 2020

³⁵⁶ Evening Standard, [How Mob Kitchen went from a foodie Instagram feed to the ultimate millennial cookbook](#), 7 September 2018

³⁵⁷ The Times, [Grace Beverley, the 24-year-old CEO who says Gen Z faces burn-out](#), 10 April 2021

³⁵⁸ See p130 in [Online Nation 2020](#) for more detail on these

³⁵⁹ Financial Times, [OnlyFans feels the lockdown love as transactions hit £1.7bn](#), 25 April 2021

³⁶⁰ Croydon FM, [Munya Chawawa Signs Deal With Netflix For A Brand New Show Entitled 'Netflix News'](#), 24 September 2020

³⁶¹ The Star, [Sheffield comedian Munya Chawawa 'can't believe' how he ended up on Celebrity MasterChef 2021](#), 22 April 2021

³⁶² The Independent, [The Syndicate: Joe Sugg impresses fans with 'on point' northern accent as YouTube star makes TV acting debut](#), 31 March 2021

³⁶³ Tubular Labs | Intelligence | YouTube | UK based Influencers | Only Includes Videos with >1M views | Views in 2020 | Videos uploaded anytime.

³⁶⁴ IAB, *UK Digital Adspend 2020 report*

³⁶⁵ IAB, *UK Digital Adspend 2020 report*

Companies such as L'Oréal, which sells beauty products, are increasingly investing their ad budget in influencer marketing.³⁶⁶ It is common practice for high-reaching content creators to be offered a partnership deal whereby the creator markets a product in exchange for money or gifts. Some creators actively seek to secure deals with brands as part of their monetisation strategy. There are also dedicated agencies which specialise in influencer marketing.

According to a report from the Influencer Marketing Hub, influencer marketing is estimated to have grown from \$1.7bn in 2016 to \$9.7bn in 2020.³⁶⁷ Over the past 12 months, 240 new influencer marketing-focused platforms and agencies have entered the market, lower than the previous year's 380.³⁶⁸ While the lower numbers of new entrants could be the result of a slower economy exacerbated by the pandemic, it may also be a sign that this area is beginning to mature.

Instagram's tagging feature makes it a useful platform for product promotion. Businesses can tag their products, and individuals can tag store profiles to direct their followers to a store. On a home décor blog, for example, each item in a picture of a living room can be tagged with the profile of the store it was purchased from. In many cases, items are tagged without a partnership deal being in place, leading to free advertising for the business.³⁶⁹ The Advertising Standards Authority (ASA) has published advertising guidance for social video influencers, providing clarity on how creators should identify ads in their content.³⁷⁰

Creators who achieve success on a platform can also gain functionality benefits. For example, Instagram grants the 'swipe up' function to creators who have more than 10,000 followers, which allows the followers to easily navigate to links to products, or to the creator's other content, for example.³⁷¹ YouTube is beta-testing a new integrated shopping experience, due in 2021, in which viewers will be able to purchase products tagged in the creator's video.³⁷²

Content creator experiences and attitudes

One in three (31%) adult UK video site users said they posted/uploaded content on these platforms, according to Ofcom research.³⁷³ This figure is higher among teenagers (aged 13-17), of whom 40%

³⁶⁶ BBC, [How Instagram's influencers changed the model industry](#), 3 April 2021

³⁶⁷ Influencer Marketing Hub, [The State of Influencer Marketing 2021: Benchmark Report](#), 15 February 2021

³⁶⁸ Influencer Marketing Hub, [The State of Influencer Marketing 2021: Benchmark Report](#), 15 February 2021

³⁶⁹ BBC, [The influencer effect: 'Love Island star transformed my business'](#), 28 February 2021

³⁷⁰ ASA, [Influencers' guide to making clear that ads are ads](#), 6 February 2021

³⁷¹ The Swipe Up function is available to those with business accounts with over 10K followers, or to verified accounts.

Source: Influencer Marketing Hub, [Instagram Swipe Up: How to Use It & How to Get It Without 10K Followers](#), 19 November 2020

³⁷² This is currently limited to electronic and beauty products, as of February 2021. Source: The Verge, [YouTube Shorts beta will launch in the United States in March](#), 17 February 2021

³⁷³ Ofcom, [Video-sharing platform use and experience of harms survey 2021](#). Q2. You mentioned that you have used the following video sites or apps in the last 12 months. In general, what do you tend to use these video services for? Base: used at least one VSP in the last 12 months, n=1,980

said they posted/uploaded content.³⁷⁴ And research from The Insights Family UK found that 6% of 8- to 12-year-olds said they aspired to become a YouTuber/vlogger; the majority of those who said this (70%) were boys.³⁷⁵ According to Ofcom research, 13- to 17-year-old video site users also watch more videos than any other age group about how to become a content creator/ blogger on video sites, at 11% compared to 3% of adult users.³⁷⁶

Content creators' compliance with, and awareness of advertising rules

The Advertising Standards Authority (ASA) announced in March 2021 that it would be putting influencers on notice, with warning of enforcement action, after finding a number of UK-based influencers who were not complying with advertising rules. The ASA's monitoring exercise of 122 UK Instagram influencer accounts found that while one in four Instagram stories contained advertising, only 35% of these were clearly labelled as such.³⁷⁷

Ofcom's qualitative research with 20 UK-based content creators found that they lack clear understanding of specific advertising rules, and how these should be applied in practice.³⁷⁸ A majority of creators in our sample were broadly aware of the need to declare advertising if they have received a payment in some form from the brand in question, or if the brand has told the creator how to promote the product, for example. But there is confusion in several areas: whether advertising rules differ across countries (i.e. whether UK creators need to adhere to the same rules as their US peers), and at what point should the declaration about advertising come, and what specific phrasing should be used.

Most content creators learn about advertising rules from their peers, according to our qualitative research. Most had not read any 'official' guidance on advertising declaration, such as literature produced by the ASA or by social video platforms. They were mostly very supportive of the need for advertising rules that provide a level playing field for content creators to work within, and enable clarity and transparency for their viewers and followers.

Support for content creators

The ASA has published advertising guidance for social video influencers, providing clarity on how creators should identify ads in their content.³⁷⁹ Platforms' 'help' pages often offer support and clarity on adhering to guidelines.³⁸⁰ According to our qualitative research, creators on YouTube tended to have a greater awareness of rules and guidelines on advertising than creators on other platforms.

³⁷⁴ Ofcom, *Video-sharing platform use and experience of harms survey 2021*. Q2. You mentioned that you have used the following video sites or apps in the last 12 months. In general, what do you tend to use these video services for? Base: used at least one VSP in the last 12 months, n=1,980

³⁷⁵ The Insights Family UK, 2020. Single select question: What do you want to be when you're older?

³⁷⁶ Ofcom, *Video-sharing platform use and experience of harms survey 2021*. Q3b. In general, what type of videos do you watch on these video sites or apps? Base: used at least one VSP in the last 12 months, n=1,980

³⁷⁷ ASA, *Influencer monitoring report (March 2021)*, 18 March 2021

³⁷⁸ Ofcom VSP Content Creators and Community Standards 2021

³⁷⁹ ASA, *Influencers' guide to making clear that ads are ads*, 6 February 2021

³⁸⁰ YouTube Help, *Advertiser-friendly content guidelines*, accessed 26 April 2021

When a user uploads a video onto YouTube, YouTube provides a checklist for users to follow; this serves as a prompt and a reminder of YouTube’s community guidelines.³⁸¹

User experiences of using social video

Social video offers huge benefits for users, allowing them to upload and share their own videos with friends and the public

Nearly all internet users (97%), have used at least one video-sharing service.³⁸² Browsing and scrolling through is the most common activity on social video platforms (74% of users report doing this), as opposed to searching for content (53%). Sharing content is also an important way to discover content, as family and friends share videos via WhatsApp, for example.

However, the majority of users in our study have seen or experienced something potentially harmful

Ofcom research found that 70% of video site users had seen or experienced something potentially harmful in the past three months.³⁸³ Some users had been exposed to potentially harmful content (‘content harms’ in the chart below) or have experiences that could be concerning (‘contact harms’ in the chart below). Our research found that fake news³⁸⁴ and offensive language were the most prevalent online content experiences that might be considered harmful, followed by fake or deceptive images/videos. Unwelcome friend requests/follows and trolling were the most common potential contact harms across all platforms.

A range of potential online harms on websites and apps were explored in this research. The harms are referred to as ‘potential online harm(s)’ because the research measured the types of content and behaviour that users could be exposed to online, but did not seek to assess what, if any, harm arose from this exposure.

Figure 3.14: Recent exposure to potential harms by users of social video platforms

Exposure to potential content harms		Exposure to potential contact harms and other harms	
Fake news	49%	Unwelcome friends/follows/messages	40%
Offensive language	45%	Trolling	36%

³⁸¹ Ofcom, VSP Content Creators and Community Standards 2021

³⁸² Ofcom, Video-sharing platform use and experience of harms survey 2021

³⁸³ This research looked at VSP users’ exposure to 26 online experiences, which capture a broad spectrum of behaviours and content that users may find potentially harmful. A full breakdown of this research can be found in the *User Experience of Potential Online Harms within Video Sharing Platforms Report*. These 26 potential online harms are types of content and behaviours that users could be exposed to online. This research did not seek to provide a view on what, if any of these experiences are considered harmful, nor what, if any, harm actually arose from these experiences. VSP providers are not under a regulatory obligation under the VSP Framework to act on any content or conduct outside the specified areas of harmful material in the legislation

³⁸⁴ Discussion on fake news can be found in the [News and Misinformation chapter](#)

Fake or deceptive images/videos	35%	Bullying, abusive behaviour or threats	26%
Offensive videos/pictures	27%	Content encouraging gambling	24%
Harmful or misleading advertising	27%	People pretending to be another person	19%
Violent/disturbing videos or content	26%	Cyber-flashing	11%
Encouraging hate of others	26%	Sale of illegal goods online	10%
Body image / excessive dieting / eating disorders	21%	Spending too much money on in-app purchasing / gifting	9%
Encouraging racism	21%	Stalking / cyber-stalking	8%
Glamourising unhealthy/abusive lifestyles	20%	Pressure to send photos / personal information	7%
Inappropriate sexual / pornographic content	16%		
Encouraging violence to others	16%		
Radicalisation or terrorism	9%		
Sharing private/intimate content without consent	8%		
Promoting self-harm e.g. suicide	8%		
Sexual abuse or exploitation of children ³⁸⁵	5%		

Source: Ofcom, *Video-sharing platform usage & experience of harms survey 2021*. Q4. Which, if any, of the following do you remember seeing or experiencing when using [VSP] in the last 3 months? Base: used at least one VSP in the past 3 months, n=1,958. NOTE: 'Videos or content depicting the sexual abuse or exploitation of children' code was not shown to those aged 13-17.

The sharing of private/intimate content without consent is a potentially harmful experience that has been highlighted in the media. The main feature of social video services is the ability to easily upload and share videos and images, and crucially, any user can do this. The user-generated element makes it difficult to prevent users from uploading content that they do not own. This was criticised in a New York Times article,³⁸⁶ which interviewed victims of non-consensual video sharing. Following that publication, Pornhub removed user-generated videos, keeping videos from verified users only. Several recent BBC documentaries have examined the prevalence of image-based sexual abuse or 'revenge porn'³⁸⁷ and the impact this has on individuals' lives for years to come. Cases include Jess Davies, who documented the unsolicited sale of her nude pictures taken several years ago and their

³⁸⁵ It should be noted that respondents saw the answer option with the wording 'videos or content depicting the sexual abuse or exploitation of children' with no additional definitions or examples. Therefore, selection of this harm was based on the respondent's own interpretation of the answer code

³⁸⁶ New York Times, [The Children of Pornhub](#), 4 December 2020

³⁸⁷ 'Revenge porn' defined as 'to share intimate images or videos of someone, either online or offline, without their consent with the intention of causing distress'. Source: [Revengepornhelpline.org.uk](#), accessed 19 April 2021

use on fake profiles.³⁸⁸ Former Love Island contestant Zara McDermott also shared her story of how nude pictures shared with her ex-partner were circulated online.³⁸⁹

Tools are in place for users to report harmful content themselves

On many platforms, users can report content that they think may be violating platform guidelines. They can do this immediately when they see the content, by clicking ‘report’³⁹⁰ or ‘flag’ on videos and images. Other options include completing an online form or contacting customer support.³⁹¹ The platforms’ ‘help’ pages often explain how to report content.³⁹² Just one in four users claim to have used these reporting tools.³⁹³ This figure is higher among 18-24s however, 42% of whom claimed to have used reporting mechanisms. Despite the ‘report’ option being available and even despite using it, our qualitative research found that some users were still unsure about how the process works.

“I’ve used the report function a few times across different platforms, but I still don’t quite know how they work. Who checks the report? Who gets to decide what is and isn’t offensive?”

Female user aged 28

Source: Ofcom Safety measures on video-sharing platforms survey (qualitative research) 2021

Social video platforms have introduced measures to better protect users, particularly children

TikTok announced new protective measures in January 2021. The measures include that users aged under 16 will have their accounts automatically set to private, and users will be prevented from downloading any videos created by under-16s. Thirteen to fifteen year-olds will be able to approve ‘friends’ for comments and choose whether to make videos public.³⁹⁴ TikTok introduced Family Pairing in April 2020, a tool enabling parents to link their account to their child’s and set specific controls for their children, including restricting the appearance of certain content, managing screen time and setting whether the account is discoverable to the public, etc.³⁹⁵ TikTok also introduced new ad policies banning ads for fasting apps and weight loss supplements.³⁹⁶ See the [Children chapter](#) for detail on the age verification mechanisms that platforms have in place.

Instagram announced new measures in March 2021, designed to protect teenagers from unwanted direct messages from adults. Older users will only be able to privately message teenage users if the teenage user follows them back. Messages will be overlaid with a notice reminding teenagers that

³⁸⁸ BBC, Jess Davies, [When Nudes Are Stolen: Inside the online 'nude trade'](#), 7 April 2021

³⁸⁹ BBC, [Zara McDermott: Revenge Porn](#), accessed 11 April 2021

³⁹⁰ The report option can be found on Facebook, for example, by clicking the three dots next to the post, as of April 2021.

³⁹¹ For example, on Pornhub, any user, including those without an account, can report content and request removal by contacting customer support or using their Content Removal Request Form. On Twitch, for example, users can fill out a detailed description of the violation that has occurred

³⁹² For example: Twitch, [How to File a User Report](#), accessed 6 April 2021; Facebook, [How to report things](#), accessed 6 April 2021

³⁹³ Ofcom Safety measures on video-sharing platforms survey (quantitative research) 2021. Q11. You mentioned that you are aware some sites and apps have buttons or reporting mechanisms that allow users to flag or report content that is concerning to them. Have you ever used these buttons and/or mechanisms to flag content? Base: all, n=1,002; 18-24, n=117

³⁹⁴ BBC, [TikTok: All under-16s' accounts made private](#), 13 February 2021

³⁹⁵ TikTok, [For Parents: Safety Center](#), accessed 22 April 2021

³⁹⁶ TikTok, [TikTok transparency report](#), H2 2020

they need not respond to anything that makes them uncomfortable. The platform also said that it now offers young account holders the option to make their accounts private when they create them.³⁹⁷

Platforms are also implementing restrictions on who can comment on posts. In March 2021 Facebook started allowing users to limit comment on their public posts to friends, or even to specific tagged people.³⁹⁸ Twitter introduced a similar feature last year, allowing users to control who replies to their tweets, or to block replies.³⁹⁹ This feature is already integral to some platforms' design. On Reddit, for example, owners of a 'subreddit' can moderate and set rules for what comments or content can be posted, thereby preventing people posting comments that are irrelevant to the topic.⁴⁰⁰

TikTok removed 194 million videos from its platform in 2020

Social video platforms remove content that is in breach of their platform policies. TikTok relies on a combination of technology and human moderation. In the second half of 2020, TikTok removed 89 million videos globally for violating its Community Guidelines or Terms of Service, which was less than 1% of all videos uploaded on TikTok.⁴⁰¹ Facebook and Instagram do not report on video removals specifically, but 'pieces of content'.⁴⁰² Snapchat enforced against 3.8 million pieces of content globally in H1 2020.⁴⁰³

The number of videos removed on TikTok decreased by 15% between H1 2020 and H2 2020. In the first half of 2020, TikTok acted on 104.5 million videos; this decreased to 89.1 million in H2 2020. In H2 2020, just over eight in ten videos were removed before they had received any views, down from nine in ten in H1.^{404 405}

³⁹⁷ BBC, [Instagram cracks down on adults messaging teens](#), 16 March 2021

³⁹⁸ BBC, [Facebook tweaks its news feed with new controls](#), 31 March 2021

³⁹⁹ BBC, [Twitter to test 'block all replies' function](#), 9 January 2020

⁴⁰⁰ Reddit, [Subreddit rules](#), accessed 1 April 2021

⁴⁰¹ TikTok, [TikTok Transparency Report 2020 H2](#), 24 February 2021

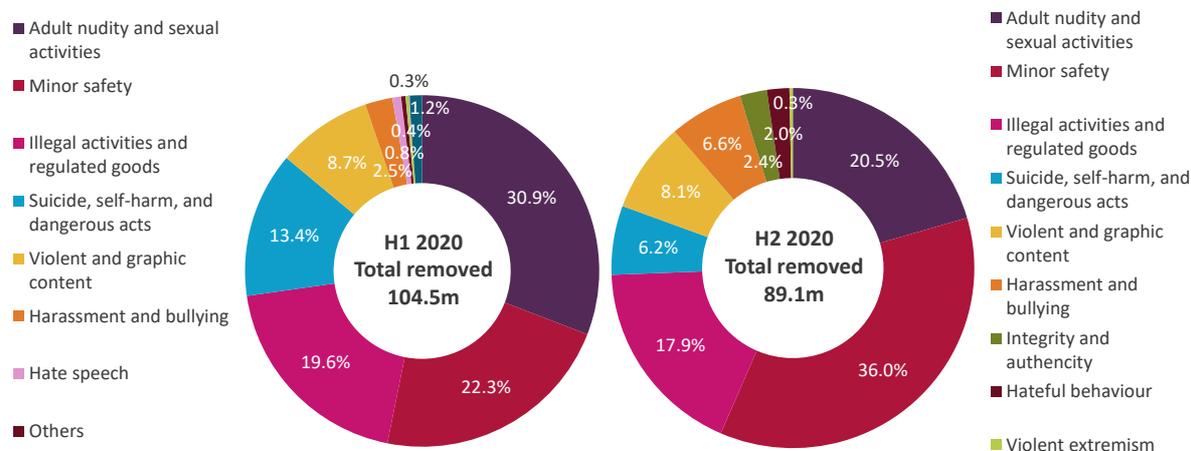
⁴⁰² Facebook, [Understanding the Community Standards Enforcement Report](#), accessed 11 May 2021

⁴⁰³ Snap, [Transparency Report](#), 18 December 2020

⁴⁰⁴ TikTok, [TikTok Transparency Report 2020 H1](#), 22 September 2020

⁴⁰⁵ TikTok, [TikTok Transparency Report 2020 H2](#), 24 February 2021

Figure 3.15: TikTok videos removed, by removal reason: first and second half of 2020



Source: TikTok, [TikTok Transparency Report 2020 H1](#), 22 September 2020 & [TikTok Transparency Report 2020 H2](#), 24 February 2021

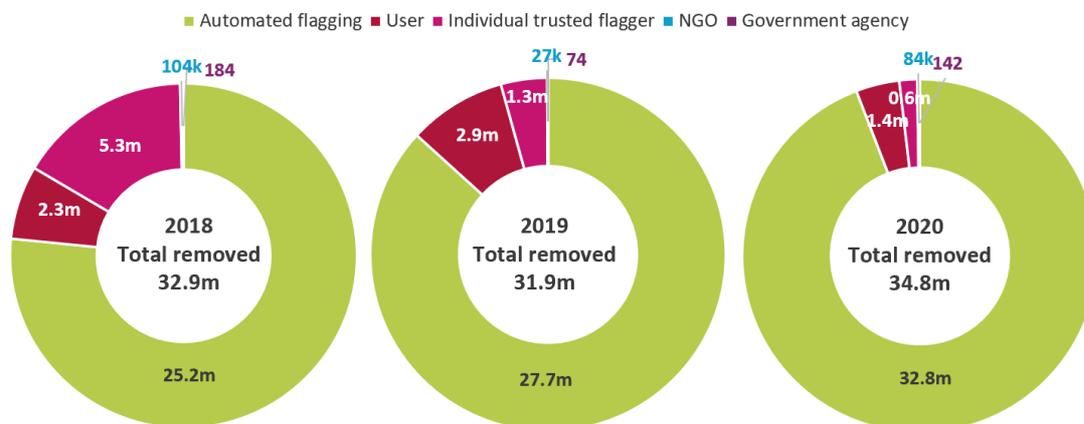
Ninety-four per cent of removed YouTube videos were taken down by automated flagging in 2020⁴⁰⁶

As the pandemic resulted in a large number of YouTube staff working from home, it became more reliant on its automated flagging process from Q2 2020, to ensure that videos met its community guidelines. It normally relies on a combination of technology and human review. YouTube stated that due to its reliance on technology to remove content in Q2 2020, it removed more videos than ever previously reported: 11.4 million.⁴⁰⁷ Forty-three per cent of videos removed in 2020 were taken down before having any views, 33% had had 1-10 views and 25% (equivalent to 8.7 million videos), had had more than 10 views before removal.

⁴⁰⁶ Google Transparency Report, [YouTube Community Guidelines enforcement](#), global, 2020

⁴⁰⁷ YouTube Official blog, [Responsible policy enforcement during Covid-19](#), 25 August 2020

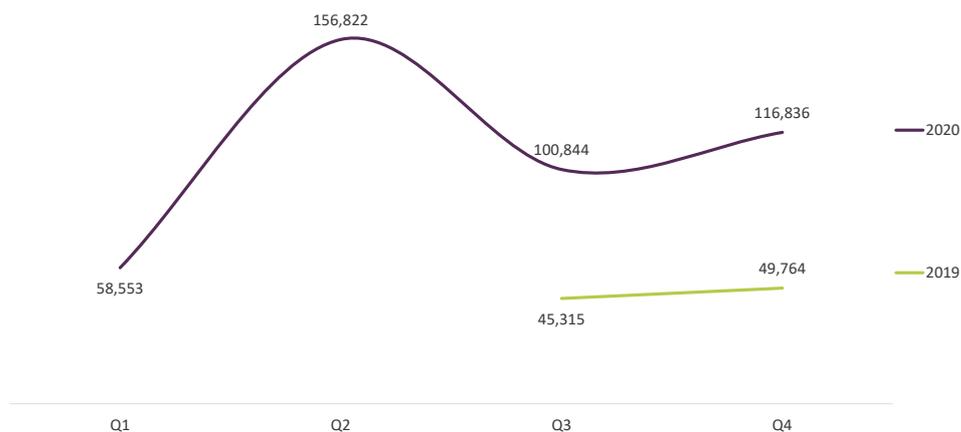
Figure 3.16: Number of videos removed on YouTube, by source of first detection



Source: Google Transparency Report, [YouTube Community Guidelines enforcement](#), global, 2018-2020

Of the videos removed during 2020, 433,055 were uploaded in the UK, equating to 1% of all the videos removed from YouTube during the period.

Figure 3.17: Number of UK-uploaded videos removed by YouTube per quarter



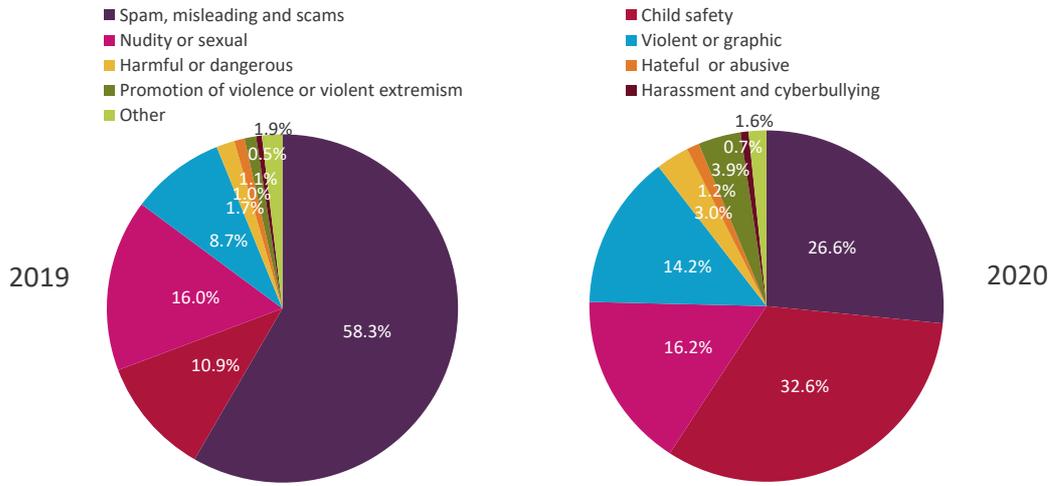
Source: Google Transparency Report, [YouTube Community Guidelines enforcement](#), global, 2018-2020

Note: Country is based on IP address at time of video upload. Data not reported before Q3 2019

Child safety was the most common reason YouTube reported for video removals. In 2020 it removed 11.6 million videos for child safety reasons, an increase of 8.3 million compared to the 3.3 million videos removed for the same reason in 2019. Following its Q2 transparency report, YouTube stated that in sensitive policy areas, such as violent extremism and child safety, it would accept a lower level of accuracy, to ensure that it was removing as many pieces of violating content as possible. This meant that, in these areas specifically, a higher amount of content that did not violate their policies was also removed.⁴⁰⁸

⁴⁰⁸ YouTube Official blog, [Responsible policy enforcement during Covid-19](#), 25 August 2020

Figure 3.18: YouTube videos removed, by removal reason: 2019 and 2020



Source: Google Transparency Report, [YouTube Community Guidelines enforcement, global, 2019-2020](#)

4. The online industry

Introduction

Figure 4.1: Estimated revenues of UK online sectors (excluding e-commerce) by revenue stream: 2015-2020

Combined UK online sector revenue by revenue stream	2015	2016	2017	2018	2019	2020	Est. CAGR 2015-20
Total UK revenue - £m	13,113	15,762	18,004	20,532	23,402	25,501	14%
Advertising	8,268	10,097	11,776	13,353	15,220	16,093	14%
Subscription	1,606	2,156	2,544	3,040	3,721	4,471	23%
Transactional	3,173	3,436	3,615	4,072	4,385	4,855	9%
Public funding	67	73	69	66	76	82	4%

Source: Ofcom estimates based on data from IAB UK/PwC Digital Adspend Study, PwC Global Entertainment and Media Outlook: 2020-2024, <http://www.pwc.com/outlook>, Ampere Analysis, Enders Analysis, AA/WARC Expenditure Report, and company reports and public filings. Pre-2020 figures have been adjusted for CPI at 2020 prices by Ofcom.

