University of BRISTOL

Digital Inequalities: Emergent findings

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Executive Summary

Working in partnership with Knowle West Media Centre, researchers from the Bristol Digital Futures Institute co-designed and sent questionnaires to 5,500 households in Knowle West – an area of Bristol that features highly in the government's multiple deprivation indices. As well as investigating how COVID-19 was shaping patterns of digital exclusion, the survey aimed to uncover the reasons for it too. Are the main problems affordability, skills and confidence, perceived relevance to life, or something else? And are these problems different for different social groups? The survey responses from our work with Knowle West Media Centre have been combined with insights and interviews conducted by researchers at the University of Bristol School of Education. By bringing our studies together, we aimed to gain a richer understanding of the patterns and processes of digital exclusion. This research will provide the evidence base needed to improve education, employment and health outcomes, allow policymakers to take effective, targeted, local action, and enable Knowle West Media Centre to redefine its digital strategy to address the issues our study reveals.

It is advised to read this Findings report alongside the Background Report for this study, where further methodological details and more finely-grained statistical and qualitative explorations are explained.

Summary of findings

Demographics

- People who responded to our survey seemed to be living in larger households than Fildwood's average household size. With more people trying to use the internet at the same time and share devices, this might affect both internet speed and access.
- 3/17 of the total participants self-identified as having a disability, with mental health conditions the most prominent. Almost a quarter of people with disabilities had two or more disabilities.
- During the lockdown, full-time employment/self-employment dropped by over 11% from pre-lockdown levels. Only a small proportion of this was made up by people being unable to work due to sickness/disability (1%) or being furloughed (2%), while unemployment accounted for 8% of this proportion.
- Analysis of the interview data provides evidence of ways in which people experiencing multiple inequalities – low income, precarious employment, physical and mental health conditions, food poverty, educational inequalities etc. – are further disadvantaged by digital inequalities, particularly as access to vital services and information is increasingly shifting online. The pandemic has compounded this disadvantage in numerous ways, including by cutting people off from their usual support networks.

Internet access

- 92.7% of households surveyed had internet access, most of them only through one type of internet (59%). Most households were connected via Broadband (68%).
- Almost all people in employment reported having access to the internet, whereas people who were retired or unable to work for health reasons typically had less internet access.
- Up to the age of 65, the vast majority of people had internet access. This dropped to 70% of households with individuals over the age of 75, but compared with other surveys, far more of our survey respondents over 55 seemed to be online than might be expected.
- We were unable to draw any significant conclusions from our survey about whether ethnicity and disability factored into people's internet access, ownership of devices or internet use.

- Internet speeds did not appear to be greatly affected by the lockdown. However, some people expressed concerns with internet speed and reliability.
- People reported widely diverging internet costs. Many said internet access was too expensive; for some, prohibitively so, especially with extra costs such as landline, electricity bills and device costs. Some people said they would prefer internet-only options rather than TV/phone/internet packages, but that choices were limited and packages more economical.

Internet use

- Entertainment, socialising, and shopping were the most commonly-reported uses of the internet, the most visited websites being Facebook, YouTube and Netflix. People also used the internet for home-working, accessing local and national information, learning and healthcare, although these uses where less prevalent.
- However, not all used the internet for this broad range of purposes. Roughly 20% of participants reported using the internet for only one or two purposes, with entertainment as the main use.
- Our findings suggest that the individuals who used the internet for a very wide range of purposes tended to be white and working in higher-status jobs. Well over half of these were between 24 and 46 years old, with a further quarter in the 46-65 age bracket. Very few over-65s were in this group of potentially more technologically advantaged or engaged people.