Both subscription and transactional revenues refer to revenues derived from sales of the relevant product or service, either on a repeating basis or through one-off sales, respectively. In the case of online news and consumer magazines, all such revenues are included under 'subscriptions'. In the case of online games, all revenues are included under 'transactional'. Figures are indicative only, with overlapping categories – and as such, data presented may differ from other industry sources due to differences in sectoral definition or other methodological differences. CAGR is compound annual growth rate.

The coronavirus pandemic has had a substantial impact on the UK and global economies, as lockdown restrictions have encouraged increased online expenditure by consumers. The key drivers of online revenue growth in 2020 were increased working and education at home, increased consumer time and money spent online, and an increase in total online advertising revenues in 2020 (despite a downturn in Q2 2020). These varied drivers ensured that most online sectors grew strongly, with Google, Apple, Facebook, Amazon and Microsoft (GAFAM) strongly present in all. Many businesses increased their reliance on their existing online offerings, strengthened by increased consumer demand for online products and services, while some established an online

presence for the first time. The impact on businesses is likely to be an acceleration of the existing structural change from traditional media to digital.

Advertising remains a key revenue stream for many online businesses. Although online advertising spend in the UK increased in 2020 overall (in spite of a decline in the first half of the year), it was not the same story across all types of advertising or across all sectors. This chapter provides some updates and commentary on the digital advertising market and then briefly considers the revenues and activities of the largest online UK companies (GAFAM).

Finally, this chapter covers seven online industry sectors: search; directories; e-commerce, entertainment and audio-visual media; gaming; news; and social media and messaging. As online shopping (e-commerce) was an area of significant growth in 2020, we will examine some sub-sectors here, specifically looking at consumer spend.

Market overview

Online revenue streams

Despite declines in overall advertising revenues, UK digital advertising spend increased in 2020

Digital advertising spend in the UK increased by 4.3% in 2020 to £16.47bn, a year-on-year increase of £677m (2019: £15.79bn).⁴⁰⁹ When compared to previous years' increases in ad spend (13% in both 2018 and 2019), the 2020 uplift is modest, but in the context of the unusual year, the rise in at least some areas of digital advertising demonstrates the continuing importance of online media.

The impact of the pandemic on the economy affected online advertising spend in the UK, as businesses were hesitant, or unable, to commit to spending on marketing campaigns during lockdown, or were affected by the temporary closure of some types of businesses, such as holidays and hospitality. However, online advertising has outperformed the rest of the advertising market. AA/WARC Expenditure Report figures show that the total UK advertising market decreased by 8% year on year to 2020.⁴¹⁰ Online advertising has been more resilient than traditional advertising to changes in the economy, and during 2020 the increase in online consumer activity provided opportunities for online advertisers.

As the general economy slowed during the first half of 2020, digital advertising revenue spend also decreased, particularly brand-based advertising.⁴¹¹ During the pandemic, it became more important for advertisers to remain alert to changes in the economy, paying increased attention to monitoring cash flow in the short term. This affected their marketing strategies, which focused more on easily measurable formats like direct response advertising. This type of marketing includes search or display advertising that offers a clear and immediate path for the consumer purchase journey; for

⁴⁰⁹ IAB, *UK Digital Adspend Study 2020*. Pre-2020 figures have been adjusted for CPI at 2020 prices by Ofcom

⁴¹⁰ AA/WARC *Expenditure Report 2020*. Pre-2020 figures have been adjusted for CPI at 2020 prices by Ofcom

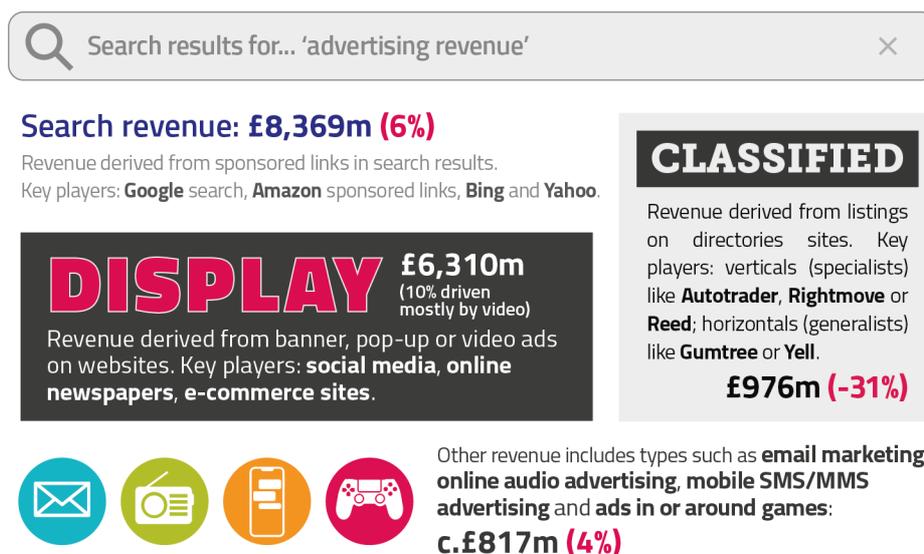
⁴¹¹ Building and establishing consumers' awareness of and long-term relationship with a brand, so that they are more likely to choose that product or service

example, signing up to a newsletter for a discount, or linking to a brand’s online store (known as call-to-action advertising).

Digital ad spend declined by 7% in the first half of the year, largely driven by a 5% drop in search advertising and a 33% drop in classified advertising compared to the same period in 2019. Search advertising remained the largest proportion of the total spend (52%) showing that it is a key pillar of marketing strategies. Overall display revenue was flat (1% decline, around £20m) as declines in non-video were not mitigated by a 4% (around £55m) increase in video display. Although this increase is relatively modest, it demonstrates the continued value of this medium to advertisers, particularly as people in the UK increasingly sought entertainment through social media, streaming and short-form video.⁴¹²

The online advertising market recovered in the second half of 2020, leading to overall annual growth in most segments. This was led by search and display advertising, mitigating the declines in the classified segment. Search ad spend was up by 6% (£489m) year on year in 2020, and display advertising by 10% (£596m). The latter was driven by display advertising on social media sites (a 18% increase, or £660m), especially video display.

Figure 4.2 Types, spend and growth of online advertising in the UK: 2020



Source: IAB UK/PwC Digital Adspend Study 2020. Pre-2020 figures have been adjusted for CPI at 2020 prices by Ofcom.

59% of digital ad spend is on smartphones

The increase in advertising spend for smartphones continues to outpace that for desktops, laptops and tablets, and now accounts for 59% of digital ad spend (up from 57% in 2019). The ubiquity of smartphones (see [Consumer chapter](#)) and the fact that over two thirds of people’s time spent online

⁴¹² IAB UK, [Digital ad spend dips 5% in H1 2020, despite surge in time spent online](#), 15 October 2020. H1 2019 figures have been adjusted for CPI at H1 2020 prices by Ofcom and estimates

is on smartphones, means that consumers are increasingly likely to view adverts on their phones, thereby increasing the number of ad impressions.

Social media platforms make the majority of their advertising revenue through smartphones. For instance, Facebook reported in 2019 that around 94% of its advertising revenue came from mobile.⁴¹³ The popularity of social media sites and video-sharing platforms is also encouraging investment in video formats (see [social media and messaging section](#) below).

GAFAM

Business model

GAFAM accounted for a large majority of UK online revenue share among the top 40 sites and apps

The largest online companies by revenue in the UK, Google, Apple, Facebook, Amazon and Microsoft (GAFAM) derive their revenues from various streams, including advertising and sales of subscriptions and online services. The GAFAM companies continued to strengthen their core service offerings in 2020, with record amounts spent on research and development and continued expansion, including through acquisitions.

All GAFAM companies reported record global revenue and profits in Q4 2020 and increased their revenue share within the UK top 40 online sites and apps⁴¹⁴. In 2020, GAFAM collectively accounted for around three quarters of the top 40 companies' revenues.⁴¹⁵

Business model changes by GAFAM can impact the wider online ecosystem

Companies with strong positions at key points in the online ecosystem can make business decisions that not only affect their own business but also that of competitors, and which can significantly impact other parts of the online ecosystem and affect users globally. The examples in figure 4.3 are decisions made at a global level, with the potential to significantly alter the UK market.

Figure 4.3: key GAFAM announcements in 2020

Company	Announcement	Stated company aim	Potential other implications
Apple	Announced in June 2020 that it will publish the consumer data	Increase transparency of the types of consumer data shared, to help improve managing privacy of personal data	May favour Apple's own advertising solution and or decrease the value of competitor offerings.

⁴¹³ [Facebook 2019 Q3 2019 financial statements.](#)

⁴¹⁴ Top 40 based on time spent by adults

⁴¹⁵ Ofcom modelling: Top 40 companies based on September 2020 Comscore minutes of use. Excludes Government sites.

	accessed by app providers. ⁴¹⁶		
Apple	Proposed in August/September 2020 to change default advertising user setting to 'opt-out'.	Give consumers greater control in managing their personal data.	Facebook states 'Apple's updates may render Audience Network so ineffective on iOS 14 that it may not make sense to offer it on iOS 14'. ⁴¹⁷
Google	Remove third-party cookies from Chrome ⁴¹⁸	Improve consumer privacy. ⁴¹⁹	May reduce the attractiveness of other advertisers relative to Google, which can still track users.
Apple	Introduce two-tier pricing on App store ⁴²⁰	Support small (< \$1m annual turnover) businesses by reducing 30% commission to 15% on App Store.	Two-tier pricing system in place with larger companies paying 30% commission.

Source: company press releases

M&A and R&D activity

Amazon web services (AWS) is the leading cloud computing service

GAFAM companies have built on the successes of their main platforms to fund and support expansion into new areas. With high share prices and cash reserves, acquisitions continued across 2020 with some targeted companies more vulnerable during Covid-19, as revenue and funding channels dried up.

Cloud services are an integral part of the online ecosystem. Amazon Web Services (AWS) is the leading cloud service provider in revenue terms, followed by Microsoft Azure and Google Cloud.⁴²¹ AWS represents 10% of Amazon's total sales.⁴²² While Google ranks a distant third, it continues to invest heavily and accept continuing losses while expanding its global scale. In 2020, Google Cloud made losses of over £4bn on £9.6bn sales⁴²³, but had the fastest-growing revenue in Q4 2020, up 58% year on year.⁴²⁴ In January 2020, Google purchased AppSheet, used for low-code mobile

⁴¹⁶ Apple, [About privacy information on the App Store and the choices you have to control your data](#), accessed 11 May 2021

⁴¹⁷ Facebook, [Preparing our partners for iOS 14](#), 26 August 2020

⁴¹⁸ Reuters, [UK's competition watchdog to probe Google's browser changes](#), 8 January 2021

⁴¹⁹ Google, [Charting a course towards a more privacy-first web](#), 3 March 2021.

⁴²⁰ Apple, [App Store Small Business Program](#), accessed 13 May 2021

⁴²¹ Canalys, [Global cloud infrastructure market Q4 2020](#), 2 February 2021

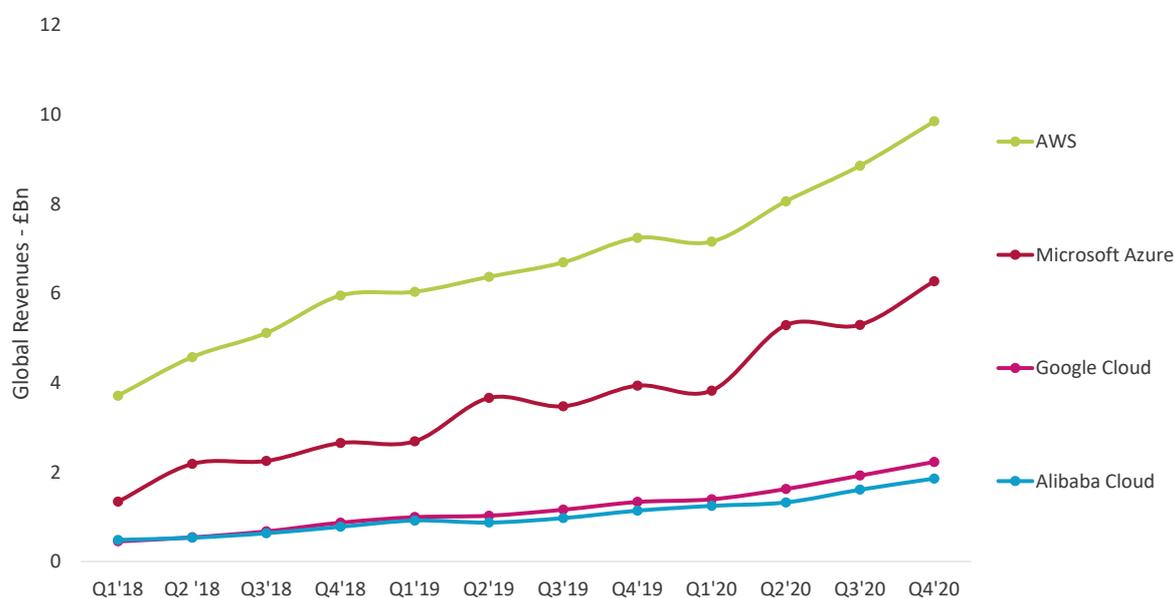
⁴²² CNBC, [Amazon's cloud division reports 28% revenue growth](#), 2 February 2021

⁴²³ Alphabet, [Annual financial report 2020](#), Ofcom conversion from USD to GBP

⁴²⁴ Canalys, [Global cloud infrastructure market Q4 2020](#), 2 February 2021. Ofcom conversion from USD to GBP

application development using cloud-based databases. This was a competitor to Google’s own ‘App Maker’ product, which now has been discontinued and replaced with AppSheet.⁴²⁵

Figure 4.4: Global cloud service revenues and growth rates of top four cloud service providers



Source: Canalis. Global Cloud Infrastructure Market Q4 2020 report. Ofcom conversion from USD to GBP.

Figure 4.5: Summary of cloud acquisitions: Jan-Dec 2020

Date	Company	Target	Fee
14/01/20	Google	AppSheet	Undisc.
21/02/20	Amazon	DataRow	Undisc.
25/02/20	Alibaba	Keruyun	Undisc.
27/04/20	Oracle	Sauce Video	Undisc.
14/05/20	Microsoft	Metaswitch Networks	Undisc.
09/07/20	IBM	RedHat	\$3.4bn
11/08/20	Alibaba	Alog	Undisc.
24/08/20	Google	StratoZone	Undisc.
26/08/20	Alibaba	Xiaoman Technology	Undisc.
1/12/20	Salesforce	Slack	\$27.7bn
08/12/20	Google	DataForm	Undisc.

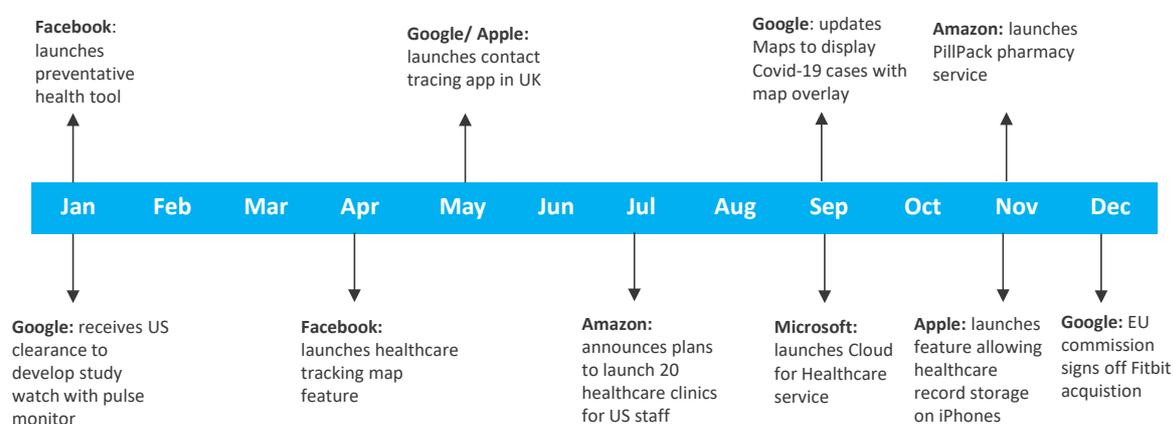
Source: Publicly announced deals sourced via S&P Market Intelligence

⁴²⁵ Google, [Action advised: App Maker shutting down](#), accessed 14 May 2021

Online healthcare provides an example of how the GAFAM firms are diversifying into new areas

The expansion of GAFAM into new areas is evident in the investment they have made into the health sector, which had increased attention in 2020 as a result of the pandemic.

Figure 4.6: 2020 timeline of GAFAM health-related developments and product launches



Source: company press releases

The diversification of large tech companies into healthcare is a common theme, while their penetration strategies vary depending on the individual strengths of each company:

- Providing cloud-based artificial intelligence and machine learning** to existing healthcare companies is the key strategy for Microsoft, which has signed strategic partnership deals with its 'cloud for healthcare' service. A recent deal with Nuance enables ambient clinical intelligence (an AI-powered voice-enabled solution) to monitor the doctor/patient conversation and suggest actions in a Teams-based virtual consultation.⁴²⁶
- Wearable and smartphone gathering of consumer data** to provide personalised, increasingly subscription-based, consumer health apps that can also build a valuable dataset of health data for advertisers and other industry players. Apple and Google, with their mobile OS platforms, wearable products and management of app stores, are well placed to lead this space.
- Health apps and online services for consumers.** There is a wide range of Covid-19 apps, including health trackers and mappers, from Facebook, Google and Apple. Amazon has leveraged its logistics and delivery systems to launch PillPack, a full-service online pharmacy.⁴²⁷ This builds on its 2019 purchase of Health Navigator,⁴²⁸ which offers clinical health content in the form of Application Programming Interfaces (APIs). Via AWS, it has signed deals with the NHS to access anonymised healthcare information and to benefit commercially from it.⁴²⁹ In December 2020, Amazon launched its Halo fitness tracker in the

⁴²⁶ Microsoft, [Microsoft accelerates industry cloud strategy for healthcare with the acquisition of Nuance](#), 12 April 2021

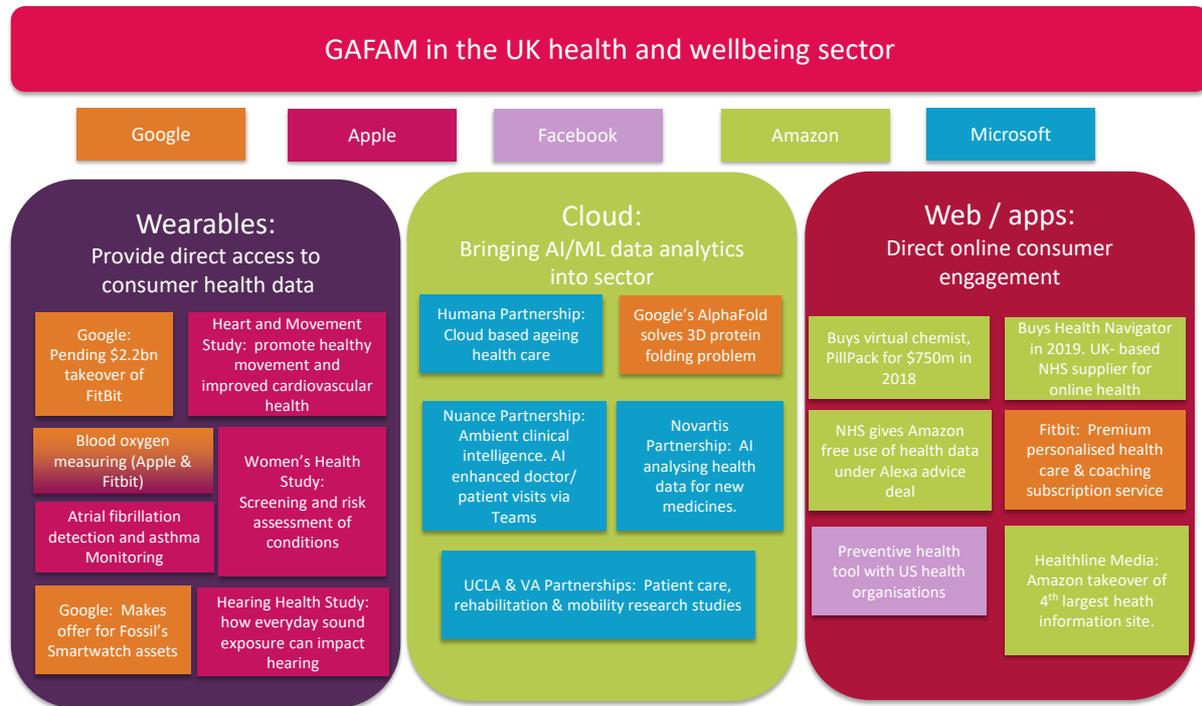
⁴²⁷ TechCrunch, [Amazon launches Amazon Pharmacy, a delivery service for prescription medications](#), 17 November 2021

⁴²⁸ CNBC, [Amazon acquires start-up Health Navigator, its first health-related purchase since PillPack](#), 23 October 2019

⁴²⁹ Digital Health, [Privacy organisation raises concerns over NHS and Amazon deal](#), 11 December 2019

US, which listens to a user's voice to gauge their mood and scans their body to measure body fat.⁴³⁰

Figure 4.7: GAFAM strategies for expansion into the health sector



Source: News reports and publicly announced merger and acquisitions

Overview of key sectors

In this section we consider how certain online industry sectors performed in 2020: search; e-commerce (through a focus on consumer spend); directories; entertainment and audio-visual media; gaming; news; and social media and messaging.

All sectors except for directories experienced overall year-on-year growth in revenues in 2020, driven by increases in subscriptions, transactional spend and advertising (with the mix and relative change in each revenue stream depending on sector). Online shopping in particular saw strong growth as non-essential shops closed and people stayed at home more during lockdown.

Directories depend on advertising, which has been affected by the reduction in advertising budgets. As explored earlier in this chapter, advertising spend has increasingly been focused on video display, particularly on social media sites. The sectors in which video advertising is embedded in the business model therefore did well: the video sub-segments of audio-visual entertainment (which also enjoyed increased subscription revenue), social media and messaging.

⁴³⁰ Amazon, [Introducing Amazon Halo and Amazon Halo Band](#), 27 August 2020 (press release from its initial, limited launch prior to going on general sale on the US Amazon platform in December 2020)

£2.45bn was spent by UK consumers on apps in 2020

Most of the time people in the UK spend on the internet is via apps on mobile devices and, according to data from App Annie, UK consumers spent £2.45bn (\$3.35bn) was spent by UK consumers in 2020 on and within mobile apps (2% of global total mobile app spend across iOS, Google Play and third-party Android stores in China). One of the top sectors UK consumers primarily spent on mobile app was entertainment. The top apps by consumer spend in the UK in 2020 were Tinder, Disney+, YouTube and Netflix. The pandemic led to UK consumers being more reliant on or having increased interest in particular areas, such as education, fitness and wellbeing. The Duolingo and Strava apps were 9th and 10th respectively in the top ten apps by consumer spend in the UK in 2020.

Most UK online sectors have retained their global market share

Many of the online sectors considered in this report have been resilient, showing growth in 2020 despite the economic challenges. The UK, which has a mature online market, has retained a significant share of global revenues in each sector: this share has remained flat since 2019 in every sector apart from directories, for which the share has reduced slightly (from 8% in 2019 to 6% in 2020).

Figure 4.8: UK share of global revenues, by sector (excluding e-commerce)

Sector	Primary business model(s)	Example key companies	2020 Global revenue (£m)	2020 UK revenue (£m)	2020 UK share of global
Search	Advertising	Google Search, Bing	98,742	8,369	8%
Directories	Advertising	Rightmove, Gumtree	14,994	911	6%
Entertainment and AV media	Advertising and subscription	Netflix, Spotify, BBC, YouTube	114,964	5,561	5%
Gaming	Transactional	Roblox, Sony (PlayStation), Microsoft (Xbox)	100,302	4,643	5%
News	Advertising	Guardian, DMGT	18,819	1,240	7%
Social media and messaging	Advertising	Facebook, Twitter	80,143	4,777	6%

Source: Ofcom estimates based on data from IAB UK/PwC Digital Adspend Study, PwC Global Entertainment and Media Outlook 2020-2024, <http://www.pwc.com/outlook>, Ampere Analysis, Enders Analysis, company reports and public filings. Figures are indicative only, with overlapping categories, and as such, data presented

may differ from other industry sources due to differences in sectoral definition or other methodological differences.

Figure 4.9 below illustrates how the global pandemic impacted different sectors. Gaming had strong growth, as did Entertainment and Social Media (though slower than the previous year), while other sectors more dependent on advertising had far slower growth or decline.

Figure 4.9: Global and UK revenue year-on-year change for 2019-20 compared to 2018-19, by online sector (excluding e-commerce)

Sector	Global		UK	
	2020 y-o-y change	2019 y-o-y change	2020 y-o-y change	2019 y-o-y change
Search	-1%	14%	6%	13%
Directories	-4%	8%	-29%	-3%
Entertainment and AV media	12%	23%	18%	22%
Gaming	10%	11%	11%	9%
News	7%	6%	-4%	4%
Social media and messaging	16%	33%	18%	22%

Source: Ofcom estimates based on data from IAB UK/PwC Digital Adspend Study, PwC Global Entertainment and Media Outlook: 2020-2024, <http://www.pwc.com/outlook>, Ampere Analysis, Enders Analysis, company reports and public filings. Pre-2020 UK figures adjusted for CPI at 2020 prices by Ofcom. Figures are indicative only, with overlapping categories – and, as such, data presented may differ from other industry sources due to differences in sectoral definition or other methodological differences.

Search sector

More than 85% of UK search revenue is generated by Google

Search advertising continues to provide the largest proportion of online advertising revenue, at 52% of total advertising spend. In 2020, UK search advertising revenue was £8,369m, a 6% year-on-year increase.⁴³¹

The search sector is characterised by large players – Google, Bing (Microsoft) and Yahoo – but Google remains far ahead, with an 85%+ share of the UK search advertising market in 2020. Bing’s

⁴³¹ IAB, UK Digital Adspend Study 2020

share of search revenues has not been reflected in a significant change in its share of revenue, which remained at around 2% in 2020.⁴³²

Sponsored listings on e-commerce sites are emerging as a competitor to traditional search

In the past few years, advertisers have been reallocating some of their advertising budgets from traditional search engines to e-commerce services such as Amazon.⁴³³ Sponsored listings in the results of e-commerce services' search functions have the advantage of directing customers to the point of sale within the service, using fewer steps than traditional search, and encouraging conversion into sales.

Amazon does not provide breakdowns specifically for sponsored listings within its revenue figures. Its reported global 'Other' revenues consist primarily of sales of advertising services and include both sponsored search listings and display. The latter is an area in which the company has been expanding in recent years,⁴³⁴ but it probably still makes up a much smaller proportion of revenue than sponsored search. As such, changes in Amazon's 'Other' revenues are probably driven mostly by those sponsored listings.

In 2020 the overall 'Other' figure grew 52% year on year to \$21,453m in nominal terms. In the first half of the year alone it was up 42% (\$8,124m) compared to the same period in 2019.⁴³⁵ In contrast, Google Search global advertising revenues were flat (<1% decline) year on year in the first six months of 2020, at \$45,821m.

Ofcom estimates that Amazon's UK search advertising revenue in 2020 was just under 10% of the UK search advertising market, making it the largest platform for search ad spend after Google.⁴³⁶

Digital voice assistants and smart speakers are also an emerging area in the search advertising sector; there are monetisation opportunities for voice-activated e-commerce search. Voice searches conducted on mobile phones allow for paid search advertising in the results of a query, as for any search engine. The full results may be displayed on the screen, or the voice assistant will read out just the first result (as do smart speakers, which do not have the screen interface). This has implications for the pricing and prominence of sponsored listings. Amazon's Alexa is integrated into its smart devices; customers can ask Alexa to add an item to their basket and then check out, or hear suggested items based on their purchase history, all actioned just by voice.

⁴³² Ofcom modelling using IAB UK/PwC Digital Adspend Study 2020 (Search) and Alphabet and Microsoft financial reporting

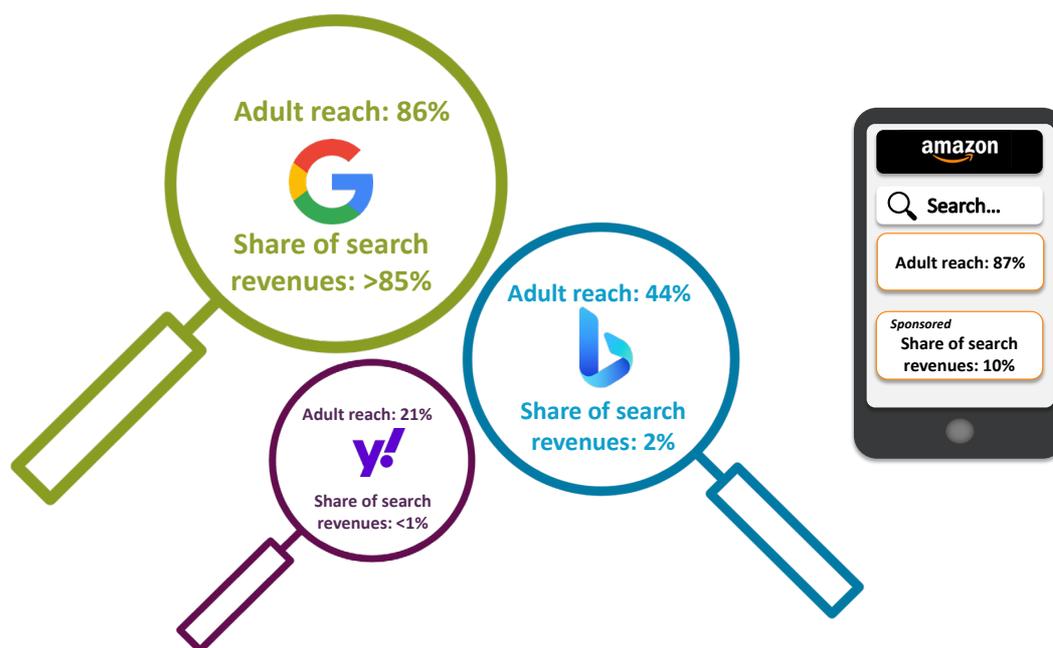
⁴³³ CNBC, [Some advertisers are moving half of their search budget from Google to Amazon, say ad industry sources](#), 9 October 2019

⁴³⁴ Digiday, ['Increasingly an awareness platform': Amazon advertising is moving beyond search](#), 3 February 2020

⁴³⁵ Amazon, [Form 10-Q \(Q2 2020\)](#), 31 July 2020

⁴³⁶ Ofcom estimates, using Amazon annual reports, IAB UK/PwC Digital Adspend Study 2020 and 2019 figures and Ofcom assumptions

Figure 4.10: The top search sites and search-enabled e-commerce site in the UK, by online adult reach and UK search revenue share: Google, Microsoft Bing, Yahoo, and Amazon



Source: UK online adult reach: Comscore MMX Multi-Platform, Age: 18+, September 2020, UK; share of search revenues: Ofcom estimates using data from IAB UK/PwC Digital Adspend Study 2020 and publicly available company reports.

E-commerce

The e-commerce sector boomed in 2020

The growth of the e-commerce sector accelerated in 2020. Amazon and eBay together comprised approximately 40% of UK e-commerce sales at the end of 2019, according to one study.⁴³⁷ They both reported much larger increases in global revenues in 2020 than in the previous year. Amazon's global revenue increased by 40% year on year to \$197bn, compared to its 15% year-on-year increase to 2019. eBay's revenue increased 23% year on year to \$9.3bn, compared to a 2% increase the previous year.⁴³⁸

Online UK retail sales reached £113bn in 2020

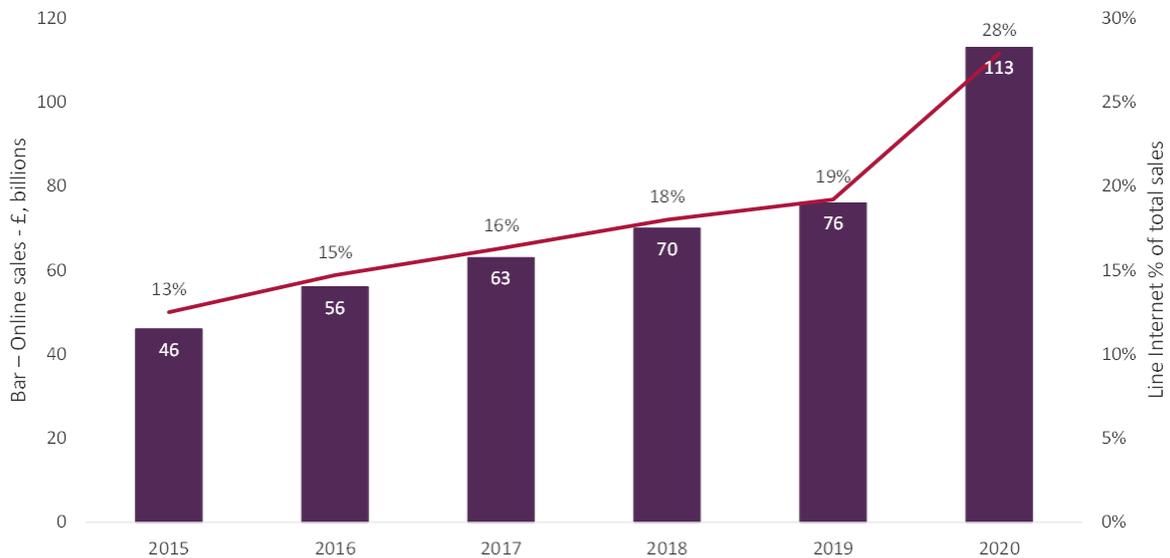
In the UK, online sales increased an estimated 48%, year on year reaching £112.7bn in revenue, compared to £76.1bn in 2019. Online accounted for approximately 35% of total retail spend during the spring 2020 lockdown, compared to 20% before, and remained high through 2020 due to a combination of physical shops being closed or less used and consumers reallocating spending to

⁴³⁷ Research by Edge by Ascential, as variously reported, including: Tamebay, [UK ecommerce market dominated by Amazon](#), 11 December 2019

⁴³⁸ Company public reporting: Amazon's 'Online stores' segment; eBay's 'Net transaction revenues' segment

online which would otherwise have been spent on travel and hospitality. In December 2020, online accounted for approximately 30% of total retail spend.⁴³⁹

Figure 4.11: Estimated online retail sales (consumer spend) and online % share of total sales



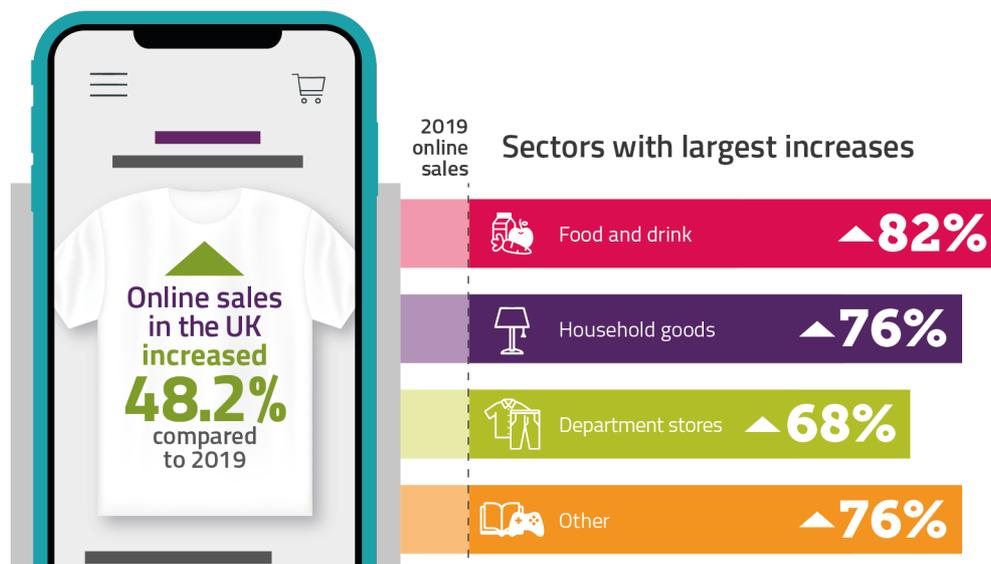
Source: Ofcom estimates based on ONS seasonally adjusted data. Pre-2020 figures have been adjusted for CPI at 2020 prices by Ofcom.

For retailers with both a physical and online presence, the largest segment increases within online retail were in food and drink stores (82%), household goods (76%), department stores (68%), and other (non-clothing) stores (76%). Online clothing sales experienced a smaller but still notable increase of 25%.⁴⁴⁰

⁴³⁹ ONS, [Retail sales, Great Britain: December 2020](#), 22 January 2021. ONS figures are seasonally adjusted

⁴⁴⁰ Ofcom estimates based on ONS seasonally-adjusted data. Pre-2020 figures are adjusted for CPI at 2020 prices by Ofcom. For non-store retailers the year on year increase was 35%. 'Non-store' retailing refers to those without a physical presence (selling goods of any type). It includes teleshopping and market stalls, but is predominantly online. In December 2020, 80% of non-store retailing was online (ONS, [Retail sales, Great Britain: December 2020](#), 22 January 2021)

Figure 4.12: Percentage year-on-year increase of UK online retail sales: 2020



Source: The total figure is for all online retailing. The sector increases are for retailers that have both physical and online presence. ‘Other’ refers to non-clothing stores including bookstores, chemists and jewellers. Ofcom estimates based on ONS seasonally-adjusted data. Pre-2020 figures are adjusted for CPI at 2020 prices by Ofcom.

Fluctuations in consumer sales across some segments coincided with easing and enforcing of lockdown restrictions throughout 2020

Across the majority of segments, online sales increased from February to March 2020 as people started to voluntarily spend more time at home, and then entered the spring 2020 lockdown in late March. In particular, online sales of products from non-specialist stores (such as department stores) and household goods stores increased from approximately £830m in February to £1,520m, an 83% month-on-month increase.⁴⁴¹ This is probably due to a surge in interest in home improvements resulting from increased time spent at home. The online share of total retail spend on household goods rose from 17% in Q1 2020 to 42% in Q2 2020.⁴⁴²

However, some online shopping categories were negatively impacted in the early months of lockdown. Although there were a fifth more online sales of clothing and footwear in February 2020 than in the previous year, sales in this segment in April were approximately £615m, down by 27% compared to March 2020, and by 17% compared to April 2019. Recovery began in May (2% up year on year), and in June and from September to the end of 2020 sales exceeded £1bn each month. Sales in July and August dipped slightly, perhaps reflecting the reopening of physical stores as lockdown eased, but were still over £900m.⁴⁴³ Despite some monthly fluctuations, online spend across all segments in 2020 remained higher than in the previous year. This can be partially

⁴⁴¹ Ofcom-rounded estimates based on ONS seasonally-adjusted data

⁴⁴² Enders Analysis, *Surging online retail: record growth during lockdown*, 2 September 2020

⁴⁴³ All calculations are Ofcom-rounded estimates based on ONS seasonally-adjusted

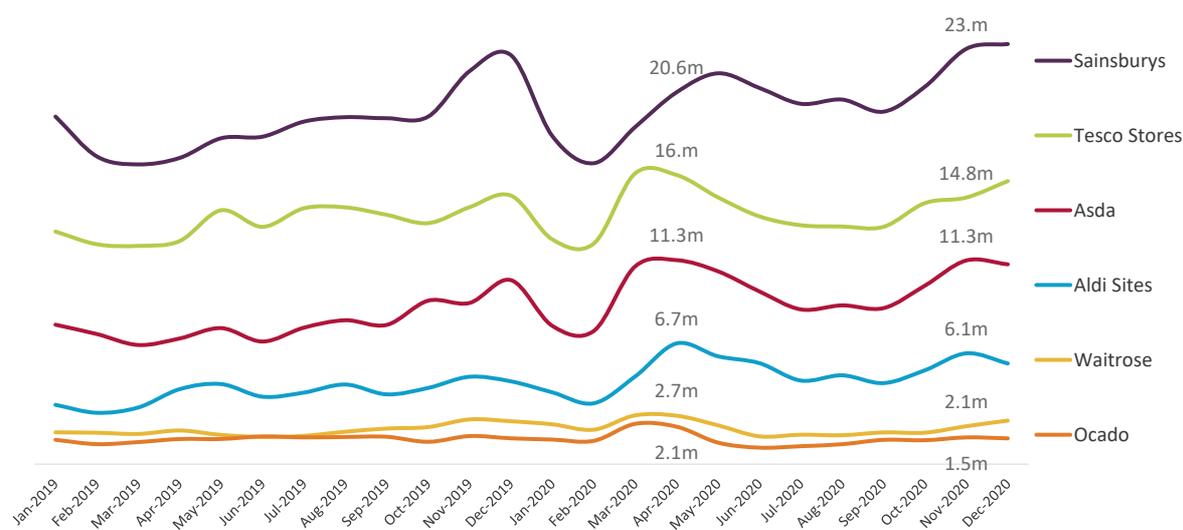
attributed to people’s continuing hesitancy about being in public areas but may also indicate a permanent shift in consumer behaviour, influenced by their confidence in online shopping and its convenience.

Sainsbury’s and Just Eat led the UK online grocery and food delivery markets

Online grocery retailers showed significant growth during the spring 2020 lockdown: online grocery sales in April 2020 were 52% higher than in March. In early 2020, 5% of UK grocery market sales was done online, and by December 2020 this had increased to 11%.⁴⁴⁴ The easing of restrictions from June to July 2020 resulted in online grocery stores’ revenues reducing by less than £3m (< 1%), suggesting that the behavioural changes resulting from lockdown may to some extent have endured.

Sainsbury’s reported rapid sales during the spring 2020 lockdown period, helped by the roll-out of more online shopping capacity. It reported that its online deliveries had increased from 7% of the chain's grocery business to 17%, while click-and-collect sales had risen 13-fold.⁴⁴⁵ Tesco was the second-highest reaching online grocery service, reaching 15.7 million adults in December 2020, followed by Asda with 11.1 million adult reach.⁴⁴⁶

Figure 4.13: UK adult reach of selected grocery delivery sites and apps: January 2019 - December 2020



Source: Comscore MMX Multi-Platform, Age: 18+, Jan - Dec 2020, UK. Note: (for monthly reach figures to select grocery sites see the [Online Nation interactive report](#))

Note: Custom list of entities defined by Ofcom.

Lockdown restrictions in 2020 resulted in people in the UK being unable to visit restaurants and food venues, although some catering businesses were still able to supply food as takeaways and

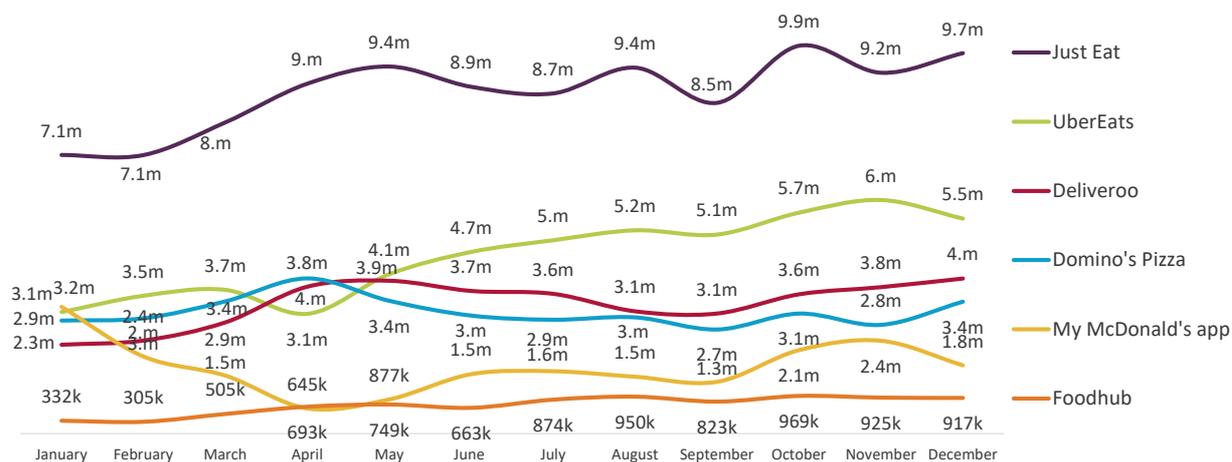
⁴⁴⁴ ONS, [Retail sales, Great Britain: December 2020](#), 22 January 2021

⁴⁴⁵ J Sainsbury plc, [First quarter trading statement](#), 1 July 2020

⁴⁴⁶ Comscore MMX Multi-Platform, Age: 18+, December 2020, UK

deliveries. Just Eat was the most popular online food delivery service visited by UK adults in 2020; it reported that its UK orders were 58% higher in the last three months of 2020 compared to the same period in 2019.⁴⁴⁷ Its annual UK revenue (the largest of its global markets) increased by 45% in real terms to £652m (€725m) in 2020.⁴⁴⁸

Figure 4.14: UK adult reach of selected take-out delivery sites and apps: January - December 2020



Source: Comscore MMX Multi-Platform, Age: 18+, Jan-Dec 2020, UK

Note: custom defined list by Ofcom

⁴⁴⁷ Just Eat Takeaway.com, [Q4 2020 trading update](#), 13 Jan 2021

⁴⁴⁸ Just Eat Takeaway.com, [Annual Report, Full Year 2020](#), 10 March 2021. Reported figure converted from Euros to GBP by Ofcom, and growth rate calculated after adjusting the 2019 figure for CPI

Case study: Etsy

Etsy, a vintage and crafts e-commerce online marketplace which includes the 2019-acquired musical instruments marketplace Reverb, had significant growth in revenue in 2020. By the end of 2020 Etsy had 4.4 million active sellers and 81.9 million active buyers globally. Etsy’s sellers generated \$10.3bn in 2020, with Etsy taking \$1.7bn in revenue, an increase of \$907m compared to 2019 (\$818m).⁵⁵ In the UK, its reach grew significantly as the country went into lockdown, and its surge continued throughout 2020, reaching 12.5 million adults in December 2020, up by 81% compared to December 2019 (6.9m).⁴⁴⁹ Etsy’s growth in 2020 was partly attributed to it urging its sellers to start making face coverings – these made up around 11% of sales in the third quarter of the financial year, selling roughly 24 million.⁵⁷⁴⁵⁰ As restrictions begin to ease both in the UK and globally, it remains to be seen whether Etsy’s growth will start to fade. Amazon is also focusing on its *Amazon: Handmade* business, increasing competitive pressure on Etsy. Etsy in June 2021 acquired UK-based fashion resale shopping app Depop for \$1.6 billion. 90 percent of Depop’s users are under 26 years old resulting in Etsy broadening its audience reach as Etsy’s own users are predominantly millennial.⁴⁵¹

Figure 4.15: Etsy UK adult reach, by year



Source: Comscore MMX Multi-Platform, Age: 18+, Jan-Dec 2019 and 2020 and Jan-Mar 2021, UK

⁴⁴⁹ Comscore MMX Multi-Platform, Etsy, Age: 18+, Jan-Dec 2020 and 2021, UK

⁴⁵⁰ Etsy, [4.7.20 Update: Mobilizing our Community in Times of Need](#), 7 April 2020

⁴⁵¹ Etsy Investor relations, [Etsy to acquire global fashion resale marketplace Depop](#), 2 June 2021

Case study: Boohoo

Boohoo is one of several online fashion retailers which benefited from the e-commerce boom during the pandemic. In the UK, its largest market, revenues increased by 37%.⁴⁵² In May 2021 Boohoo reported that its revenue had increased from £857m in FY19 to £1,745m in FY20, and that its active customer base had increased from 11 million to 18 million over the same period.⁴⁵³

Boohoo adjusted its social media marketing strategy as people began to stay at home. Between April 2020 and May 2021 its hashtag #boohoointhehouse was used in more than 16,600 posts on Instagram (it also appears on Facebook, Twitter and TikTok), directing customers towards loungewear during the pandemic, as well as to live content such as beauty tutorials and interviews with influencers.⁴⁵⁴ This marketing strategy was used to convert social media users into customers by driving engagement and building brand awareness.

In recent years Boohoo has made several online-based business acquisitions of high street brands but without their physical stores, where these existed. These included fast-fashion retailers Pretty Little Thing (PLT) (2016), Nasty Gal (2017) and Miss Pap (2019), and high-end high street stores Coast and Karen Millen (2019). Several high street stores went into administration during the Covid-19 pandemic in 2020. Of these, Boohoo acquired Oasis and Warehouse in June 2020, Debenhams in January 2021 (perhaps to target a wider demographic than its typically young customer base) and Dorothy Perkins, Wallis and Burton in February 2021.

Online retailers are providing multiple payment options to encourage sales

In order to maximise the flexibility and convenience of online shopping and thereby increase sales, some retailers are offering alternative payment options: buy-now-pay-later (BNPL) services such as those offered by Klarna and Laybuy.

BNPL are similar to store credit schemes, as they permit customers to purchase goods on credit and pay for them after a set interest-free period, or in instalments.⁴⁵⁵ In February 2020 Klarna reported that it was being used by over 5,000 merchants in the UK, including 500 brands offering it in-store.⁴⁵⁶ In March 2021 it was reported that the number of partnered merchants may now be as high as 10,000.⁴⁵⁷ The UK adult reach of some online BNPL services increased during the second half of 2020 (see figure 4.16 below).