Internet devices at home

- The households surveyed were much more likely to have a smartphone or a laptop than a PC. Smartphones were also relatively new, whereas PCs, laptops and tablets tended to be much older.
- Twenty-four homes (11%) had no internet devices and the same number had only one gadget.
- People with devices tended to be in employment.
- Over half of the households with no internet devices had people aged over 75.
- Of the 108 households needing internet devices for schoolwork, over half reported that they did not have sufficient devices. This rose to 81% of 3-person households but dropped off for larger households. People reporting insufficient devices for schoolwork tended to identify as white, and households with a member with disabilities also seemed to be more prominent in this group.

No Internet access

- A minority of respondents did not use the internet. Respondents aged 35+ tended to cite as deterrents: confidence, skills, privacy, and security concerns, the cost of internet access and technology.
- Older participants tended to say they didn't need internet access or that disability was an issue, although open-ended responses suggest confidence is also an issue for older people.

Attitudes to technology

- While many participants expressed confidence about using the internet, a sizeable minority also require support. Compared with recent national data, people in this study were well over twice as likely to say that they lacked skills.
- Confidence is not merely a matter of age. While this study provides clear evidence of a lack of confidence about using the internet among older individuals, it also suggests that older individuals feel significantly *more* confident to use the internet *when guided by others* than their younger counterparts. This suggests a much more complex picture.
- People in this study were over four times more likely to express concerns about security, privacy and the trustworthiness of online information than in a recent national study.

- Across all data privacy questions, those not feeling comfortable disclosing personal information online are comparatively older than those reporting fairly or very comfortable.
- Some people said that increased time spent online was affecting their mental and physical health and real-life social contact, although some also reported using the internet for supporting their mental health through entertainment and socialising.
- While respondents recognised the benefits of online activity for children's education and future employment, they were also concerned about the time children spent online and the potential for exposure to online abuse.
- Participants hoped for a safer internet in the future, with greater regulation and accountability.
- Cheaper or free internet access and ample support were regarded as essential to digital equality.
- Participants were also hopeful that technology would play a vital role in the future in healthcare, improving the environment, connecting people locally and internationally, and education, and would improve people's quality of life, especially older and vulnerable people and those with disabilities.

Key Recommendations

In a community with high proportions of low-income households, internet access can be prohibitively expensive. We recommend that policymakers:

- consider making it compulsory for providers to offer lower-priced tariffs to low-income customers, without compromising on internet speeds;
- extend plans for free, fast and secure WiFi to neighbourhoods beyond the city centre;
- ensure that improving fibre optic network infrastructure (including into homes) is a condition of planning approval for new developments.

Our study provides evidence that residents of the Knowle West area are concerned about staying safe online, protecting their personal data and being able to trust online information. We recommend that

- free training is provided for people of all ages to address these concerns

Enforced home-schooling during lockdown has revealed the extent of digital inequalities among families with children of school age. We recommend that

- children without adequate digital resources are swiftly identified and that funding is directed to provide devices, including laptops and headphones, and ensure access to internet and free printing services;
- policymakers recognise that digital inequality is part of a wider web of inequalities, including income, employment precarity, food and health inequalities, and a holistic approach is necessary.

This study evidences ways in which longstanding underinvestment in community services leaves many families and individuals in positions of precarity and vulnerable to crisis.

- funding should be provided to regenerate struggling community services and reduce the reliance on crisis solutions such as food banks.

The study also provides evidence of ways in which community organisations with collaborative working practices and grassroots knowledge can identify local problems and assets and find innovative solutions. We recommend that

- this model of working continue to be supported, trusted and funded at city level.

SECTION 1: Demographics

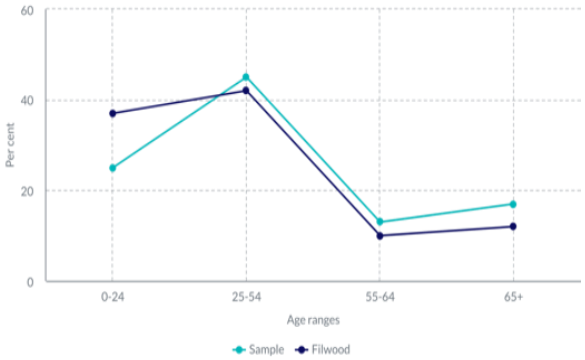
The graphs below represent some features of the households who returned the survey in June 2020:

- the number of people per household, their ages and ethnicities (Figures 1-3, respectively).
- proportions of people identifying as disabled and a breakdown of those disabilities (Figures 4-6).
- employment status, how that changed during the lockdown, and employment status according to socio-economic classifications (Figures 7-9).