⁴⁵² Boohoo Group plc, [Interim results for the six months ended 31 August 2020](#), 30 September 2020

⁴⁵³ Boohoo Group plc, [Results for the twelve months ended 8 February 2021](#), 5 May 2021

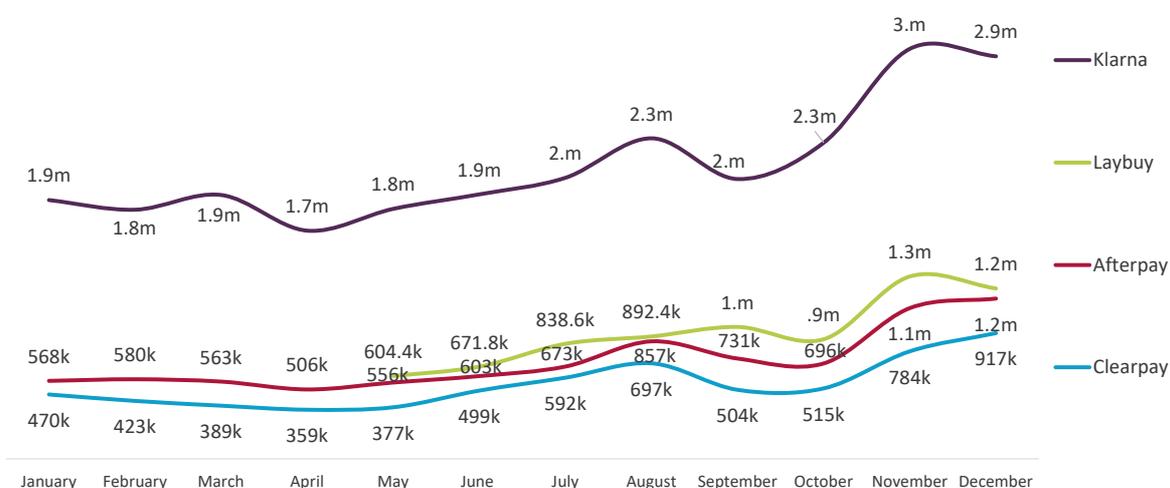
⁴⁵⁴ Boohoo.com, [#boohoointhehouse](#), accessed 28 April 2021

⁴⁵⁵ Money advice service, [What are buy now pay later purchases?](#), accessed 6 May 2021

⁴⁵⁶ Klarna.com, [Klarna UK hits 7 million customers and 1.6 million app downloads](#), 26 February 2020

⁴⁵⁷ Drapers, [The Klarna effect](#), 8 March 2021

Figure 4.16: UK adult reach of selected buy-now-pay-later sites and apps: Jan-Dec 2020



Source: Comscore MMX Multi-Platform, Age: 18+, Jan - Dec 2020, UK

Note: Custom list of entities defined by Ofcom.

Directories sector

Online directories' UK classified advertising revenue decreased by 30% in 2020 to just under £1bn

Directories are online services for listings of information on products and services. The listings on these services are also known as classified advertising. Specialist directories (horizontal) for cars, jobs, and housing directories such as Autotrader, Reed and Rightmove are the best-known examples, but there are also more generalist (vertical) platforms such as Yell and Gumtree. The majority of the revenue generated by these online services are from taking a commission on the sale of the listings, or payment on a per-listing or subscription basis. These are considered to be online advertising revenues.

According to Enders Analysis research, online classified advertising spend overtook that of print formats (e.g. physical newspapers and magazines) in 2014. The online share (such as through online newspapers, specialist digital magazines and directory sites) has continued to grow, and in 2020 was 85%. In addition, online directories (as opposed to other sites or media offering classified advertising such as online newspapers) have increasingly taken more of the online classified revenues; in 2020 over 90%.⁴⁵⁸

As noted earlier in this chapter, changes in consumer behaviour in 2020, and the general decline in the economy, affected several of the sectors that are key to the directories market. Online classified advertising revenues fell from £1,411m in 2019 to £976m in 2020, a drop of 31%. This then affected the directories sector, which we now estimate to be worth around £911m, down from £1,283m, a slightly smaller but still significant drop of about 29%. However, before the pandemic, overall online

⁴⁵⁸ Ofcom modelling based on data from Enders Analysis.

classified revenue had been in decline since 2016, down by an average of 2% per year between 2016 and 2019.⁴⁵⁹ This might suggest that the pandemic has to some extent accelerated a structural decline already taking place.

Figure 4.17: Estimated online directories’ revenues in the UK

	2015	2016	2017	2018	2019	2020
Online directories’ UK 2020 revenue	£1,168m	£1,374m	£1,340m	£1,327m	£1,283m	£911m

Source: Ofcom estimates based on data from Enders Analysis and IAB UK/PwC Digital Adspend Study. Pre-2020 figures have been adjusted for CPI at 2020 prices by Ofcom.

New entrants with different business models were already affecting the directories market before the pandemic, particularly in the horizontals market, which competes more closely with social media platforms’ offerings such as Facebook Marketplace, where people can list products and services free of charge. eBay and Adevinta (a directories company in Norway) agreed a deal in July 2020, merging Gumtree with Shpock in the UK⁴⁶⁰ – this transaction is currently being considered by the Competition and Markets Authority (CMA).⁴⁶¹

Entertainment and audio-visual media

In total, online entertainment and audio-visual media generated £5.6bn in UK revenue in 2020

This sector includes free (advertising-funded) and paid-for video content, audio/music (including podcasts and online radio) and digital consumer magazines (online news is considered as a separate industry sector). The video and audio sectors grew overall in 2020, although the scale of growth differed by sub-sector. Digital consumer magazines revenues were flat (a 2% decline) as a slight increase in circulation revenue failed to make up for the decline in non-video display advertising which has affected this sector.⁴⁶² Fuller analysis of the video and audio markets of 2020 will be provided in Ofcom’s [Media Nations report](#) later in 2021.

Paid-for video (figure 4.18) includes subscription video-on-demand (SVoD) revenue, which increased by 27%. This was driven by subscriber growth, the introduction of new services such as Disney+, and price increases for some services such as Netflix and Sky’s Now. However, this was actually a slowdown compared to 2019, when SVoD revenues increased by 30%.

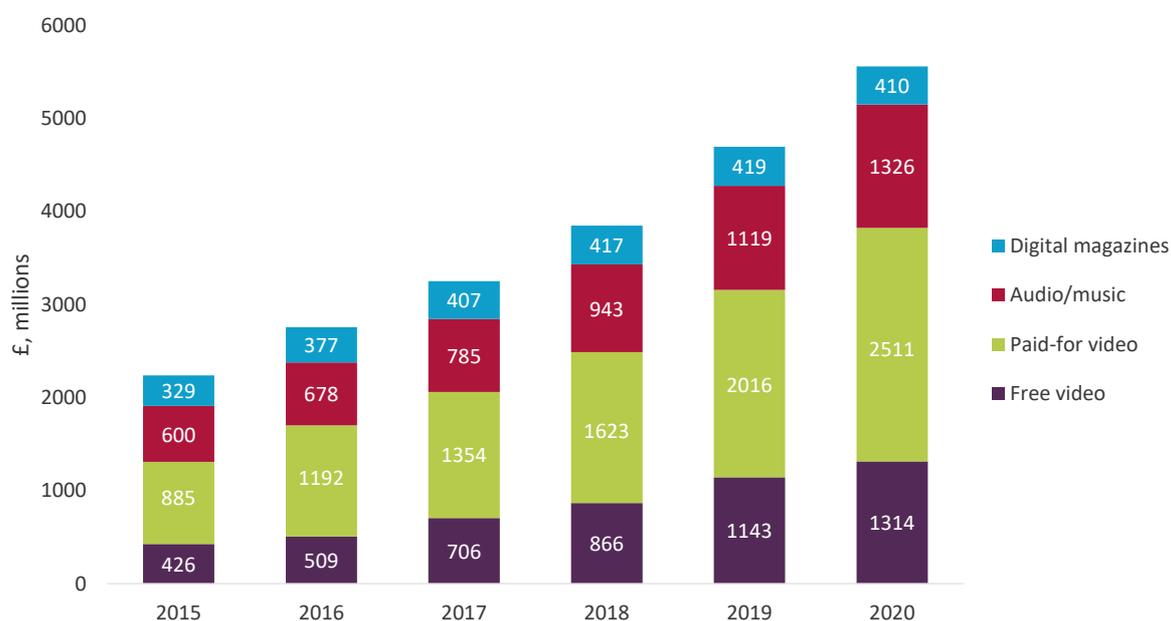
⁴⁵⁹ IAB UK/PwC Digital Adspend Study 2020 (classified advertising figures) and Ofcom estimates (online directories); 2019 figures have been adjusted for CPI at 2020 prices by Ofcom

⁴⁶⁰ Company press releases: eBay, [Adevinta to acquire eBay classifieds group](#), 21 July 2020, and Adevinta, [Adevinta signs agreement to acquire eBay classified group](#), 21 July 2020

⁴⁶¹ Gov.uk, [Adevinta/eBay merger enquiry](#), accessed 14 May 2021

⁴⁶² For the splits of revenues, see the [interactive report](#). Circulation revenues from PwC Global Entertainment and Media Outlook: 2020-2024, <http://www.pwc.com/outlook> - these are grouped under ‘subscription’ in the interactive report but also include single sales of online magazines; advertising revenues from AA/WARC Expenditure Report

Figure 4.18: Estimated shares of UK online entertainment and audio-visual media revenues, by media type (£m)



Source: Ofcom estimates based on data from Ampere Analysis, IAB UK/PwC Digital Adspend Study 2020 and PwC Global Entertainment and Media Outlook: 2020-2024, <http://www.pwc.com/outlook>. Pre-2020 figures have been adjusted for CPI at 2020 prices by Ofcom. Some historical online free (ad-funded) video and subscription video on demand figures have been restated compared to previously published figures. This is due to further information from companies in the advertising market and updated context from the largest OTT players that was previously not available.

87% of all online audio revenues now come from subscriptions to streaming services

Online audio streaming drove an overall 19% increase in revenue in the online audio sector to £1.3bn.⁴⁶³ Audio subscription streaming alone increased by 23%, and accounts for around 87% of all online audio revenues (up from 84% in 2019).⁴⁶⁴

Spotify recorded strong subscription growth – its global Premium revenues increased by 17% to €7,135m in nominal terms.⁴⁶⁵ The UK is Spotify’s largest market behind the United States, in 2020 accounting for 11% of global revenues (subscription and advertising-based revenues combined), a share which is unchanged since public reporting began in 2018.

However, Spotify’s global Premium subscription average revenue per user in 2020 declined 9% year on year. Perhaps as a way to boost revenue in the light of this change, in April 2021 Spotify announced that in the UK it would increase the prices of three of its four subscription plans for the

⁴⁶³ The online audio sector includes podcasts, audio/music streaming and online radio applications, and download-to-own digital sales but not e-commerce sales of physical copies

⁴⁶⁴ Ofcom estimates based on data from IAB UK/PwC Digital Adspend Study and PwC Global Entertainment and Media Outlook: 2020-2024, <http://www.pwc.com/outlook> (Digital music streaming consumer). Pre-2020 figures have been adjusted for CPI at 2020 prices by Ofcom

⁴⁶⁵ Their revenues from the ad-supported service also increased by 10% to €745m

first time, although the individual Premium account is to remain at its current price of £9.99 per month.⁴⁶⁶

Podcasting and non-music audio is becoming a more monetisable medium

Podcast advertising revenues in the UK grew 42% to £33m.⁴⁶⁷ This is still a young sector, representing just under a third of online audio advertising revenues (the rest being from ad-supported tiers of music streaming services and online radio). However, the strong growth suggests podcasts are increasingly part of marketers' budget plans. This may reflect global trends: in 2019 in the US, advertising spend on podcasts through annual budgets (rather than more ad-hoc spend) had increased by 23 percentage points to just 47% of total spend on podcast advertising.⁴⁶⁸

Podcasts may also boost subscription revenues for the online audio sub-sector in coming years as it moves beyond advertising: both Apple and Spotify launched podcast subscription platforms in spring 2021. Creators using either service will be able to mark content as free or subscriber-only and will be able to set the cost of subscriptions to their content. Apple will take 30% of revenue in the first year, halving this share in the second (in line with other streaming and subscription products).⁴⁶⁹ Spotify plans to charge a 5% fee to podcast creators only from 2023.⁴⁷⁰

As a further indication of the value increasingly attributed to audio content, since the launch of audio-only social media app Clubhouse, Twitter, Facebook and Telegram have released rival products (see Consumer chapter case study: [Clubhouse](#)).

Gaming

The online gaming sector has seen steady growth

Online gaming⁴⁷¹ revenue in 2020 grew roughly in line with the previous year; 11% overall year-on-year UK revenue growth, to an estimated £4,643m, compared to 9% growth in the year to 2019.⁴⁷² Ninety per cent of social/casual gaming revenue is from app-based play; this has been stable since 2017, demonstrating the prevalence of tailor-made formats for mobile social gaming compared to browsers.

⁴⁶⁶ Some plans in the US and EU will also increase in price

⁴⁶⁷ IAB UK/PwC Digital Adspend Study 2020. Pre-2020 figures have been adjusted for CPI at 2020 prices by Ofcom.

⁴⁶⁸ IAB, [US Podcast Advertising Revenue Study](#), 10 July 2020

⁴⁶⁹ Apple, [Apple leads the next chapter of podcasting](#), 20 April 2021

⁴⁷⁰ Spotify, [Spotify Ushers in New Era of Podcast Monetization](#), 27 April 2021

⁴⁷¹ Revenues excluding online sales of hardware such as consoles and physical games and including only static advertising within games (but not dynamic display advertisements within games or in the app or browser)

⁴⁷² Ofcom estimates based on PwC Global Entertainment and Media Outlook: 2020-2024, <http://www.pwc.com/outlook>. Pre-2020 figures have been adjusted for CPI at 2020 prices by Ofcom

Figure 4.19: Estimated online gaming revenues in the UK, by revenue stream



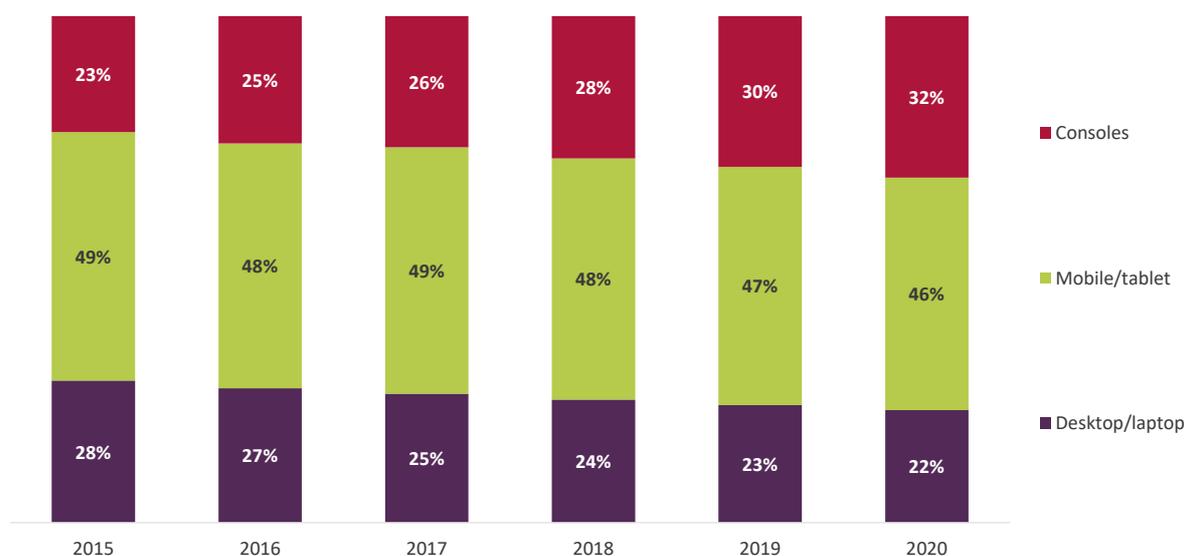
Source: Ofcom estimates based on data from PwC Global Entertainment and Media Outlook: 2020-2024, <http://www.pwc.com/outlook>. Pre-2020 figures have been adjusted for CPI at 2020 prices by Ofcom. Paid-for revenues include both one-off purchases of games or purchases within games and subscription revenues (for services such as Playstation Plus and Xbox All Access). Traditional gaming formats include online transactional gaming conducted through PCs and consoles.

The greatest share of online gaming revenues in 2020 came from mobile devices

The greatest share of online gaming revenues in 2020 came from smartphone or tablet devices (46%). This proportion has changed slightly over the past few years in favour of console online gaming, which in 2015 accounted for less than a quarter of the revenue (with mobile at around half) but is now just under a third.⁴⁷³

⁴⁷³ Ofcom calculations based on data from PwC Global Entertainment and Media Outlook: 2020-2024, <http://www.pwc.com/outlook>

Figure 4.20: Estimated shares of online gaming revenues in the UK, by device



Source: Ofcom estimates based on data from PwC Global Entertainment and Media Outlook 2020-2024, <http://www.pwc.com/outlook>. In-gaming advertising revenue (static advertising) is assumed to be split evenly across the device types. All casual gaming (browser and app-based) is assumed to be via mobile/tablet, as the majority of games are app-based. Browser-based games represented 7% (£132m) of total casual play revenues in 2020 and therefore the amount played on desktop/laptops is likely to be relatively small.

New consoles and cloud-based subscription gaming could change the future landscape

New generations of consoles launched in November 2020, such as the PlayStation 5 and Xbox Series X/S, may boost the online gaming market in 2021. Alongside the launch of the new Xbox, Microsoft refreshed its subscription service Xbox All Access. PlayStation Plus was the most popular paid-for gaming subscription in the UK with 3 million subscribers by the end of 2020, followed by Xbox Live Gold (1.9 million), Xbox Games Pass (all version) (1.7 million) and Nintendo Switch Online (1.3 million).⁴⁷⁴

Cloud gaming services remain a small part of online gaming. Sony, Nvidia, Google and Microsoft do not provide revenue breakdowns for their cloud gaming segments (PlayStation Now, GeForce Now, Stadia and Xbox cloud gaming respectively), but user numbers are likely to remain low compared to traditional gaming options. PlayStation Now is the longest established, having been available in the UK since 2015. In April 2020 it had 2.2 million subscribers globally, compared to 45 million subscribers (June 2020) to the PlayStation Plus service.⁴⁷⁵

Microsoft's global gaming revenue in the year to June 2020 increased 2% (\$189m) overall in nominal terms, with an 11% increase in content and services (including subscriptions and games such as *Minecraft* as well as the cloud services) just mitigating a 31% decline in Xbox hardware. Content and services continued to show strong growth (35%) in the six months ending December 2020 compared

⁴⁷⁴ Ampere Games - Subscription

⁴⁷⁵ Sony, [Corporate Report 2020](#), 28 April 2021

to the previous year, supplemented by a 51% increase in Xbox hardware revenue following the launch of the new console. This suggests that apart from big console releases, online gaming services (such as game downloads, subscriptions and cloud services) are a consistent driver of growth in this segment.

Other subscription services are seeking to challenge these incumbents but have yet to take a significant market share. Apple does not report breakdowns of revenue or subscriber numbers for its Arcade subscription service but continues to invest in it: in April 2021 Apple expanded its catalogue of games to around 180 titles, including original games and traditional and popular games from the App Store.⁴⁷⁶

Amazon launched its cloud gaming proposition, Luna, in the US in autumn 2020 (yet to launch in the UK) and complements existing assets such as the gaming-dominated streaming platform Twitch, Prime and the e-commerce platform through which Amazon can sell the Alexa-ready controllers.⁴⁷⁷

As of April 2021, Xbox Game Pass offers the most expensive subscription service from a console brand, costing almost £96 annually for a single device (the more expensive Ultimate option includes access to the cloud gaming offering). Stadia is the most expensive cloud gaming subscription, costing almost £108 a year, reflecting the slightly higher price point for cloud services.

Figure 4:21: Gaming and cloud gaming subscription fees

	Subscription type	Subscription cost
Online play and download		
Nintendo Switch Online	Per month	£3.49
	Annual	£17.99
PlayStation Plus	Per month	£6.99
	Annual	£49.99
Xbox Game pass	Ultimate (any device), per month	£10.99
	PC, per month	£7.99
	Per month	£7.99
Apple Arcade	Per month	£4.99
Cloud gaming		
PlayStation Now	Per month	£8.99

⁴⁷⁶ Apple.com, [Apple Arcade launches its biggest expansion yet](#), 2 April 2021

⁴⁷⁷ Analysys Mason, [Amazon Luna is a strong cloud gaming proposition that may provide partnership opportunities for operators](#), 13 October 2020

	Annual	£49.99
Nvidia GeForce Now	Per month	£8.99
	Annual	£89.99
Google Stadia	Per month	£8.99

Source: Gaming operators' websites on 5 May 2021. Some platforms offer 3-month subscription packages. Xbox Game Pass Ultimate includes access to the cloud gaming offering, Apple Arcade is free for three months with a newly-purchased device. It can also be bundled with other services such as Apple Music and Apple TV+ from £14.95 per month.

Further discussion of the gaming sector can be found in [Consumer](#) and [Children](#) chapters).

News and information

Advertising remains the largest revenue stream for news providers, but publishers are exploring other sources

Online advertising remains the largest source of revenue for online news providers, but in the UK in 2020 there was a 10% decline in advertising spend on online newsbrands and broadcasters' news sites. Nevertheless, this decline in advertising spend is much less than the 38% decline for print newsbrands. Online accounted for 41% of total newsbrand advertising revenue in 2020, up from 32% in 2019 and 29% in 2018).⁴⁷⁸

Increasingly, publishers are seeking to build online revenues from sources other than advertising. The majority (53%) of digital publishers had positive revenue growth in Q3 2020, more than double that of the previous quarter (22%) - this growth was driven in part by a significant rise in subscription revenue, which increased by 51.3% from Q3 2019 to Q3 2020.⁴⁷⁹ The donations model remains comparatively small in the UK, with the Guardian the best-known example, taking a reported 42% of all the donations to newsbrands in the UK.⁴⁸⁰ Paying subscribers to UK online newspapers increased by an estimated 800,000, reaching nearly three million total paying subscribers to seven online newspapers in 2020. The Telegraph, The Guardian and Financial Times had the largest gains of paying subscribers, while Times, Economist, Daily Mail and Tortoise Media all increased subscriber memberships as well.⁴⁸¹ As of November 2020, The Guardian had 900,000 digital subscribers and supporters – up by 268,000, or 43%, in 2020, which reportedly was driven by major global events such as its coverage of news events such as the pandemic, Black Lives Matter and the US election.⁴⁸²

⁴⁷⁸ Ofcom estimates based on AA/WARC Expenditure Reports for 2018, 2019 and 2020

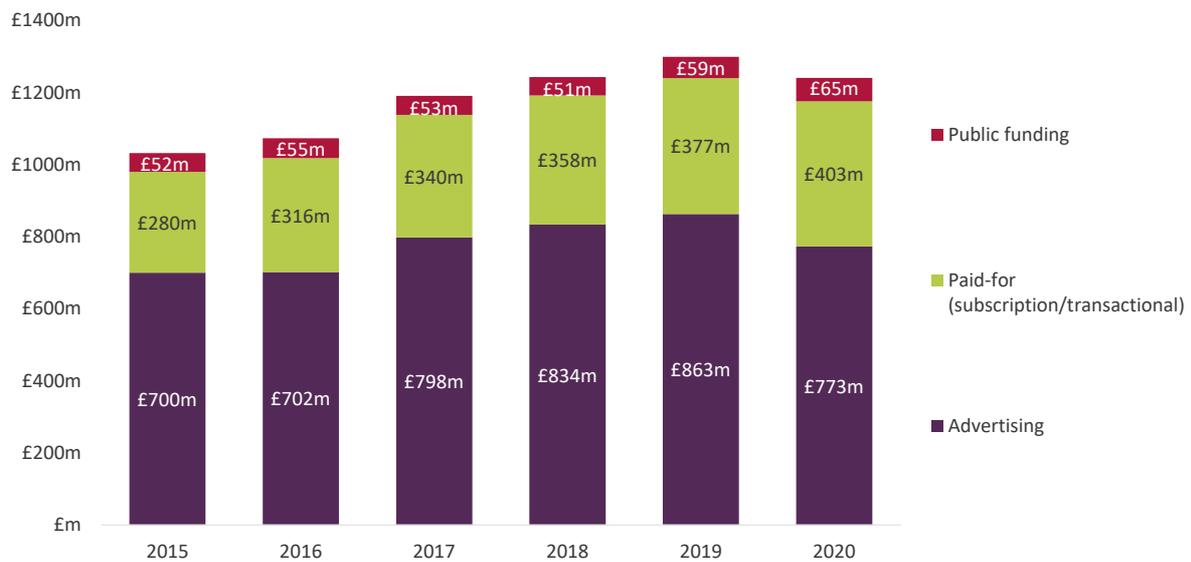
⁴⁷⁹ UK AOP, [AOP and Deloitte report reveals 78% of publishers are prioritising ad revenue growth](#), 9 February 2021

⁴⁸⁰ Reuters Institute, [Digital News Report 2020](#), 16 June 2020

⁴⁸¹ Enders Analysis, Publishing in the pandemic: Print Squeeze, digital boost, 17 May 2021. P.9

⁴⁸² Press Gazette, [Guardian claims a record 1m paying readers after surge in regular contributions and subscriptions](#), 17 December 2020

Figure 4.22: Estimated revenues for online news (newsbrands and broadcasters) in the UK



Source: Ofcom estimates based on advertising data from AA/WARC Expenditure Report, subscription and other transactional revenue from PwC Global Entertainment and Media Outlook 2020-2024, <http://www.pwc.com/outlook>, and public funding based on Ofcom estimates. Pre-2020 figures have been adjusted for CPI at 2020 prices by Ofcom. Donations revenues are not included as they are rarely disclosed and are likely to be a small proportion of the revenue mix at the present time. Other transactional includes other revenues from circulation of news content that is not purchased as part of a subscription (for example, one-off payments and micropayments).

The commercial relationship between news providers and online intermediaries appears to be evolving

Online news providers get significant amounts of their traffic from intermediary platforms, including social media platforms and news aggregators. However, there have been increasing levels of scrutiny of the relationship between news publishers and such platforms in relation to the collection of user data and the sharing of advertising revenue, recognising that both platforms and content producers seek to benefit from user engagement.

In October 2020, Google launched a three-year \$1bn global fund for partnerships with news publishers.⁴⁸³ The product at the heart of the fund, an app called Google News Showcase, will use a licensing system to pay publishers for their content. The newsbrands will have editorial control of their dedicated space on the app, and readers will be able to click through from the Google product to the newsbrands' own sites and apps, even to content usually behind a paywall. UK publishers including Reach, National World, the Telegraph, the Financial Times and the Evening Standard have joined this initiative.⁴⁸⁴

⁴⁸³ Google blog, [A new licensing program to support the news industry](#), 25 June 2020

⁴⁸⁴ Press Gazette, [Google begins UK roll-out of news showcase paying publishers for paywalled content](#), 10 February 2021

The direct financial impact of this initiative on the UK online news sector is likely to be limited, at least in the short-term, once the fund has been split across publishers globally. Longer-term impacts may include increased traffic and subscriptions to the publishers' websites as users discover them through the app.

In February 2021, the Australian government implemented legislation (the News Media Bargaining Code) requiring Facebook and Google to negotiate for a period of three months with eligible news businesses to agree on compensation for the supply of 'snippets' from articles. In response to this, a few days before the legislation came into force, Facebook restricted all news content from appearing on its platform in Australia but reinstated it after various legislative amendments had been accepted. Facebook has agreed to pay news corporations in Australia for their content through advertising-revenue-sharing agreements.⁴⁸⁵

Wikimedia is also considering revenue opportunities for content used by other platforms

Wikimedia has started exploring alternative ways to commercialise Wikipedia content for use by large platforms such as Google Search. In March 2021 it announced that it would launch Wikimedia Enterprise later in the year, through which it will sell its content to other platforms, tailored to those organisations' needs.⁴⁸⁶ Free, unedited data and content will remain available, but the platforms may recognise the value in paying for ready-to-use information. It will add an additional revenue stream beyond the donation model currently used by Wikimedia.

Further discussion of the News and information sectors can be found in the [News and misinformation chapter](#).

Social media and messaging

Social media revenue in the UK totalled an estimated £4.78bn in 2020

Social media revenues totalled an estimated £4,777m in the UK (6% of global revenue), of which 90% was from advertising.⁴⁸⁷ Facebook, including Instagram, accounts for a large majority of social media revenues and makes 98% of its total revenue from advertising. Twitter and Snapchat were the next largest social media platforms for ad revenue in the UK. TikTok was successful in 2020 in expanding its userbase, but its monetisation efforts in the UK are still in their infancy.⁴⁸⁸

Dating services, and the social components of more specialist platforms such as LinkedIn, tend to focus more on attracting subscription revenue, banking on users moving from the limited free tiers to becoming paying subscribers, with only limited supplementary third-party advertising. For instance, £1,718m of Match Group's global revenue (98% of its total revenue) across its brands in

⁴⁸⁵ Facebook, [Changes to sharing and viewing news on Facebook in Australia](#), 22 February 2021

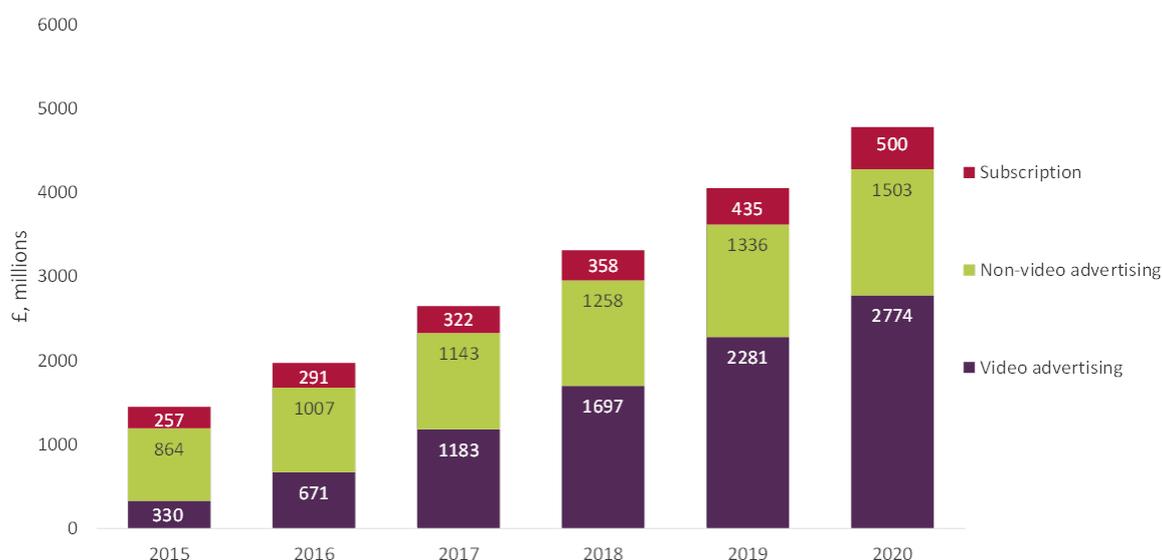
⁴⁸⁶ Wikimedia.org, [Wikipedia Enterprise](#), accessed 7 May 2021

⁴⁸⁷ Other revenues include subscriptions and transactional spend such as on dating sites

⁴⁸⁸ Ofcom's estimates are based on data reported by the TikTok UK subsidiary that it has only about a 1% share of total UK social media advertising. Ofcom estimates based on IAB Europe territorial splits of advertising revenue, and company annual reports

2020 was derived from subscriptions or one-off transactions.⁴⁸⁹ Match’s global subscription revenues increased at a much lower rate from 2019 to 2020 than in the previous year (9% compared to 25%, in nominal terms), probably due to slower user growth and reduced willingness to pay for subscriptions as in-person meetings were impacted by lockdown restrictions.

Figure 4.23: Estimated social media revenues, by revenue stream (advertising split into video and non-video display)



Source: Ofcom estimates based on data from company reports and IAB UK/PwC Digital Adspend 2020 report. Pre-2020 figures have been adjusted for CPI at 2020 prices by Ofcom. Includes platforms and services that derive most of their revenue from advertising such as such as Facebook, Twitter, Snapchat and TikTok, and those which derive most of their revenue from subscriptions, such as LinkedIn and dating sites.

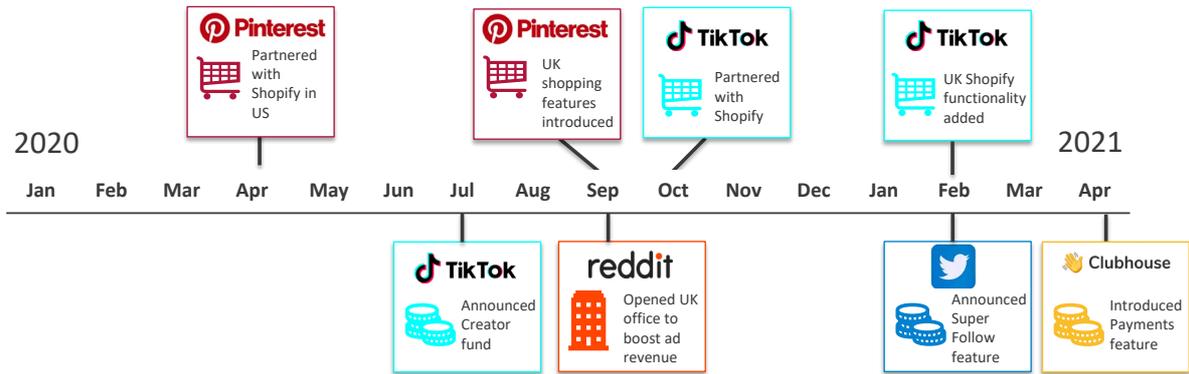
Refer to the [Social video chapter](#) for more detail on social media influencers and influencer marketing.

New features and partnerships are geared towards expanding revenue streams

While there are some initiatives in the social media sector to develop alternative revenue streams, the key focus remains on developing features and partnerships to build larger advertiser bases, including through video formats and e-commerce relationships.

⁴⁸⁹ Match Group, [Annual Report 2020](#) and Ofcom modelling

Figure 4.24: Timeline of developments and partnerships



Source: Reddit blog, [Reddit launches London operation with mission to grow UK community and advertising business](#), 28 September 2020, Pinterest, [Pinterest launches Shopify partnership](#), 7 May 2020, Pinterest, [Pinterest announces new global shopping and ad features ahead of holiday season](#), 29 September 2020, Shopify, [Dancing to a new beat: Shopify brings commerce to TikTok](#), 27 October 2020, Clubhouse, [Introducing Clubhouse Payments](#), 5 April 2021

Further discussion on some of the social media platforms can be found in the [Social video chapter](#).

5. News and misinformation

Introduction

Key metrics

Figure 5.1: UK news and misinformation: key metrics

Proportion of online adults	
Look at online news headlines at least weekly (spring 2020 lockdown) ⁴⁹⁰	64%
Access newspaper content online (spring 2020 lockdown) ⁴⁹¹	53%
Who get news from social media (Q1 2021) ⁴⁹²	35%
News or information about coronavirus seen on social media (Q1 2021) ⁴⁹³	45%
News or information seen from a known contact on WhatsApp (Q1 2021) ⁴⁹⁴	54%
Came across information/news about coronavirus that they thought was false or misleading (Q1 2021) ⁴⁹⁵	30%
Concerned about the amount of false or misleading information that they themselves may be getting about coronavirus (March 2021) ⁴⁹⁶	32%
Concerned about the amount of false or misleading information that others in society may be getting about coronavirus (March 2021) ⁴⁹⁷	59%
Take steps to check whether the information they come across online is accurate ⁴⁹⁸	86%

News consumption

During the spring 2020 lockdown, half of online adults in Britain (52%) said that news and current affairs was one of the main reasons why they went online⁴⁹⁹

Online adults in Britain aged 45-54 were most likely to cite news and current affairs as a main reason for going online (61%). However, those in the DE socio-economic group were less likely than those in

⁴⁹⁰ TouchPoints, GB, spring lockdown 2020. Base: all adults (15+) who have gone online in last 12 months

⁴⁹¹ TouchPoints, GB, spring lockdown 2020. Base: all adults (15+) who have gone online in last 12 months

⁴⁹² Ofcom Covid-19 news and information survey UK

⁴⁹³ Ofcom Covid-19 news and information survey UK

⁴⁹⁴ Ofcom Covid-19 news and information survey UK

⁴⁹⁵ Ofcom Covid-19 news and information survey UK

⁴⁹⁶ Ofcom Covid-19 news and information survey UK

⁴⁹⁷ Ofcom Covid-19 news and information survey UK

⁴⁹⁸ Adults' Media Literacy Tracker 2020

⁴⁹⁹ TouchPoints, GB, spring 2020 lockdown. Base: all adults (15+) who have gone online in last 12 months

the AB socio-economic group to give this as a main reason for going online (45% vs. 58%). Sixty per cent of online adults in Britain said they found the internet a really useful source for news.⁵⁰⁰

Before the spring 2020 lockdown, Ofcom’s news consumption research found that two-thirds of UK adults said they accessed news online and that the internet was the second most-used news platform, behind television.⁵⁰¹ Young people aged 16-34 (78%) and people from a minority ethnic background (74%) were more likely than over-34s and people from white ethnic groups to use the internet for news. Our 2020 Adults’ Media Literacy research found that since going into lockdown 69% of UK online adults said they accessed news online⁵⁰², but because this figure is from a different Ofcom research source, a like-for-like comparison is not possible. In general, news reach has remained relatively stable.

Figure 5.2: Proportion of UK adults who use the internet for news, by age

	16+	16-24	25-34	35-44	45-54	55-64	65+
Accessed news via internet	65%	79%	77%	72%	65%	57%	44%

Ofcom News Consumption Survey 2020

C1. Which of the following platforms do you use for news nowadays?

Base: All adults aged 16+ (4,576 in 2020, 726 aged 16-24, 727 aged 25-34, 831 aged 35-44, 766 aged 45-54, 615 aged 55-64, 911 aged 65+)

There was an increase in online adults in Britain seeing online news headlines weekly during the spring 2020 lockdown

There has been a steady increase in online adults in Britain accessing news headlines online weekly since 2019, with a high during the spring 2020 lockdown.⁵⁰³

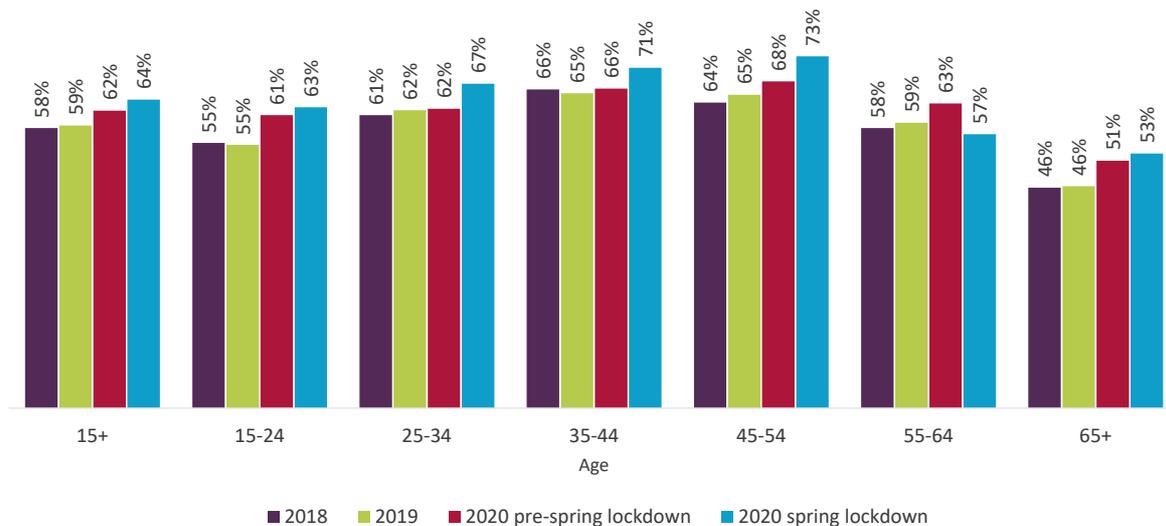
⁵⁰⁰ TouchPoints, GB, spring 2020 lockdown. Base: all adults (15+) who have gone online in last 12 months

⁵⁰¹ Ofcom News Consumption Survey 2020

⁵⁰² Ofcom, Adults’ Media Literacy Tracker 2020

⁵⁰³ TouchPoints, GB, spring 2020 lockdown. Base: all adults (15+) who have gone online in last 12 months

Figure 5.3: British online adults who look at online news headlines weekly, by age



Source: TouchPoints, GB, 2018-2020. Question: Please think now about news that is available on all different types of websites, not just newspaper or magazine sites. How often do you look at the following types of news online? Those who selected - News headlines, at least once a day or News headlines at least once a week.

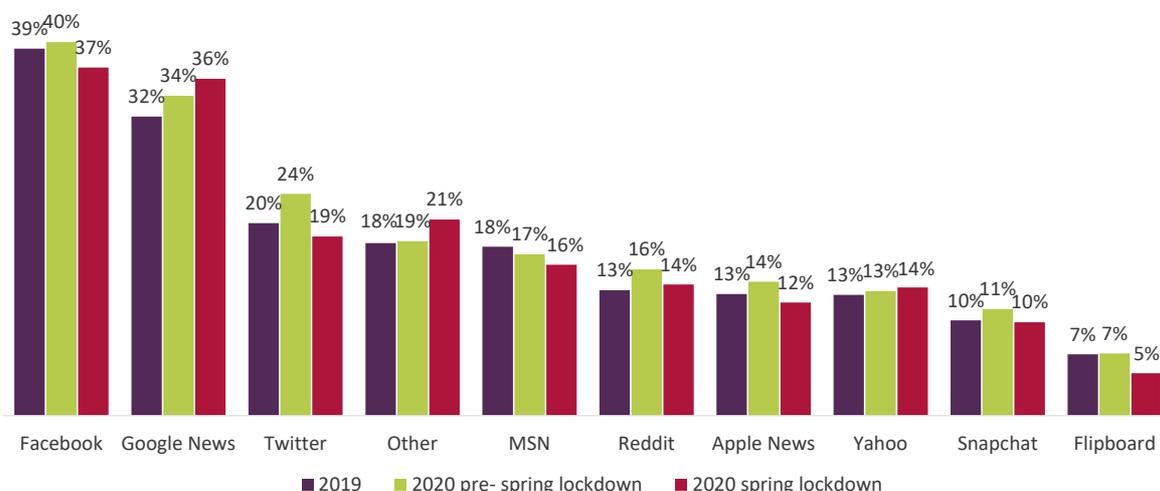
Base: all adults (15+) who have gone online in last 12 months.

Facebook is the highest-reaching intermediary service used for accessing a variety of news sources

Online adults use various sites and/or apps, including social media, that bring together or provide links to a variety of news sources online. During the spring 2020 lockdown, 37% of online adults in Britain said they used Facebook to access news content. Fifty per cent of online 15- to 24-year-olds in Britain said they had ever used Facebook for news, with 25% of 55- to 64-year-olds saying the same. The most commonly used source among online 55- to 64-year-olds (at 30%) was Google News, which was the fourth most-used source for 15- to 24-year-olds (40%), behind Snapchat (41%) and Twitter (40%).⁵⁰⁴

⁵⁰⁴ TouchPoints, GB, spring 2020 lockdown. Base: all adults (15+) who have gone online in last 12 months

Figure 5.4: Proportion of online adults in Britain who say they have ever used sites/apps which bring together or provide links to news



Source: TouchPoints 2019 - 2020, GB, age: 15+. Question: There are also websites or apps that pull together stories or links allowing you to access news through a variety of different news or newspaper titles, often tailored to your tastes. How often do you use any of these ways of accessing online news? Those who selected daily/weekly/monthly/less often.

Base: all adults (15+) who have gone online in last 12 months.

Social media

16-24s were much more likely to identify a social media source as the most important source of news for them (40%) compared to all adults (14%)

Social media is a key way in which many people get news. Ofcom’s 2020 news consumption survey (conducted before the spring 2020 lockdown) found that 45% of UK adults said they used social media for news. Of these, three-quarters (76%) said they got it from Facebook (compared to 73% in 2019), 37% from Twitter (compared to 33% in 2019) and 31% from Instagram (compared to 28% in 2019). Those consuming news on social media were more likely to say that they got their online news mostly from ‘posts’ (42%) than mostly directly from news organisations’ websites or apps (29%). This was most pronounced for 16-24s, 51% of whom got their online news mostly from posts, compared to 22% who mostly got it directly from news organisations.⁵⁰⁵

Online newspapers

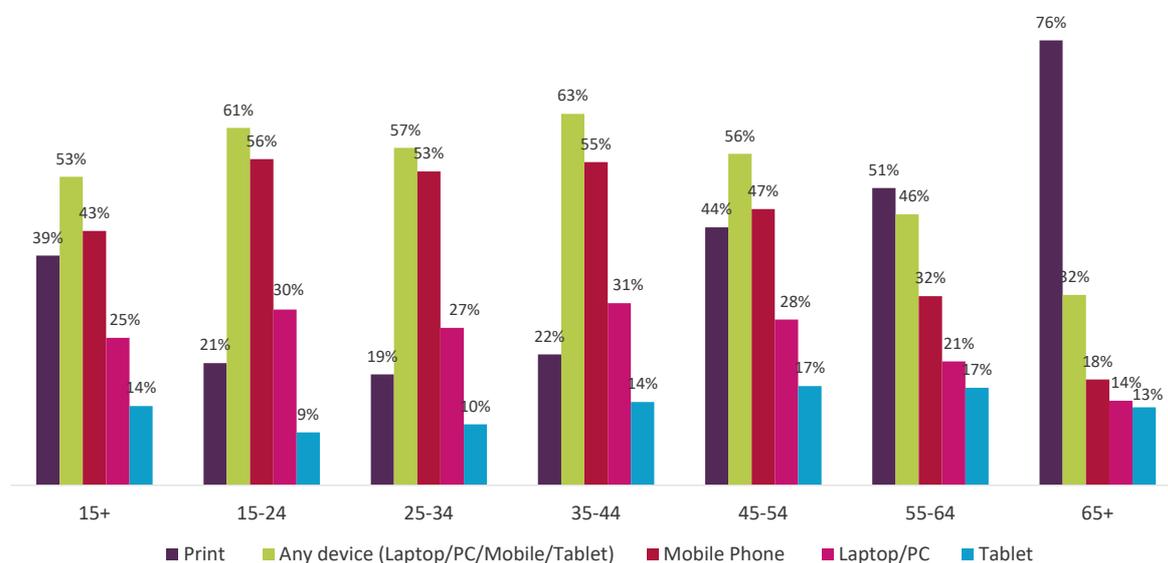
Smartphones are the most popular device for accessing newspaper content online

During the spring 2020 lockdown 53% of online adults in Britain aged 15 and over said they accessed newspaper content via a computer or mobile device. The most popular device for accessing

⁵⁰⁵ Ofcom News Consumption Survey 2020

newspaper content was smartphones, used by 43% of online adults in Britain. Monthly online news access via smartphone skews more towards younger audiences.⁵⁰⁶

Figure 5.5: Access to online and print newspaper content, at least monthly, during the spring 2020 lockdown



Source: TouchPoints, GB, spring 2020 lockdown. Question: How often do you look at or read national newspapers in each of the following ways?/ How often do you look at or read regional / local newspapers in each of the following ways?

Base: all adults (15+) who have gone online in last 12 months.

Note: includes national and regional online newspapers

Mail Online/Daily Mail is the highest-reaching online print newspaper title, reaching 85% of UK online adults at the end of 2020⁵⁰⁷

Data from Comscore, the industry source for measuring online audiences, reveal that nearly all UK adult internet users accessed some form of online news from print news providers’ online outlets at least once during September 2020 (Comscore uses a panel of internet users to record everything they do online; it is notable that this results in a much higher proportion of people accessing newspaper content than the consumer research reported above, which is based on what people say. This difference may in part be due to people not recalling accessing newspapers’ online sites when they follow links from social media or news aggregators).⁵⁰⁸

During 2020 there were fluctuations in news reach, most notably a rise during the spring 2020 lockdown period, and a less pronounced increase during the autumn lockdowns. However, online

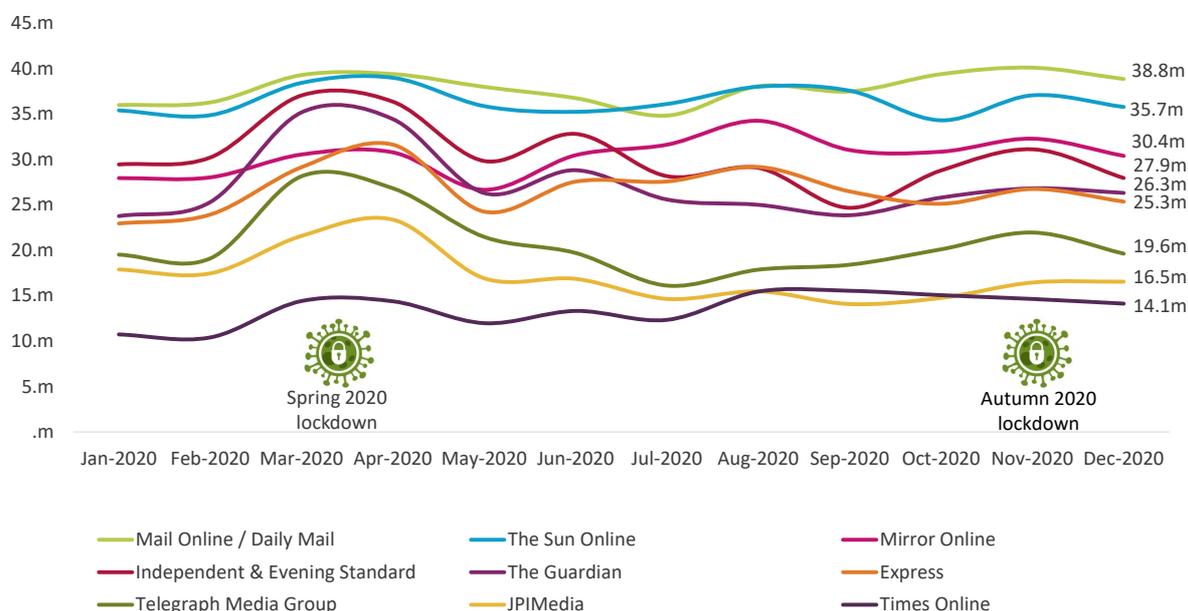
⁵⁰⁶ TouchPoints, GB, spring 2020 lockdown. Base: all adults (15+) who have gone online in last 12 months

⁵⁰⁷ Comscore MMX Multi-platform, Mail Online/Daily Mail, age: 18+, Dec 2020, UK

⁵⁰⁸ Comscore MMX Multi-platform, age: 18+, Sep 2020, UK. Note: based on reach of the nine print news services in Figure 5.6

print news audiences remained fairly stable and there has been little change in either total news consumption or individual title share.

Figure 5.6: UK online adult reach of selected print newspaper sites and/or apps



Source: Comscore MMX Multi-platform, age: 18+, Jan - Dec 2020, UK.