Figure 1. Number and percentage of household members.

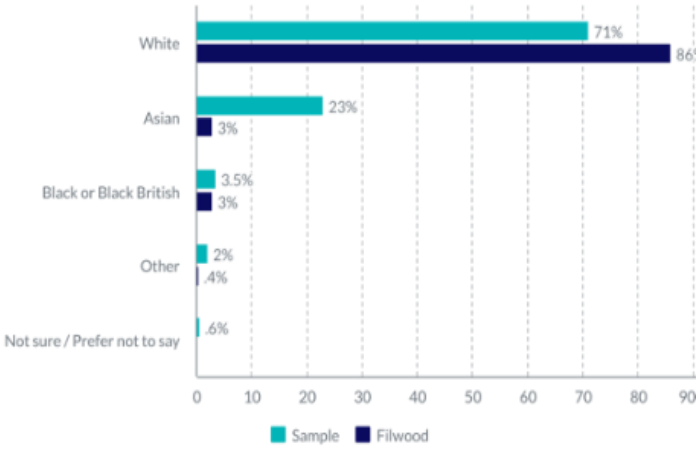
NB. With 3.2 people per household, the Knowle West household size is higher than the Filwood's average of 2.5 persons per household.

Figure 2. Percentage of age groups in the sample.



NB Adults appear to be slightly overrepresented in this survey compared with ONS 2019 Small Area Population Estimates for the Filwood area.

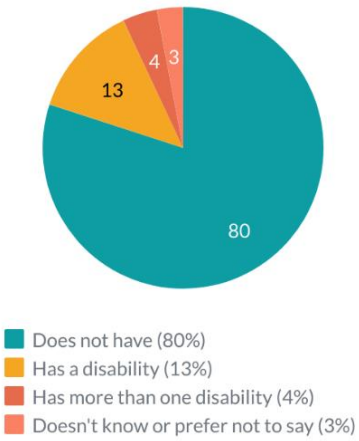
Figure 3. Ethnicity.



NB Compared with 2011 census data for Filwood, this sample has a far smaller proportion of respondents identifying as White, far higher proportions of participants identifying as Asian, and a slightly higher representation of people identifying as Black or other ethnicities.

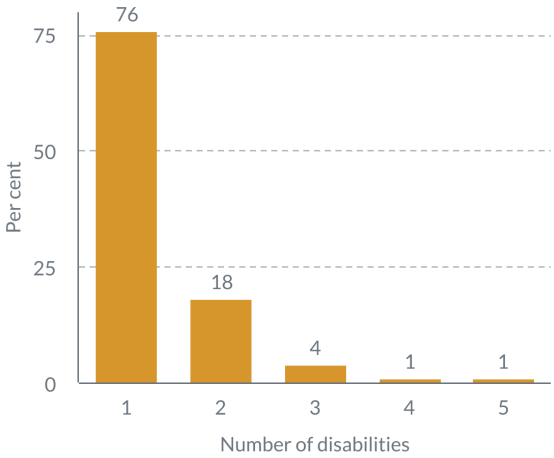
Disabilities

Figure 4. Proportions of disabilities in the sample.