Note: Custom list of entities defined by Ofcom. See Online Nation 2021 [interactive report](#) for all 2020 monthly figures

British online adults aged 15-24 are more likely to access online newspaper content via social media than via newspapers’ own websites and apps

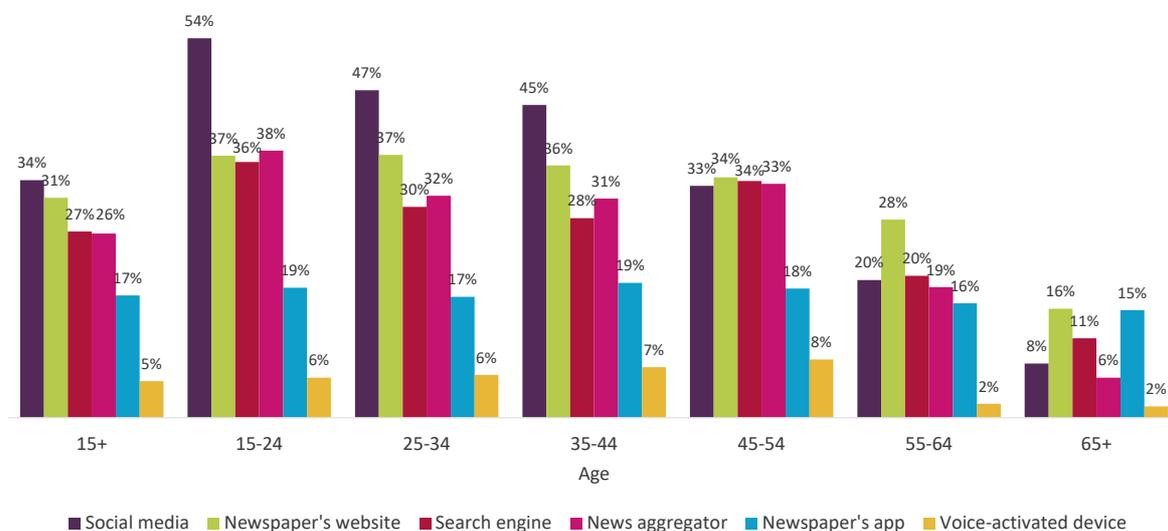
During the spring 2020 lockdown 26% of online adults in Britain said they accessed newspaper content via social media weekly, with 28% saying they accessed newspaper content via their site or apps weekly. Forty-four per cent of young online adults aged 15-24 in Britain used social media to access newspaper content online, and 28% said they accessed newspaper content via their websites or apps. Over-35s are more likely to use newspapers’ own sites or apps weekly.⁵⁰⁹

Twenty-nine per cent of online adults in Britain said they clicked through to a newspaper site or article from a link on social media at least monthly. Nineteen per cent shared links to newspaper stories privately; for example, via text or WhatsApp, with 12% saying they shared links publicly, such as on Facebook or Twitter.⁵¹⁰

⁵⁰⁹ TouchPoints, GB, spring 2020 lockdown. Base: all adults (15+) who have gone online in last 12 months

⁵¹⁰ TouchPoints, GB, spring 2020 lockdown, monthly. Base: all adults (15+) who have gone online in last 12 months

Figure 5.7: How people access newspaper content online (at least monthly, by digital source, during the spring 2020 lockdown)



Source: TouchPoints, GB, spring 2020 lockdown. Question: How often do you look at, listen to or read online / digital versions of national/regional/local newspaper titles in each of the following ways?

Base: all adults (15+) who have gone online in last 12 months.

News aggregators

Sixty per cent of UK online adults visited an online news aggregator in September 2020⁵¹¹

News aggregators are a common method of consuming news online. A news aggregator is an online site, application or feature within an online service that gathers news content from different sources such as online newspapers, blogs, podcasts, and videos, in one location. The aggregation can be curated by a human or entirely automated using algorithms. Algorithm-based aggregation can choose content based on users' past behaviour on the site/app, taking into account the type of news stories that the user typically clicks on and shares, in order to show them similar content. Algorithms are also capable of taking other behaviour on the mobile device into account (e.g. types of apps the user has downloaded, or searches via internet browsers). Almost all smartphones have a news aggregator pre-installed on them: Upday is loaded on all Samsung devices, Google News Feed is pre-installed on several other Android phones, and Apple News is on iPhones. Social media platforms can also provide news aggregation as part of their features.

In figure 5.8 below, data from Comscore shows reach of selected news aggregator sites and/or apps to UK adults in September 2020. This does not include feeds such as Google's news feed, which can be accessed by swiping left on Android devices. Neither does it capture Google Search as a *de facto*

⁵¹¹ Comscore MMX Multi-platform, age: 18+, Sept 2020, UK. Note: based on reach of the six news aggregators in figure 5.8

⁵¹² [Online Harms White Paper: Full government response to the consultation](#), 15 Dec 2020

news aggregator, via its 'Top Stories', or social media platforms, as users may not come across news content during their visit.

Figure 5.8: UK adult reach of selected news aggregator sites and/or app services: September 2020

News aggregator site and/or app	Adult visitor	Online UK adult reach
Apple News app	13.7m	30%
Upday	10.6m	23%
Google News search	2.7m	6%
Google News app	1.2m	3%
Flipboard	673k	1.5%
Pocket app	31k	0.07%

Source: Comscore MMX Multi-platform, age: 18+, Sept 2020, UK.

Note: Custom defined list by Ofcom

False or misleading information

False or misleading information can be characterised as misinformation, disinformation or malinformation

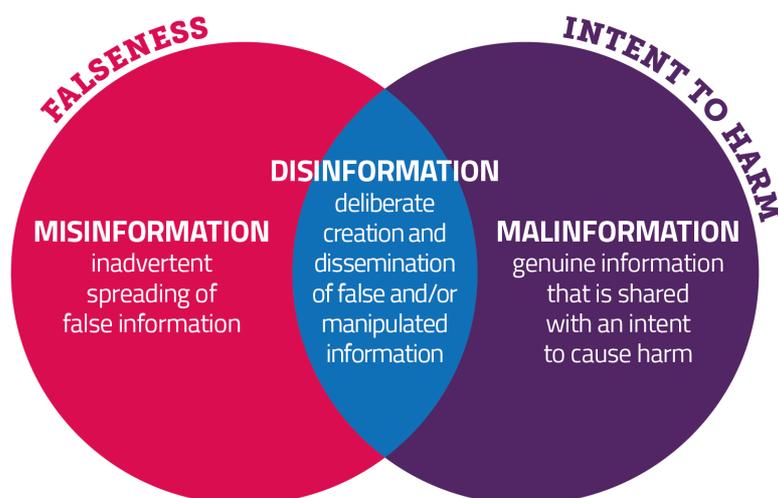
The ease of publishing news online and the speed through which it can be distributed and shared delivers many benefits, but also creates the potential for the spread of false and misleading information online and the challenges for online users to identify whether content they come across is true, false or misleading. In December 2020 the UK Government’s response to the Online Harms White Paper defined ‘misinformation’ as the inadvertent spreading of false information and ‘disinformation’ as the deliberate creation and dissemination of false and/or manipulated information that is intended to deceive and mislead audiences, either for the purposes of causing harm, or for political, personal or financial gain.⁵¹²

There is a further category: true information published online that is shared with the intent of causing harm; this is known as ‘malinformation’. An example of this is when Russian agents reportedly hacked into emails from the Democratic National Committee and the Hillary Clinton campaign and leaked certain details to the public to damage her reputation.⁵¹³ In this category there can be a deliberate change of context to the genuine information which could potentially result in the content being misleading. This chapter will predominantly focus on misinformation.

⁵¹² [Online Harms White Paper: Full government response to the consultation](#), 15 Dec 2020

⁵¹³ First Draft, [Understanding information disorder](#), October 2019

Figure 5.9: Definition of misinformation, disinformation and malinformation



Source: [Online Harms White Paper: Full government response to the consultation](#), 15 Dec 2020. First Draft, [Understanding information disorder](#), October 2019

The coronavirus pandemic has resulted in an ‘infodemic’ – an overabundance of information, which includes the dissemination of inaccurate or misleading information

The internet has been used to keep people safe, informed, productive and connected during the Covid-19 pandemic. However, the prevalence of misinformation online about coronavirus has been an ongoing concern. During the spring 2020 and winter 2021 lockdowns there was increased Google UK search interest in the topic ‘misinformation’, indicating an increased awareness of the issue.⁵¹⁴ The concern around incorrect information led to the World Health Organisation, along with other organisations, declaring an ‘infodemic’ – an overabundance of information, some accurate and some not – that can occur during an epidemic, both online and offline.⁵¹⁵ An infodemic can make it difficult for people to discern which information is accurate and to be trusted.⁵¹⁶ The content varies widely from misinformed but well-intentioned ‘tips’ for keeping healthy, to potentially deliberate attempts to mislead about, e.g., the link between Covid-19 and 5G (disinformation).

Exposure to misinformation can be harmful if it results in people making decisions based on false and misleading information and undermines legitimate scientific evidence.⁵¹⁷ For instance, shortly after President Trump publicly raised the question of whether injecting bleach could be a potential treatment for Covid-19⁵¹⁸, the US Centers for Disease Control and Prevention carried out a survey in the US, finding that 4% of online adults surveyed said they had drunk or gargled diluted bleach

⁵¹⁴ [Google Trends](#), UK search interest in ‘misinformation’ (topic), 1/1/2020-31/3/2021

⁵¹⁵ WHO, [Managing the COVID-19 infodemic: Promoting healthy behaviours and mitigating the harm from misinformation and disinformation](#), 23 Sept 2020

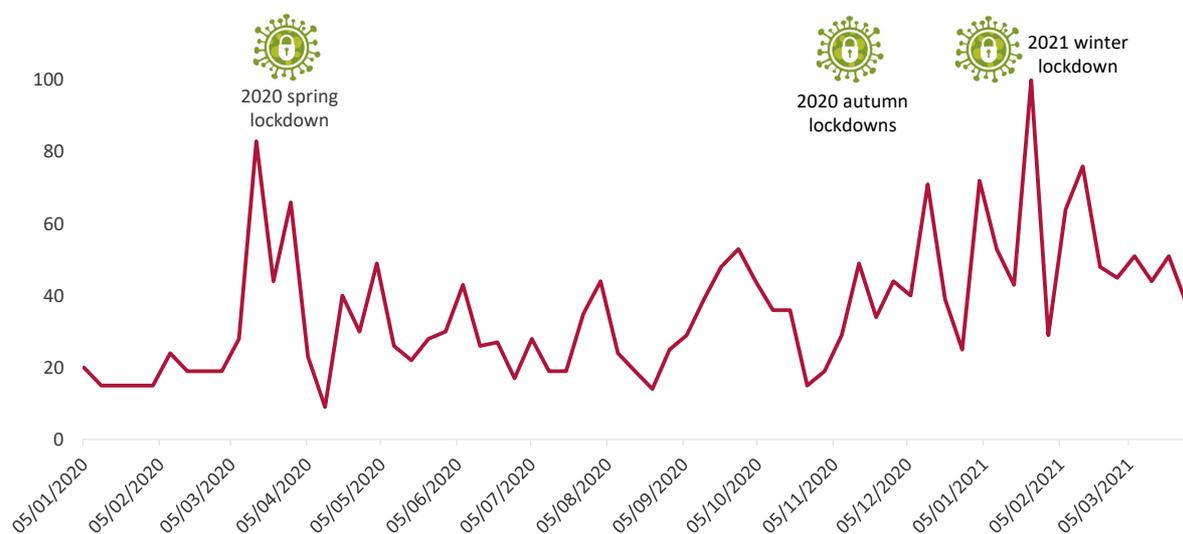
⁵¹⁶ WHO, [Infodemic management](#)

⁵¹⁷ C. M. Pulido, L. Ruiz-Eugenio, G. Redondo-Sama, B. Villarejo-Carballido, [A new application of social impact in social media for overcoming news in health](#), 2020

⁵¹⁸ BBC News, [Coronavirus: Outcry after Trump suggests injecting disinfectant as treatment](#), 24 April 2020

solutions to prevent Covid-19.⁵¹⁹ Online services are taking steps to tackle false or misleading information, but this is challenging, as it may be difficult to ascertain whether some information is in fact ‘false’, or is otherwise misleading and whether such information is likely to cause harm (discussed in [Actions taken to tackle false information](#), below).

Figure 5.10: Google searches for ‘misinformation’ – UK trend: January 2020 - March 2021



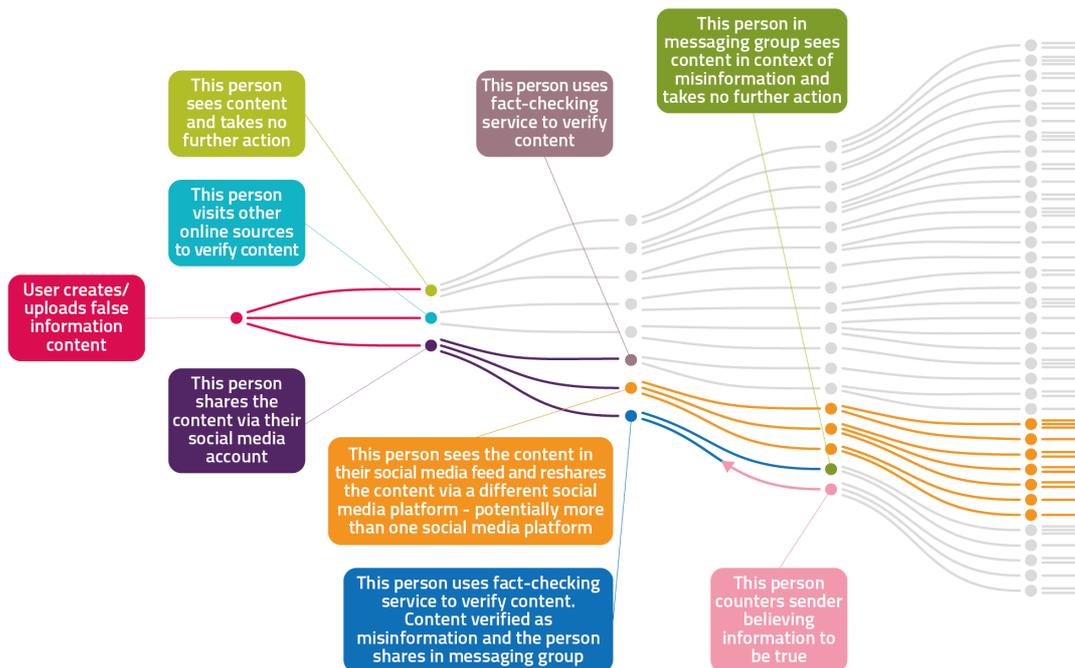
Source: [Google Trends](#), UK search interest in ‘misinformation’ (topic), 1/1/2020-31/3/2021

The spread of misinformation can happen for various reasons and come from a variety of sources

Some online users may share or help amplify false information through their social media accounts. This may be to deliberately spread false information, or with the benign intention of informing others. Individuals may also share false or misleading information to warn others about it or share it as a joke. In many cases, however, it is hard to isolate the intent behind sharing this type of content. Figure 5.11 below gives some examples of how false information can spread online, although this is by no means exhaustive.

⁵¹⁹ CDC, [Knowledge and Practices Regarding Safe Household Cleaning and Disinfection for COVID-19 Prevention — United States, May 2020](#), June 2020

Figure 5.11: Example of how false information can travel online



First Draft is a UK company that aims to bring together a global network of journalists to investigate and verify emerging stories and also conducts research in relation to false and misleading information encountered online. Figure 5.12 below outlines some of the forms that false or misleading information can take as identified by First Draft.⁵²⁰

Figure 5.12: Types and characteristics of false or misleading information online

Type	Characteristic	Example
False connection	Headlines, visuals or captions don't support the content	Intentional or unintentional misleading 'aspect' in news articles, videos, or posts, such as a news headline that misconstrues an article
Misleading content	Misleading use of information to frame an issue or individual	Intentional or unintentional misleading messages or conclusions in news articles and political propaganda
False context	When genuine content is shared with false contextual information	News articles that are knowingly or unknowingly shared years after publication as 'new' stories, or including misattributed quotes
Imposter content	When genuine sources are impersonated	Fraudulent phishing or scams designed to induce individuals into revealing personal information

⁵²⁰ First Draft, *Understanding information disorder*, October 2019⁵²¹ Merriam Webster, *Words We're Watching: 'Deepfake'*, accessed 21 April 2021

Manipulated content	When genuine information or imagery is manipulated to deceive	Digitally altered images and videos, including deepfakes
Fabricated content	False content designed to deceive	Illegitimate websites and hoaxes

Source: First Draft, *Understanding information disorder*, October 2019 and Visual Capitalist, [How to spot fake news](#), 10 Feb 2021

Case study: Deepfakes and trust in video and audio content

The term ‘deepfake’ – a combination of ‘deep learning’ and ‘fake’ – rose to prominence in 2018. It typically refers to a video of a person that has been edited using an algorithm to replace the person in the original video with someone else, in a way that makes the video look authentic.⁵²¹ Audio can also be deepfaked. In recent years, online services that enable online users to generate their own deepfake images and videos have become widely available. Apps such as Reface and Avatarify allow users to upload any photo of a person to substitute for the face of a famous person or character appearing in a photo, GIF or video. According to Comscore, Reface had 579,000 UK adult visitors in September 2020.⁵²² It was reported that AI firm Deepttrace had found 15,000 deepfake videos online, almost doubling over a nine-month period in 2019.⁵²³

The Deepttrace research in 2019 also found that 96% of deepfakes were of a pornographic nature; this is considered the most prevalent form of this kind of manipulated imagery.⁵²⁴ In 2019, research organisation Future Advocacy used artificial intelligence (AI) and an impressionist to create a fake social media video in which Boris Johnson and Jeremy Corbyn endorsed each other for Prime Minister. The video was posted to highlight the impact that deepfake videos could have on democracy⁵²⁵ and people’s trust in information. Deepfakes creating the likeness of prominent politicians such as Donald Trump and Barack Obama have also been distributed online,⁵²⁶ such as BuzzFeed’s 2018 ‘You Won’t Believe What Obama Says In This Video’ deepfake that received more than 8.4 million global views on YouTube.⁵²⁷ Advocacy consultants Future Advocacy stated that there is a risk that it will become easier and easier to use deepfakes, and there is a danger that these may undermine genuine video footage which could itself then be dismissed as a deepfake.⁵²⁸ Online services have begun addressing the issue. In January 2020 Facebook introduced a new policy banning AI-manipulated deepfake videos that are likely to mislead viewers into thinking that someone “said words that they did not actually say”.⁵²⁹

The coronavirus pandemic

News consumption

BBC online is the highest-reaching online source of news and information about coronavirus

⁵²¹ Merriam Webster, [Words We're Watching: 'Deepfake'](#), accessed 21 April 2021

⁵²² Comscore MMX Multi-Platform, Reface, Age: 18+, Sep 2020, UK

⁵²³ BBC [Deepfake videos 'double in nine months'](#), October 2019; The Guardian, [What are deepfakes - and how can you spot them?](#), January 2020

⁵²⁴ BBC [Deepfake videos 'double in nine months'](#), October 2019; The Guardian, [What are deepfakes - and how can you spot them?](#), January 2020

⁵²⁵ BBC, [The fake video where Johnson and Corbyn endorse each other](#), November 2019

⁵²⁶ The Guardian, [The rise of the deepfake and the threat to democracy](#), June 2019

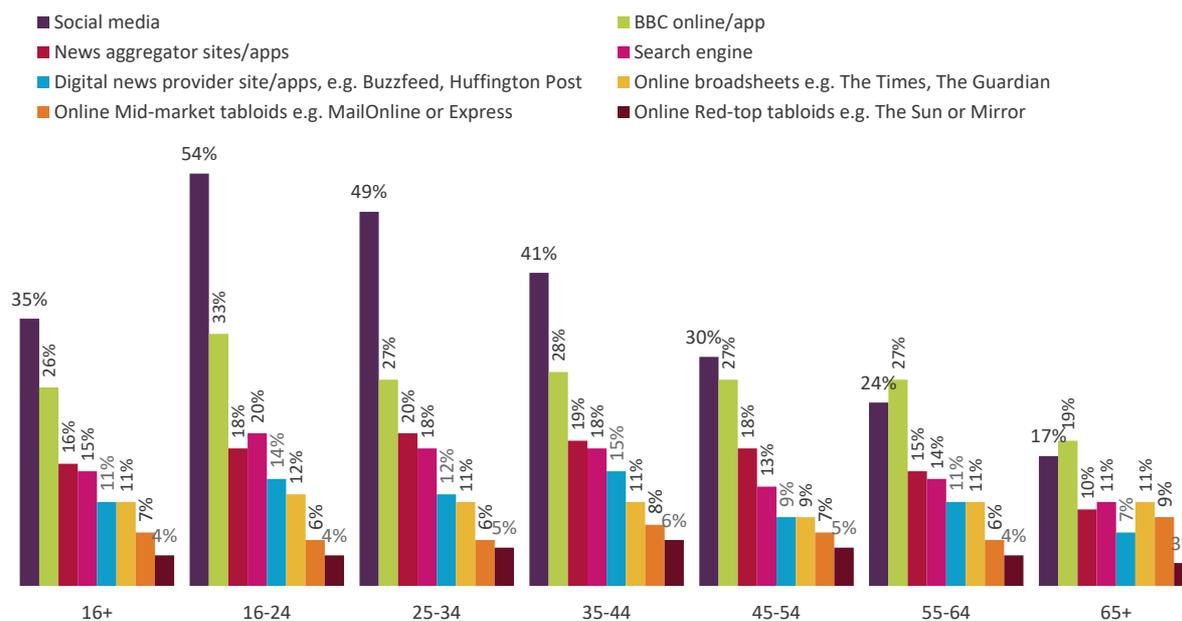
⁵²⁷ BuzzFeed, [How To Spot A Deepfake Like The Barack Obama-Jordan Peele Video](#), April 2018

⁵²⁸ Future Advocacy, [Deepfakes](#), accessed 23 April 2021

⁵²⁹ Facebook, [Enforcing Against Manipulated Media](#), Jan 2020

Online adults in the UK are as likely to use social media as a news source to find information about the Covid-19 pandemic (at 35%) as they are to use news sites and apps. Among news sites, BBC online was the most commonly used, although aggregator services and digital-only news services were also used widely. On social media, Facebook is the main source, although younger people in particular are just as likely to use Instagram or Twitter. One in eight (13%) 16-24s considered social media to be their most important source of information about coronavirus, compared to 5% of all UK online adults.⁵³⁰

Figure 5.13: Selected online sources of news/information about coronavirus, by age: Q1 2021



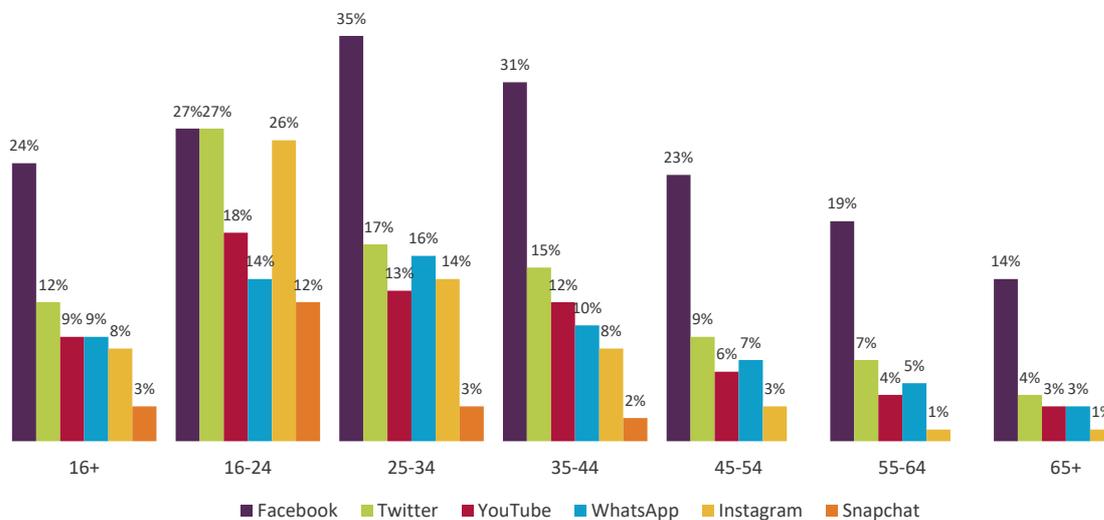
Source: Ofcom Covid-19 news and information survey, Jan-Mar 2021

Q3a. Which, if any of the following sources have you used to get information/news about the coronavirus outbreak in the LAST WEEK? Please select all that apply. Base: All respondents getting information/news about the coronavirus outbreak – Q1 2021(6232).

Note: Social media is a net answer of Facebook, Twitter, Instagram, Snapchat, WhatsApp.

⁵³⁰ Ofcom Covid-19 news and information survey, Q1 2021

Figure 5.14: Selected social media sources of news/information about coronavirus, by age: Q1 2021

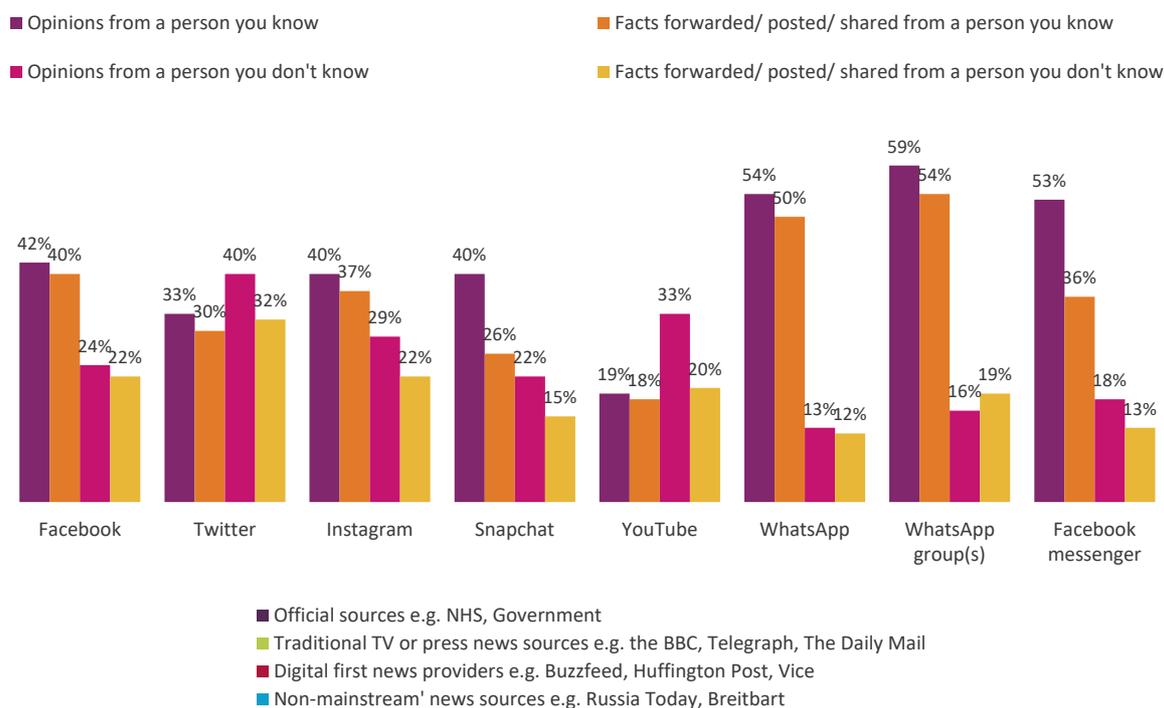


Source: Ofcom Covid-19 news and information survey, Jan-Mar 2021. Q3a. Which, if any of the following sources have you used to get information/news about the coronavirus outbreak in the LAST WEEK? Base: All respondents who are getting information/news about the coronavirus outbreak – Q1 2021 (6232). Note: WhatsApp is a net of responses for WhatsApp and WhatsApp groups.

Most news and news and information people see on social media comes from people they know

Online adults in the UK are twice as likely to come across news and information from known contacts on social media than from people they don't know. This is less the case for Twitter and more so for WhatsApp. This is probably because people are more likely to follow and engage with people they don't know on Twitter, whereas WhatsApp is more often used for keeping in touch with friends and family. Opinions and facts forwarded or posted by known contacts using messaging services such as WhatsApp were the most prevalent source of news and information through social media messaging services. Twitter was the most popular social media platform for UK online adults to come across official sources such as the NHS, and clips taken from traditional TV or press sources.

Figure 5.15: Types of news and information seen on selected social media: Q1 2021



Source: Ofcom Covid-19 news and information survey, Jan-Mar 2021. Q4 Thinking about what you are seeing on the below sources, which of the following types of news/information about the Coronavirus are you getting?

Base: All respondents using each social media source, Q1 2021 – Facebook (1465), Twitter (748), Instagram (462), Snapchat (141), YouTube (550), WhatsApp (377), WhatsApp group(s) (245), Facebook messenger (257)

The coronavirus pandemic and misinformation

There has been a gradual decrease in self-reported exposure to information considered false or misleading

Ofcom research in Q1 2021 found that 30% of UK adults who were getting news or information about the coronavirus pandemic said that they had come across information/news that they thought was false or misleading – this was down from 46% in late March 2020 when the UK had just gone

into lockdown. An additional 26% said they didn't know if they had come across information/news that they thought was false or misleading - which indicates the difficulty of identifying misinformation.

Six in ten UK adults who said they had seen misinformation about Covid-19 in Q1 2021 said they had seen it at least once a day. Men, 16-24s and those in the AB socio-economic group were more likely than women, people aged 45+ and those in the C2DE socio-economic groups to say they had come across misinformation.⁵³¹ Our research has found a gradual decrease in self-reported exposure to information that was considered false or misleading. This may be due to a variety of factors, such as people's better understanding of the coronavirus pandemic, a reduction in their exposure to news and information about it, or a reduction in the potentially false and misleading information being reported or shared.

Respondents were provided with a select list of claims which had been made about aspects of the coronavirus pandemic and which could be considered false or misleading, and were asked if they had come across them. The most-seen claim about coronavirus which could be considered false or misleading in Q1 2021 was that "face masks/coverings offer no protection or are harmful".⁵³²

Figure 5.16: Top ten selected claims about coronavirus that UK adults came across and which could be considered false or misleading

	Claim considered could be false or misleading	Q4 2020	Q1 2021
1	Face masks/coverings offer no protection or are harmful	28%	23%
2	The number of deaths linked to coronavirus is much lower in reality than is being reported	25%	22%
3	The coronavirus vaccine is a cover for a plan to implant trackable microchips into people	Not asked	20%
4	Empty hospitals shown via social media posts are evidence that coronavirus has been exaggerated	Not asked	20%
5	The flu alone is killing more people than coronavirus	28%	19%
6	The number of cases linked to coronavirus is much lower in reality than is being reported	22%	18%
7	The coronavirus vaccine may reduce fertility	Not asked	17%
8	Flu and coronavirus statistics are being combined to make coronavirus look more harmful than it is	20%	15%
9	The coronavirus vaccine will alter human DNA	Not asked	15%

⁵³¹ Ofcom Covid-19 news and information survey, Q1 2021

⁵³² Ofcom Covid-19 news and information survey, Q1 2021

10	The origin or cause of coronavirus is in some way linked to 5G technology	16%	14%
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Source: Ofcom Covid-19 news and information survey, Jan-Mar 2021. Q10. Have you come across any of these claims which some people are making about aspects of the Coronavirus and that could be considered as false or misleading in the LAST WEEK?

Base: All respondents who are getting information/news about the coronavirus outbreak (6232)

The prevalence of misinformation claims is highest on Facebook

To understand further how misinformation on aspects of the pandemic was being accessed and perceived, respondents were asked whether specific claims they had come across had been presented as true, false or unclear. If the claim had been presented as true, they were asked where they had come across the claim; options included broadcast news, newspapers, press on news sites or apps, online-only news sources and social media. Social media was the most likely source for claims which could be considered false and the prevalence of such claims listed in Figure 5.17 was highest on Facebook, probably due to the platform having a high reach. It should be noted that Figure 5.17 below lists only online sources for these claims, although our survey also captured claims seen offline. Of the 20% of adults who had seen the claim that “empty hospitals shown via social media posts are evidence that coronavirus has been exaggerated”, 59% said it had been reported as being true on social media, compared to 22% in traditional media.⁵³³ The most-cited source by respondents for such claims being reported as true, when including both online and offline services, is Facebook.⁵³⁴

Figure 5.17: Respondents who have come across claim reported/posted as true: Q1 2021, online services only

	“Empty hospitals shown via social media posts are evidence that coronavirus has been exaggerated”	“The flu alone is killing more people than coronavirus”	“The coronavirus vaccine is a cover for a plan to implant trackable microchips into people”
Social media (net)	59%	56%	55%
Facebook (incl. Facebook messenger)	44%	38%	41%
Twitter	10%	13%	6%
Search engine	7%	5%	4%
News aggregators	7%	6%	2%
YouTube	6%	5%	3%
Instagram	4%	2%	4%

⁵³³ Traditional media = newspapers, broadcasters and radio

⁵³⁴ Ofcom Covid-19 news and information survey, Q1 2021

WhatsApp	5%	5%	6%
Online mid-market tabloids	5%	1%	-
Online news organisations	4%	3%	5%
Online broadsheets	1%	1%	-

Source: Ofcom Covid-19 news and information survey, Jan-Mar 2021. Q10o/q/s and which of these sources was it being reported/described as true? Please tick all that apply, Base: All respondents who have come across claims stating that the flu alone is killing more people than Coronavirus as a true claim (476), empty hospitals on social media posts prove that Coronavirus has been exaggerated as a true claim (328) and the coronavirus vaccine is a cover for a plan to implant trackable microchips into people as a true claim (118).

Note: see Covid-19 News and Information [interactive report](#) for full list of source of claims

Of the respondents who had seen claims that could be considered false or misleading, 22% said in Q1 2021 that seeing these claims had made them think twice about the issues (down from 26% in Q4 2020). Fifty-seven per cent of people said that it had not made them think twice (up from 49% in Q4 2020). Respondents from an ethnic minority background were more likely than white respondents to think twice (Q1 2021: 39% vs 19%).⁵³⁵

Consumer experience and understanding of information online and misinformation

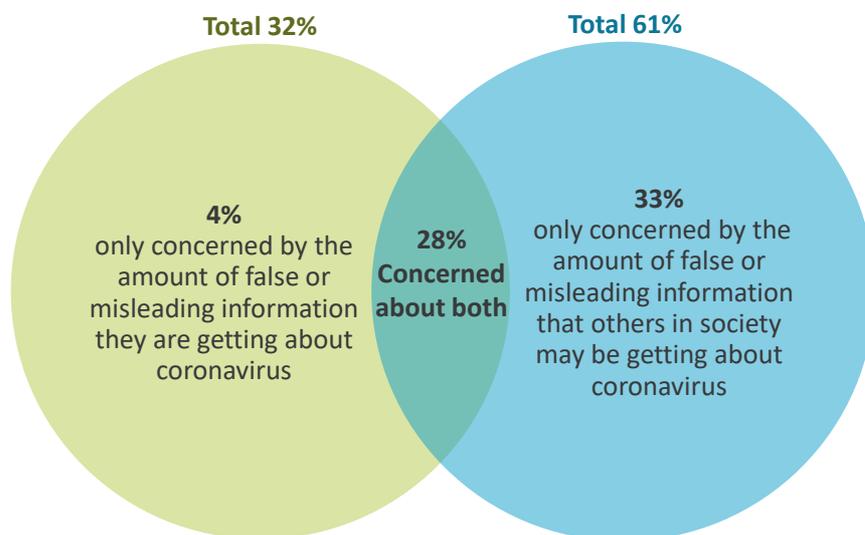
Six in ten people have concerns about the amount of misinformation other people may be getting about coronavirus

Ofcom research in March 2021 found that six in ten online UK adults (61%) had concerns about the amount of misinformation that other people may be getting about coronavirus. This compares to one in three (32%) who are concerned for themselves. Most of those who were concerned for themselves were also concerned about others in society. Twelve per cent of online UK adults were neither concerned for themselves or for others in society. Most online UK adults (81%) agreed that “untrue stories about coronavirus should not be posted or shared on social media”. However, one in five (20%) also agreed that “it’s OK for untrue stories about coronavirus to be posted and shared on social media, as long as they are flagged as potentially untrustworthy/ untrue by the social media platform”.⁵³⁶

⁵³⁵ Ofcom Covid-19 news and information survey, Q1 2021, Q10j. Thinking about the claims that have just been listed, which could be considered as false or misleading, have any of these claims made you think twice about the issue? The top 2 box net score has been used for those that made them think twice and the bottom 2 box net score has been used for those that did not make them think twice

⁵³⁶ Ofcom Covid-19 news and information survey, week 51 – March 2021

Figure 5.18: The extent to which UK adults are concerned about the amount of false or misleading information either they or others in society may be getting about coronavirus



Source: Ofcom Covid-19 news and information survey, week 51, March 2021. Q10k. To what extent are you concerned or not concerned about the following statements? “The amount of false or misleading information you may be getting about Coronavirus” and “The amount of false or misleading information that others in society may be getting about Coronavirus”

Base: all respondents (2121)

Consumer trust

A quarter of adult internet users say they do not think about whether the information they find online is truthful

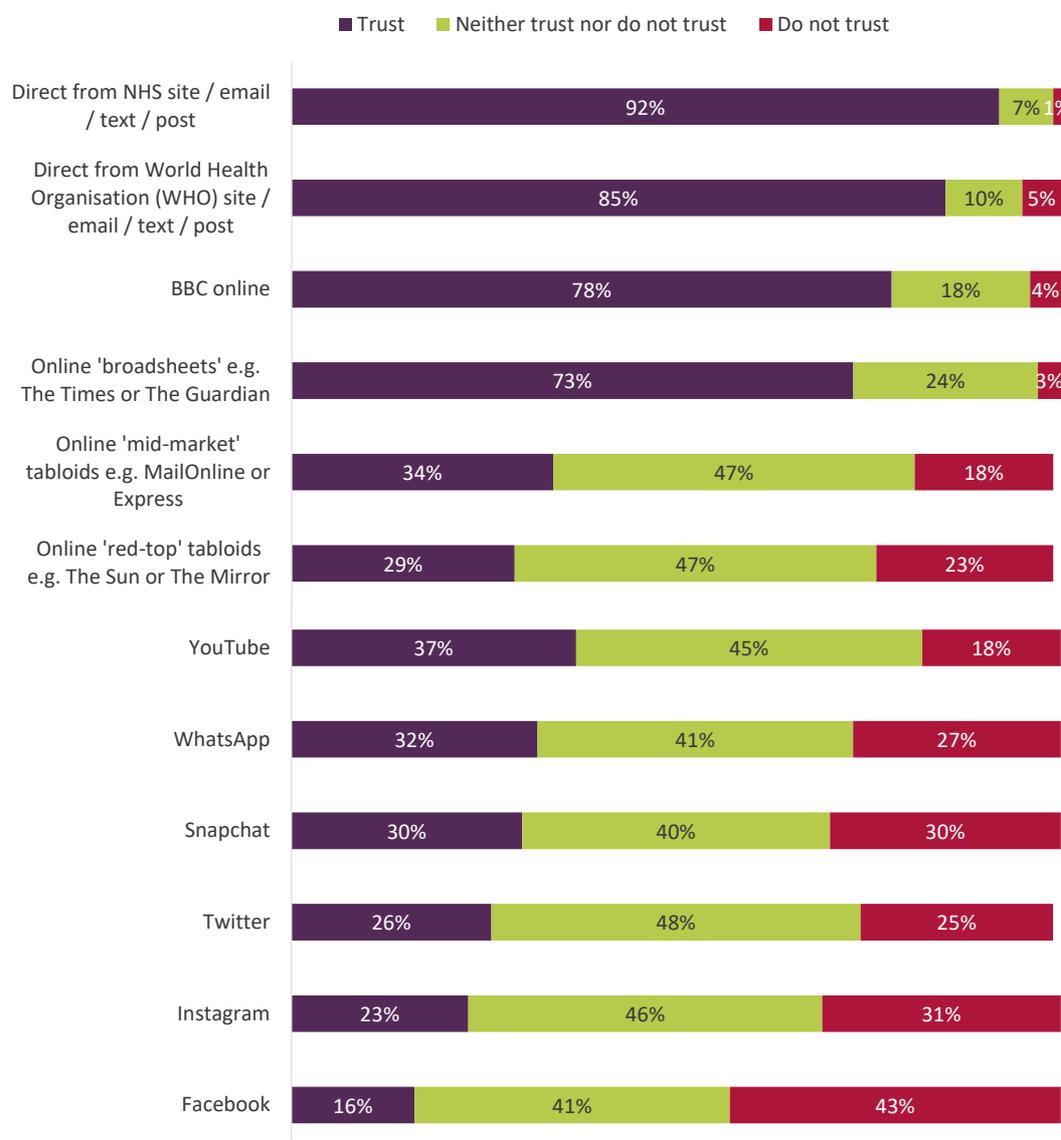
Our media literacy research found that 74% of online UK adults said they did think about whether the information they find online is truthful. A third of UK online adults said they believed that all or most of the information they found online was truthful.⁵³⁷

However, trust in information about coronavirus from social media sources is far lower than for information found on health and scientific sources such as BBC online and online broadsheets. Facebook was the least-trusted social media source; only 16% said they trusted it (while 43% said they did not). People from an ethnic minority background were more likely than white respondents to say that they trusted Facebook (32% vs. 14%).⁵³⁸ However, lack of trust was not limited to the social media platforms; only a minority said that they trusted online tabloids as a source for news/information about the coronavirus.

⁵³⁷ Ofcom, Adults’ Media Literacy Tracker 2020

⁵³⁸ Ofcom Covid-19 news and information survey, Q1 2021

Figure 5.19: Trust in services where people can see information or news about coronavirus: Q1 2021



Source: Ofcom Covid-19 news and information survey, Q1 2021. Question Q5.

Using the following scale from 1 to 5, where 1 is do not trust at all and 5 is trust completely, how much do you trust the following sources for information/news about Coronavirus? Net trust (4-5), Net Do not trust (1-2).

Base: All respondents who are getting information/news about the coronavirus outbreak and used source; Direct from NHS (1054), Direct from WHO (275), BBC online (1620), Online 'broadsheets' (720), Online 'mid-market' (457), Online 'red-top' tabloids (291), YouTube (550), WhatsApp (377), Snapchat (141), Twitter (748), Instagram (462), Facebook (1465)

Factual information and consumer verification

The majority of adults in the UK take steps to check whether the information they come across online is accurate

The majority of adult internet users say they are using the internet to corroborate information they find online, indicating that online adults are thinking critically about the information they come across. UK internet users aged 45-54 are more likely (64%) to say they check different websites, compared to 16-34s (58%) and over-64s (46%). Over half of people say they sometimes come across warnings or notices on social media saying that the information may be untrustworthy.⁵³⁹

People are also aware of the notices that social media platforms provide. Social media services such as Facebook and Twitter provide warnings or notices where they identify content that may contain false information ([actions taken by services to tackle false information](#) on their service is discussed further below). Fifty-three per cent of people in Q1 2021 said that they (at least sometimes) come across warnings or notices on social media saying that the information may be untrustworthy or untrue.⁵⁴⁰

For further information see Ofcom's qualitative research report [Misinformation: exploring attitudes](#).

Actions taken to tackle false information online

The International Fact-Checking Network is working with online services to address misinformation

Established in 2015, The International Fact-Checking Network (IFCN) is a unit of the Poynter Institute that advocates for higher standards among the global fact-checking community. It has published a code of principles for organisations that regularly publish non-partisan reports on the accuracy of statements by public figures, major institutions, and other widely circulated claims of interest to society.⁵⁴¹ The IFCN brings together more than 100 fact-checking organisations globally, and maintains a CoronavirusFacts database.

Facebook uses machine learning to improve its ability to identify false content

Facebook's Fact-Checking programme works with IFCN-certified fact-checkers and organisations to rate and review the accuracy of content on its platform. Content that might be misinformation on either Facebook or Instagram may be identified by users through the flagging process, or by user patterns, such as people commenting that they don't believe a certain post. Facebook uses machine learning models to continuously improve its ability to predict content that is misinformation. Facebook feeds ratings from its fact-checking partners back into its model, to improve its ability to predict content that could be false.⁵⁴² Once content has been identified as potentially false,

⁵³⁹ Ofcom, Adults' Media Literacy Tracker 2020

⁵⁴⁰ Ofcom Covid-19 news and information survey, Q1 2021

⁵⁴¹ See: Poynter, [The International Fact-Checking Network](#).

⁵⁴² Facebook, [How our Fact-Checking Program Works](#), August 2020

Facebook’s fact-checking partners review and rate the content, and the fact-checkers review accuracy through original reporting, interviewing public sources, consulting public data and analysing media. There are several rating options that can be applied to the content by third-party fact-checkers. These include: ‘False’ (content that has no basis in fact), ‘altered’ (an image, audio, or video content that has been edited or synthesised beyond adjustments for clarity or quality, in ways that could mislead people), ‘partly false’ (content that has some factual inaccuracies) and ‘missing context’ (content that may mislead without additional context).⁵⁴³ Figure 5.20 below lists the actions that are potentially taken when content is identified as false.

Figure 5.20: Facebook’s actions taken, following fact-checkers’ review of content

Action	Description
Reduced distribution	“We show the piece of content lower in News Feed, significantly reducing its distribution. And on Instagram, we remove it from Explore and hashtag pages and downrank content in feed and Stories.”
Sharing warning	“When someone tries to share a post that’s been rated by a fact-checker, we’ll show them a pop-up notice so people can decide for themselves what to read, trust, and share.”
Sharing notifications	“If someone has shared a story that is later determined by fact-checkers to be false, we notify them that there is additional reporting on that piece of content.”
Misinformation labels	“Applying visual labels to content that has been debunked by fact-checkers and surface their fact-checking articles for additional context.”
Removing incentives for repeat offenders	“When Pages or websites repeatedly share content that’s been debunked by fact-checking partners, they will see their overall distribution reduced, and will lose the ability to advertise or monetize within a given time period.”

Source: Facebook, [How our Fact-Checking Program Works](#), August 2020

Facebook is working with health organisations to confirm claims that are misinformation

In December 2020 Facebook stated that it would begin removing the false claims about the Covid-19 vaccines that have been “debunked by public health experts on Facebook and Instagram”. This was part of Facebook’s policy to remove misinformation about the virus that could lead to imminent physical harm. For instance, as part of its announcement Facebook explicitly stated that it would remove claims that COVID-19 vaccines contained microchips, or anything else not on the official vaccine ingredient list.⁵⁴⁴ In February 2021 Facebook stated that it was expanding its list of debunked claims, following consultations with the World Health Organization (WHO) about removing false

⁵⁴³ Facebook, [How our Fact-Checking Program Works](#), August 2020

⁵⁴⁴ Facebook, [Keeping People Safe and Informed About the Coronavirus](#): Removing False Claims About COVID-19 Vaccines, 3 Dec 2020

claims on Facebook and Instagram. These included claims such as Covid-19 being man-made or manufactured.⁵⁴⁵

YouTube Covid-19 information panels, introduced to tackle misinformation, were viewed 400 billion times in 2020

YouTube introduced a Covid-19 medical misinformation policy in May 2020, not permitting “content about Covid-19 that poses a serious risk or egregious harm” on its platform. YouTube’s policy states that it “doesn't allow content that spreads medical misinformation that contradicts local health authority information or World Health Organization (WHO) medical information about COVID-19”.⁵⁴⁶ In December 2020, Google launched knowledge panels in search results to tackle misinformation about Covid-19 vaccines by showing accurate information. This feature was initially launched on YouTube in March 2020, and in December Google stated that the information panels had been viewed 400 billion times. The feature consists of information boxes that appear on Google when users search for entities (people, places, organisations, things) that are in the ‘Knowledge Graph’.⁵⁴⁷

During the pandemic Facebook introduced new features and restrictions on WhatsApp in an attempt to curb the spread of misinformation

As social media platforms such as Facebook and YouTube amend their community policies and processes to combat false information on their services, this can potentially lead to false information moving onto, and potentially becoming more prominent on, other platforms. It was reported that during the Covid-19 pandemic messages were being sent via WhatsApp potentially containing misinformation.⁵⁴⁸ Users on the messaging service can copy, paste and forward messages and posts, which can mean they can be shared easily with different contacts or chat groups. In April 2020, WhatsApp introduced a limit on message forwarding, so if a message has been forwarded more than five times, a user will only be able to send it on to a single chat at a time. Although this cannot prevent forwarding, WhatsApp saw it as helping to slow the spread of rumours, viral messages, and fake news.⁵⁴⁹ In August 2020, WhatsApp introduced a ‘magnifying glass’ button, appearing next to messages that have been forwarded through chains of five or more people. Tapping it searches the message’s topic online; WhatsApp hopes that the search will reveal whether the content contains misinformation.⁵⁵⁰

In the second half of 2020, TikTok’s Covid-19 information hub was viewed 2.6 billion times globally

TikTok provides authoritative public health information (Public Service Announcements (PSAs)), including from WHO, available directly from its Discover page, on relevant search results, hashtags, and videos, and within its Safety Center. Banners directing users to its Covid-19 information hub were added to over three million videos and were viewed over 63 billion times. TikTok also added

⁵⁴⁵ Facebook, [An Update on Our Work to Keep People Informed and Limit Misinformation About COVID-19](#), 8 Feb 2021

⁵⁴⁶ YouTube Help, [COVID-19 medical misinformation policy](#), 20 May 2020

⁵⁴⁷ Google the keyword, [How you'll find accurate and timely information on COVID-19 vaccines](#), 10 Dec 2020

⁵⁴⁸ BBC News, [Coronavirus: Viral WhatsApp messages 'drop 70%'](#), 27 April 2020

⁵⁴⁹ WhatsApp, [About forward limits](#), accessed April 2021

⁵⁵⁰ WhatsApp Blog, [Search the web](#), 3 Aug 2020

PSAs to relevant Covid-19 and vaccine hashtags that direct users to the WHO and local public health resources, and these PSAs were viewed over 38 billion times.⁵⁵¹

TikTok removed 51,505 videos in the second half of 2020 for promoting Covid-19 misinformation. Of these videos, 86% were removed before they were reported to TikTok, 87% were removed within 24 hours of being uploaded, and 71% had had zero views. In the second half of 2020, 347,000 videos were removed in the US for election misinformation, disinformation, or manipulated media. TikTok worked with fact checkers at PolitiFact, Lead Stories, and SciVerify to assess the accuracy of content and to limit distribution of unsubstantiated content. As a result, 441,000 videos became ineligible for recommendation into the For You feed.⁵⁵²

A difficulty faced by platforms is that sometimes there is insufficient evidence to conclude that information is false. With this issue in mind, in February 2021 TikTok launched a new tool in the UK, targeting content that had been fact-checked but could not conclusively be confirmed to be false. Such videos will not be eligible for a TikTok user's 'For You' feed, to limit the spread of potential misinformation. Viewers see a banner across such videos if the content has been reviewed but not conclusively validated, and the video creator is notified of the flagging. In the UK TikTok has partnered with Logically, a technology company with a fact-checking team, to identify whether content on the platform is false, misleading or misinformation.⁵⁵³

LinkedIn and Twitter also took steps in 2020 to address misinformation

In 2020, Microsoft-owned LinkedIn started reporting on the volume of content being removed for being misinformation. LinkedIn categorises misinformation content as including "false or misleading information presented as fact, such as 'false news', misleading or deceptive media, and denials of well-documented historical events". In the first half of 2020 LinkedIn reported removing 23,000 items of content from its service due to violating its policy on misinformation. Misinformation accounted for 41% of all the content that was removed for policy violations; the second largest category was harassment, with 30% of the content removed for this reason.⁵⁵⁴

Twitter reported that in the first half of 2020 it suspended 1,751 accounts and removed 4,647 due to breaches of its policy on Covid-19 misleading information. These equated to 0.01% and 0.2% of total removals respectively.⁵⁵⁵ In January 2021, Twitter launched 'Birdwatch', an initiative it described as "a community-driven approach to address misleading information".⁵⁵⁶ At the time of writing this was being piloted in the US. It enables users to identify information in tweets that they believe is false, to write notes to provide further context, and then to rate others' notes. Twitter has stated that the notes will eventually be visible on tweets for all users to see; it is using the notes to develop algorithms that will automate the process, using a combination of reputation, consensus, and ranking systems.