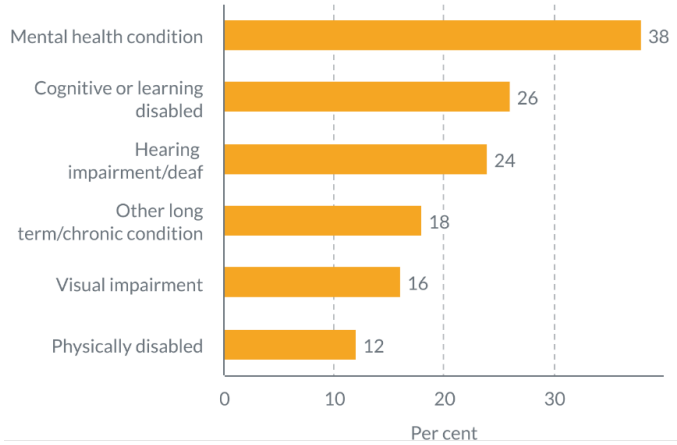
NB Calculated from a total sample of 885 individuals

Figure 5. Disabilities.



NB While most of the participants who identified themselves as disabled indicated that they had only one disability (76%, n=113), nearly one in every five reported having two disabilities (18%, n=27), and the rest said they had between three and five disabilities.

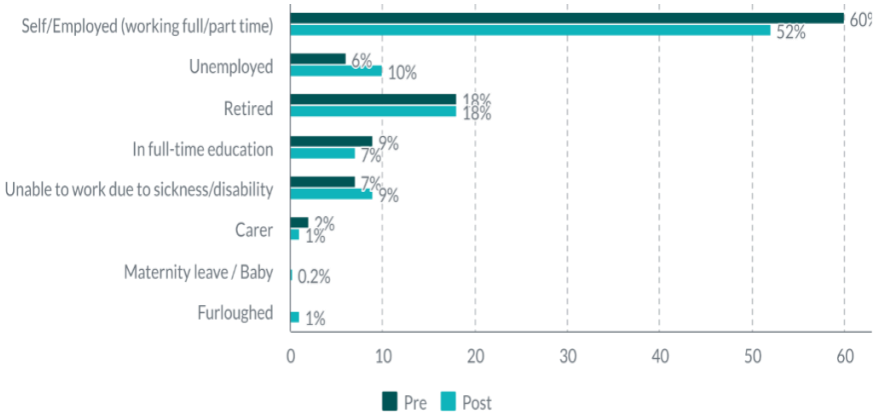
Figure 6. Different kinds of disabilities.



NB These numbers represent 149 individuals. The questionnaire gave the option to state more than one disability. Therefore, percentages do not sum up to 100%.

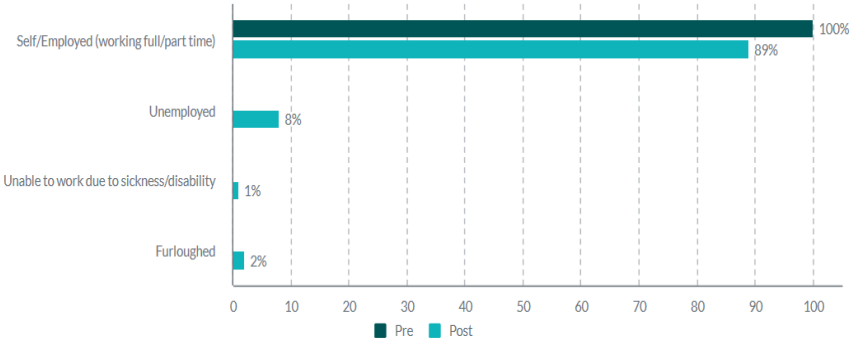
Employment

Figure 7. Comparing employment status pre- and post-lockdown.



NB sample size for this item n=546.

Figure 8. Employment status before and after lockdown, a comparison.