⁵⁵¹ TikTok, [TikTok transparency report Jul-Dec 2020](#), 24 Feb 2021

⁵⁵² TikTok, [TikTok transparency report Jul-Dec 2020](#), 24 Feb 2021

⁵⁵³ TikTok Newsroom, [New prompts to help people consider before they share](#), 3 Feb 2021

⁵⁵⁴ LinkedIn Transparency, [Community Report](#), January - June 2020

⁵⁵⁵ Twitter Transparency, [Rules Enforcement Q1 2020](#), 11 Jan 2021

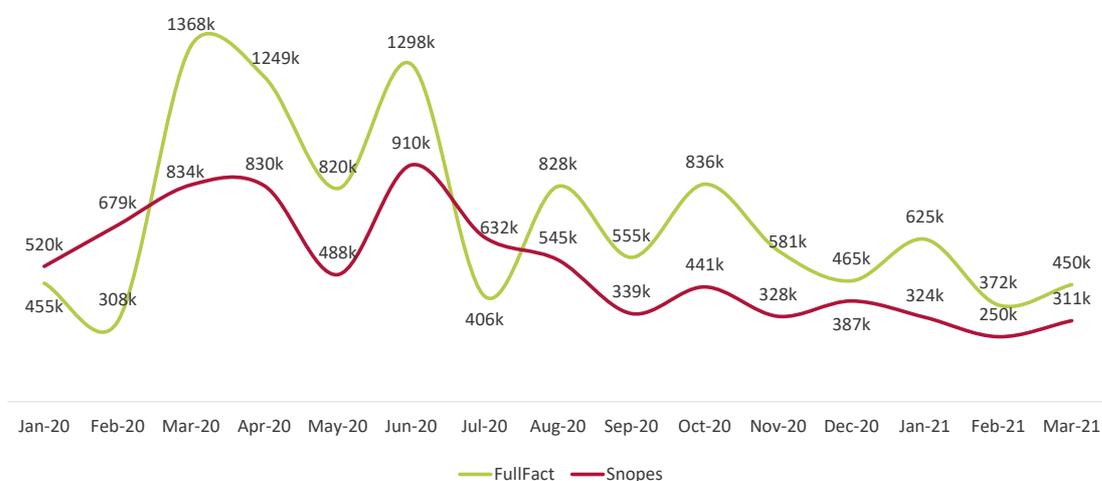
⁵⁵⁶ Twitter Help Center, [About Birdwatch on Twitter](#), Jan 2021

Fact-checking sites gained prominence during the pandemic

There are online sites that fact-check and verify reported information. Full Fact is a UK-based independent fact-checking charity, launched in 2009. It checks claims made by politicians, public institutions and journalists, as well as viral content online, and then follows this up by asking for incorrect information to be corrected, with the intention of stopping and reducing the spread of bad information.⁵⁵⁷ Full Fact has partnered with social media services, as discussed below. Snopes, established in 1994 in the US, is also used by adults in the UK. Its checking process involves assigning content to a Snopes editorial staff member, who undertakes preliminary research, including reaching out where possible to the source of the claim for elaboration and supporting information, contacting individuals or organisations with relevant expertise, and looking for printed information on the topic.⁵⁵⁸

There are various other fact-checking sites available including Northern Ireland-based fact-checking service FactCheckNI.org and Scotland-based fact-checking service TheFerret.Scot, which at its peak in April 2020 had 59,000 adult visitors.⁵⁵⁹ In April 2021 WhatsApp in partnership with the IFCN provided a vaccine grant of \$500k to seven fact-checking organisations to help support their efforts to fight COVID-19 vaccine misinformation.⁵⁶⁰

Figure 5.21 UK adult monthly unique visitors to fact-checking services Full Fact and Snopes: January 2020-March 2021



Source: Comscore MMX Multi-platform, FULLFACT.ORG and Snopes.com, age: 18+, Jan 2020 - Mar 2021, UK.

⁵⁵⁷ FullFact.org, About us, 5 March 2021

⁵⁵⁸ Snopes, [What is Snopes' fact-checking process?](#), 30 May 2019

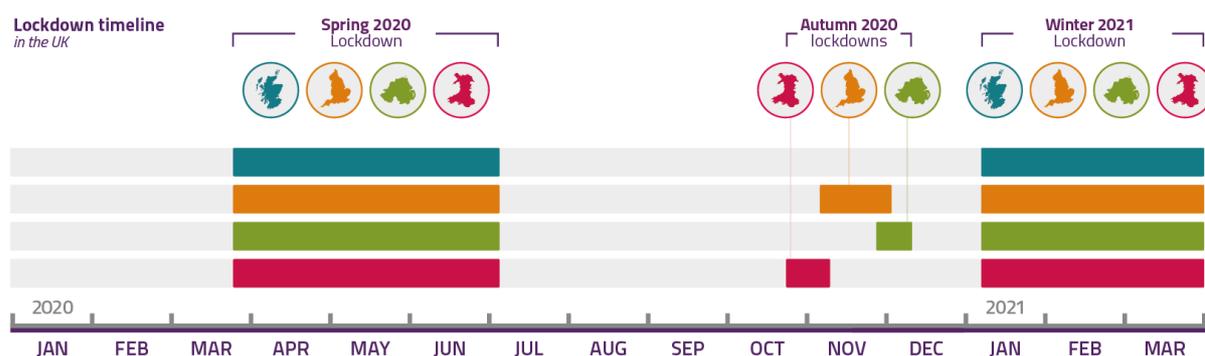
⁵⁵⁹ Comscore MMX Multi-platform, THEFERRET.SCOT, age: 18+, April 2020, UK

⁵⁶⁰ Poynter, [WhatsApp and the IFCN offer a financial shot in the arm to fact-checkers fighting vaccine misinformation](#), April 2021

A1. Covid-19

Lockdown restrictions during the pandemic have had an impact on our research methodology and how we can report data.

We will discuss the impact of the pandemic and lockdowns in 2020 and 2021 on people’s online behaviour and the online industry in this report. Throughout the report we will refer to the various lockdowns across the UK, as detailed in the timeline below, as the spring 2020 lockdown, autumn 2020 lockdowns and the winter 2021 lockdown.



The pandemic has also meant that methodological changes have been made to how some of our data is collected. This means that for some of our surveys, such as our annual Adults’ and Children’s Media Literacy research and our Children’s and Parents’ Media Literacy tracker, we cannot report directly on year-on-year changes, but we have commented on substantial changes or directional trends where appropriate.

A2. Methodology

Ofcom research sources

Adults' Media Literacy Tracker

The Adults' Media Literacy Tracker is an annual survey providing evidence on media use, attitudes and understanding among UK adults aged 16 and over. In previous years, the Adults' Media Literacy Tracker has been conducted face-to-face, in-home using Computer Assisted Personal Interviewing (CAPI). In 2020, due to the Covid-19 pandemic – and in common with other Ofcom tracking studies with an element of in-home interviewing – it was not possible to conduct the research in this way. For this study, a combination of a postal sample, with respondents either completing the survey online or through being sent a paper questionnaire, and an online panel was used. Fieldwork ran from 6 October 2020 – 23 January 2021, achieving interviews with a sample of 3,015 adults aged 16 and over.

Children's and Parents' Media Literacy Tracker

The Children's and Parents' Media Literacy Tracker provides evidence on media access, use, attitudes and understanding among children and young people aged 5-15, as well as information about media access and use by young children aged 3-4. The survey also asks parents' views about their children's media use, and about the ways that parents seek – or decide not – to monitor or limit use of different types of media. Up to 2019, this tracker was conducted face-to-face in the home using Computer Assisted Personal Interviewing (CAPI). In 2020, due to the Covid-19 pandemic and in common with other Ofcom tracking studies with an element of in-home interviewing, it was not possible to conduct the research in this way. Therefore, eligible households were encouraged to complete the survey online, through a combination of post-to-web and online panel interviewing. To adapt the 2019 in-home CAPI questionnaire to an online approach it was necessary to split the survey into two parts: a 'main' online study (Survey 1) and a supplementary online study (Survey 2). The fieldwork for Survey 1 ran from 6th October 2020 - 15th January 2021, achieving interviews with 2,190 parents of 5-15s and children aged 8-15 and 782 interviews with parents of children aged 3-4. The fieldwork for Survey 2 ran from 27th November 2020 - 15th January 2021, achieving interviews with 1,658 parents of 5-15s and children aged 8-15 and 261 parents of children aged 3-4.

Children's Media Lives

A research project which follows 18 children, aged 8-18, over consecutive years, interviewing them on camera each year about their media habits and attitudes.

The study provides evidence about the motivations and the context of media use, and how media are part of daily life and domestic circumstances. It also provides rich detail on how media habits and attitudes change over time, particularly in relation to children's emotional and cognitive development.

Children’s Media Lives: Year 7 – 28 April 2021

Children Media Lives 2020/21 provides analysis of the findings from the seventh year of Ofcom’s Children’s Media Lives study. This research began in 2014 as a way of providing a small-scale, rich and detailed qualitative complement to Ofcom’s quantitative surveys of media literacy.

CML Wave 7 Methodology:

CML wave 7 was completed in February of 2021, during the UK’s third national Covid-19 lockdown. The work followed on from *Life in Lockdown*^[1], completed in the summer of 2020, which was a Covid-19-specific wave of the study that aimed to get an insight into the media lives of children during the initial period of the Covid-19 pandemic.

Apart from this deep-dive report, the project has run once each year between 2014 and 2019.

Due to the travel and distancing restrictions in place during the Covid-19 pandemic, all the interviews for wave 7 were, like those for *Life in Lockdown*, conducted remotely via a video-calling platform.

We used new research methods this year to understand the children’s experience of using media during a pandemic. These new techniques provided us with more insight into their online lives than ever before.

This phase included the following:

An initial interview with each child and their parent.

A media diary: Following their first interview, children kept a detailed diary over a two-week period, including a description of what they did each day. They also submitted six **screen-recorded** videos showing how they used their devices and giving tours around their favourite social media apps and influencers.

Social media tracking: In addition to the material that the children recorded for us, we were able to follow them on social media over the same period; this allowed us to see how they acted online.

Follow-up interviews: During the follow-up interviews, researchers were able to explore what the participants had uploaded and shared on their social media profiles, and cover specific topics of interest raised during the first interview.

Revealing Reality has a strict ethics and safeguarding policy^[2] in place to ensure, as much as possible, that taking part in research is a positive experience for children and that they are not placed under any undue risk, stress or discomfort during the project. This policy is reviewed regularly to ensure that it is in line with all industry standards, including the Market Research Society and the Government Social Research Service.

^[1] [Life in Lockdown](#)

^[2] See [Annex 3 to review Revealing Reality’s Ethics and Safeguarding Policy](#)

Covid-19 news and information: consumption and attitudes omnibus survey

This omnibus is a quantitative interview among 2,000 UK adults aged 16+ via an online panel. The data provides Ofcom with a continuous understanding of how UK adults are getting news and information about the coronavirus. The fieldwork takes place each weekend, with the first wave taking place between 27-29 March 2020.

Yonder's online panel consists of 185,000 UK adults and is the primary source of the sample. Invitations to complete the survey are sent out to a national representative online sample of UK adults aged 16+. Quotas are set on age, gender, region and socio-economic group, and the data weighted to the known profile of the UK using age, gender, government office region, socio-economic group, whether taken a foreign holiday in the last three years, tenure, number of cars in the household and working status. Targets for quotas and weights are taken from the National Readership Survey, a random probability face-to-face survey conducted annually with 34,000 adults.

New research for Online Nation 2021

Video-sharing platforms (VSPs) research

Ofcom commissioned bespoke consumer research to inform our approach to VSP regulation. This research explored a range of websites and apps that people in the UK use to watch and share videos online. It did not focus solely on the services which may fall into Ofcom's regulatory remit under the VSP Regime, but instead sought to understand the UK VSP user's whole experience across the market. This research also considered a broader range of potentially harmful content or experiences that VSP users could be exposed to when using these sites than the specified categories of harmful material in the VSP legislation. This broad approach was taken to build a holistic understanding of the wide range of VSP users' experiences on these sites.

Video-sharing platform usage & experience of harms survey 2021 and *Safety measures on video-sharing platforms 2021* involved the use of a panel created for Ofcom featuring 5,835 UK internet users aged 13-84 years. 5,223 were adults (18-84 years) and 612 were children (13-17 years). The sample was sourced from Yonder Consulting's PopulusLive research panel.

Video-sharing platform usage & experience of harms survey 2021 sample consisted of 2,039 people in the UK aged 13-84. Quotas were set on gender, age, socio-economic group, and region. Of the 2,039 sample, 1,825 were aged 18-84 years and a boost of 214 children aged 13-17 years was applied, with 13-17s weighted back to a representative proportion. Overall, the data was weighted to be online nationally representative of the UK. The data has been tested for statistical significance applied at the 95% confidence level. Fieldwork took place from 8th – 14th September 2020.

Safety measures on video-sharing platforms 2021 was a two-phased programme of qualitative research followed by quantitative research exploring safety measures on video sharing platforms. The qualitative phase consisted of a pre-task and one-to-one online interviews followed by online group workshops. The sample was made up of 24 UK adults aged 18+ years with quotas set on region, gender, usage of VSPs (light, medium, heavy) and working status. A mix of sites and apps were explored: YouTube, Instagram, Snapchat, TikTok, Facebook, Twitter, LiveLeak, and Vimeo.

Fieldwork took place from 21st September – 9th October 2020. The quantitative sample consisted of 1,002 people aged 13-84 years in the UK with quotas set on gender, age, socio-economic group, and region. All participants used at least one of the following in the last 12 months: YouTube, Instagram, Snapchat, TikTok, Facebook, Twitch, LiveLeak, and Vimeo. Data was weighted to be representative of those who go online in the UK. The data has been tested for statistical significance applied at the 95% confidence level. Fieldwork took place from 26th – 30th October 2020.

VSP Content Creators and Community Standards 2021 sample consisted of 20 content creators who earn revenue via content shared on VSPs. There were a mix of those who use the services for marketing, sponsorship, and brand advertising, as well as those who earn money directly from viewers - all within the past 12 months. The sample contained a mix of age and demographics and participants were located in Greater London and Greater Manchester. The project consisted of online, one-to-one depth interviews lasting 60 minutes per interview. Fieldwork took place from 21st September – 9th October 2020.

Reality Mine

Between September 2020 and February 2021, 1,120 of the participants of the research panel recruited for the video sharing platforms research detailed above took part in our passive monitoring research. This involved using Reality Mine's Reality Meter application, which participants downloaded to their smartphones and/or tablet computers, to collect information on their device use. Data was collected on an activity by activity basis, detailing the apps or websites used by the participants and the time spent on each activity.

News Consumption Survey

The News Consumption Survey uses a mixed methodology which includes c.2,100 face-to-face and c.2,500 online interviews among adults aged 16+. The survey was carried out in two waves: in November-December 2019 and February-March 2020. This year face-to-face fieldwork was halted during wave 2 of the adults' study this year, due to the Covid-19 crisis. 56 planned face-to-face interviews that had not been achieved were replaced with online interviews. We do not believe this has had a significant impact on the results. The data is weighted to correct for over-representation in the nations, with weights applied to age, gender and SEG within nation to match known population profiles. A final weight step is taken to calibrate between the face-to-face and online adult interviews. Children's News Consumption Survey, an online survey of children aged 12-15, was also carried out in two waves; in November & December 2019 and April 2020.

Technology Tracker

The Technology Tracker is a survey run once a year (face-to-face in-home) with c.3,900 adults aged 16+ in the UK. Due to the Covid-19 pandemic, the existing face-to-face methodology of Ofcom's Technology Tracker had to be adapted this year, and an approach of post-to-web and post-to-paper was adopted for the main survey. It provides us with an understanding of consumer attitudes and

behaviour in the UK communications markets, helping us to monitor change. The data collected is weighted to the profile of UK adults. The main Technology Tracker survey provides data on:

- Access and take-up of telephony services
- Activities conducted on mobile phones and the internet
- Take-up of TV services, including paid-for and free TV, plus video-on-demand services
- Take-up and listenership of radio and audio services, including digital radio
- Take-up of smart technology
- Bundling of services

In addition to the main Technology Tracker survey, a supplementary CATI (computer-assisted-telephone-interview) omnibus survey was commissioned, to provide Ofcom with statistics that are not easily gathered using other methodologies. The CATI omnibus survey was conducted with c. 3,100 adults aged 18+ living in the UK, and the data was weighted to the profile of UK adults. It provides data on:

- access to devices;
- access to the internet;
- the number of each type of device in the household;
- the extent to which children in the household had access to appropriate devices for their schooling requirements; and
- how children's lack of access to appropriate devices was managed.

Third-party research sources

BARB

Broadcasters' Audience Research Board (BARB) is a panel of approximately 5,300 homes providing the official broadcast TV measurement for the industry.

TouchPoints

TouchPoints is an annual survey commissioned by the Institute of Practitioners in Advertising (IPA). With a sample of approximately 6,000 adults aged 15+ across Great Britain, it uses a seven-day diary to capture media consumption and other daily activities every half hour. It also uses a self-completion questionnaire which includes attitudinal statements. The survey is conducted from January to May each year. In 2020 due to the country going into lockdown in March the results of the survey were split with TouchPoints providing pre-lockdown diary data for the 4,130 respondents who completed from 14 January 2020 through to 23 March 2020 when full lockdown commenced. Lockdown data was provided for 2,253 respondents who started their diaries on 17 March so one or more of the diary days was completed on or after lockdown started in 23 March 2020. In our report we have referred to the 2 different data sets in 2020 as "pre-spring 2020 lockdown" and "spring 2020 lockdown".

Comscore

The UK Online Measurement Company (UKOM) was formed in 2009 with a mandate from the advertising industry in the UK to establish measurement standards for digital media. UKOM appointed Comscore as its exclusive partner for some of its online media audience measurement products in the UK from 2012-2020.

We have used three of the Comscore products:

1. For analysis of internet activity across platforms (laptops, desktop computers and mobile devices), we use Comscore MMX Multi-Platform which employs Comscore's Unified Digital Measurement (UDM) methodology, explained below.
2. For detailed analysis of internet activity on mobile devices (tablets and smartphones), we have used Comscore Mobile Metrix.
3. For analysis of viewing of online video content, we use Comscore Video Metrix (VMX) Multi-Platform.

This report also covers Comscore data for the following countries in addition to UK data: Australia, Brazil, China, Canada, France, Germany, India, Spain & USA.

Comscore's Unified Digital Measurement (UDM) methodology combines panel and census measurement techniques to obtain digital audience measurement statistics. UDM uses Comscore's country specific measurement panel to determine audience reach and demographics. Census-level activity is captured from publishers' digital content, such as on websites, videos, and computer and mobile applications.

Comscore combines census-level data with those captured from the panel to help provide a more accurate view of audiences and their consumption habits. This approach allows Comscore to capture more accurate consumption activity from publishers, and attribute this to audience demographics in a way that is not affected by cookie deletion, blocking, or rejection.

There are varying levels of unification between panel and census data, including where publishers have chosen not to tag all entities they own; this can result in measurement for some entities being reliant on panel only data or being partially unified. Data for BBC News, for example, is partially unified.

In September 2017 Comscore updated the source for its UK universe estimates to the Audience Measurement for Publishers study run by The Publishers Audience Measurement Company (PAMCo). The Enumeration source is the data that Comscore uses to produce universe estimates for its Audience Analytics products. Effective with January 2020 and July 2020 Comscore updated its universe estimates for its MMX-Platform products as part of its periodic enumeration updates. The change affects the UK universe estimates in Comscore MMX Multi-Platform, Video Metrix and Mobile Metrix products. In October 2019 Comscore also introduced improved collection and reporting of its mobile data. Collectively, these changes may result in trend shifts for UK Audience data. Data changes will vary by entity and platform. In July 2020 Comscore enhanced its desktop unique visitor methodology to be less reliant on cookies and reduce impact from privacy settings.

Comscore does not currently measure online activity via a TV set or smart devices in the UK.

The Insights Family UK

The Insights Family UK is a market research and insights resource on the attitudes, behaviour and consumption pattern of children aged 3-18 years old. More than 21,300 children a year in the UK take part in the survey.

Family, Kids and Youth

Family, Kids and Youth is a market research agency specialising in research on children, parents and carers. Their annual 'Wellbeing and the Internet' examines the impact social media and gaming have on children's lives and wellbeing.

App Annie

App Annie provides mobile app analytics data on how apps, platforms and markets are performing, and key metrics across the app lifecycle. The publisher and app rankings reported in the App Annie 2020 State of Mobile, the source of the data for this report, are based on the download, consumer spend and usage estimates available through App Annie Intelligence.

CHILDWISE

The CHILDWISE Monitor Report 2021 is based on data collected from September to November 2020, **from 1,976 children and young people aged between 5 and 16 years, from 55 schools across the UK. Schools were drawn from the CHILDWISE Schools Panel and selected to give a representative mix of demographics (e.g. urban/ suburban/ rural, level of deprivation, Ofsted results). Children completed online surveys in school, lasting for 20-25 minutes, and focusing on children and their media, the child as a consumer, and children's attitudes and activities. Final data were weighted to restore representation by age and gender and grossed to be indicative of the total number of 5- to 16-year-olds in the UK (in 1,000s).**

Tubular Labs

Tubular Labs is social video analytics provider. Tubular Audience Ratings™ measure the reach and engagement of YouTube & Facebook audiences with de-duplicated ratings (unique viewers, minutes watched, 30-second views) for individual or groups of creators, as well as across entire media and brand portfolios, segmented by gender, age, and geography.

Industry sectors: data sources and methodology

Ofcom has conducted data collection, analysis and broader sector insight for key UK online sectors from 2015 to 2020: search, e-commerce, directories, media and audio-visual entertainment, gaming, news and social media. Global and UK figures are provided for each sector by revenue stream (advertising, subscription, transactional and public funding).

Figures are based on estimates from publicly-available company reports and industry sources including the IAB UK Digital Adspend Study, PwC Global Media and Entertainment Outlook: 2020-2024, Office for National Statistics, Ampere Analysis, AA/WARC Expenditure Report and Enders Analysis, or modelled where applicable and appropriate. The figures presented should be treated as indicative only. They are designed to provide general context of online markets in the UK and may differ from other estimates in the industry due to differences in sector definition or other methodological differences. This is not intended to act as an economic analysis exercise and the categories defined in this report are subjective and may overlap.

Underlying UK revenue figures have been adjusted for CPI (2020 prices) in accordance with standard Ofcom practice. Global figures remain unadjusted and any UK shares of global were calculated before CPI adjustments.

Ofcom used a top-down approach starting with data from industry sources such as IAB UK and PwC to estimate sector or segment sizes. This was coupled with a bottom-up approach, focusing on the revenues of the largest market participants, to fill sectoral gaps and quality assure other industry estimates.

The combined total of each of the applicable revenue streams gave the market size for that sector, and the combined totals of all revenue streams the total market size. The e-commerce sector (UK-only) was considered separately to other industry sectors and figures from e-commerce (consumer spend) are not included in total market size.

Industry sources used to estimate online industry sector data include the following:

IAB UK

IAB UK is the online advertising trade association of the UK and publishes an annual advertising spend study sizing the online advertising market. IAB UK's Digital Adspend study 2020 (produced with PwC) is used in Online Nation as the primary source for UK online advertising revenues covering search, display (comprising both video and non-video), audio and classified advertising formats. It is used to consider the digital advertising market individually, a key revenue stream of many online businesses, and is also one of the sources used for the analysis and modelling of industry data across several sectors.

PwC Global Media and Entertainment Outlook (GEMO): 2020-2024

Global professional services network PwC conducts data analysis across a wider range of areas. GEMO is one of the sources used for the analysis and modelling of sectoral online industry data for this report. It provides historical and forecast data and commentary for various segments of the entertainment and media industry globally and for the UK, including advertising, free and paid-for video, music, news and gaming.

Office for National Statistics

The ONS is a non-ministerial department of the UK government which collects statistics related to the UK economy and society. The Retail Sales Index internet sales data formed the basis for the estimates and analysis on the e-commerce sector in the UK presented in this report. Ofcom used the ONS average weekly sales data (seasonally adjusted) for different store-types, including food and drink and household, to estimate monthly and annual sales total for e-commerce.

Ampere Analysis

Ampere Analysis is a research and data analysis company which focuses on media and communications. Their data was used in Online Nation to estimate the UK video segment of the entertainment and audio-visual media sector, primarily paid-for (subscription and transactional) revenues. Ampere Analysis also provided some data on users of subscription gaming services.

AA/WARC

The Advertising Association is a trade body representing the advertising industry in the UK. WARC is a marketing intelligence firm that supports advertisers, agencies and media platforms. They collaborate on an annual Expenditure Report, providing data and analysis on the UK advertising market. Data was used primarily to estimate the advertising revenues for digital magazines (entertainment and audio-visual media sector) and online newsbrands (news sector) in the UK.

Enders Analysis

Enders Analysis is a research and data analysis company which focuses on media and telecommunications in Europe. Data on the classified advertising market was a primary source used to model the online directories market, in combination with other industry and modelled data.

Adjustments for CPI

In line with standard Ofcom practice to represent all monetary figures adjusted for inflation using the consumer price index, we have adjusted UK figures for inflation using figures available from the Office for National Statistics:

2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
1.164	1.131	1.104	1.087	1.087	1.079	1.051	1.026	1.008	1

For any conversions by Ofcom to GBP from other currencies (including historical figures), we have used Bank of England rates.