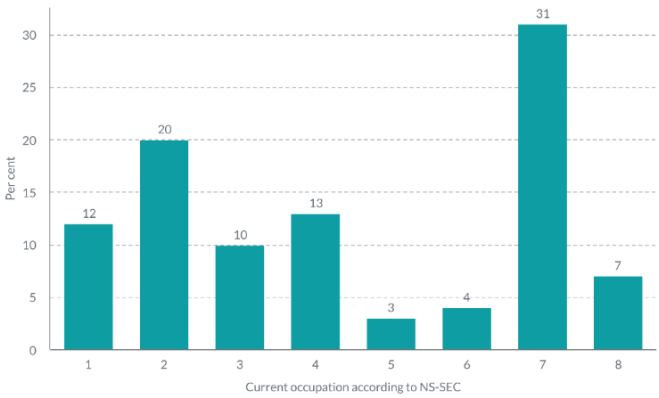


NB The figure relates to people who reported being employed only (wether self employed, employed, part of full time) before lockdown (n= 325). It shows a considerable drop in employment and a large increase in unemployment.

Table 1. NS-SEC 2010 classifications.

Category	Description
1	Higher managerial, administrative and professional occupations
2	Lower managerial, administrative and professional occupations
3	Intermediate occupations
4	Small employers and own-account workers
5	Lower supervisory and technical occupations
6	Semi-routine occupations
7	Routine occupations
8	Never worked and long-term unemployed

Figure 9. People's occupations, according to the above socio-economic classifications.



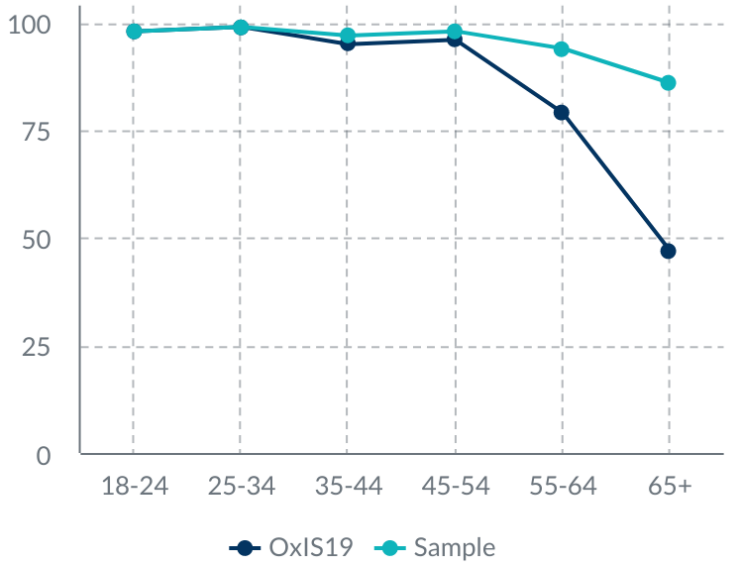
SECTION 2: Internet Access

Of the households that returned the Digital Technologies and the Coronavirus Crisis Community Survey, over 90% were internet users (92.7%, n=255).

Demographics and internet access

The evidence shows that all minors in the sample (people aged 17 or younger) had internet access at home. This finding is remarkable as it is the only age group found to have universal access to the internet. Most people across all other age groups reported being online (94% and above) except for people aged 65+ (86%). These findings closely resemble the distribution of people online observed nationally, according to OxIS19 data, with one important exception: a far greater proportion of people aged 55+ in Knowle West seem to have internet access than their national counterparts (See Figure 10).

Figure 10. Internet access by age group compared between OxIS 19 and Sample.



The vast majority of individuals in part or full-time employment had access to the internet. Because of the small numbers in our survey of people without internet access, it was not possible to draw any conclusions about how disability and ethnicity affected people's internet access or their ownership of devices.

Internet access pre- and post-lockdown

Figure 11 shows where people accessed the internet before and during the first national lockdown in the UK. Accessing the internet while "out and about" reduced by about ten per cent, while "at work or college" reduced by nearly 15%. Figure 12 indicates that Broadband is the most common internet type among survey participants.

Figure 11. A comparison of internet access pre- and post-lockdown.

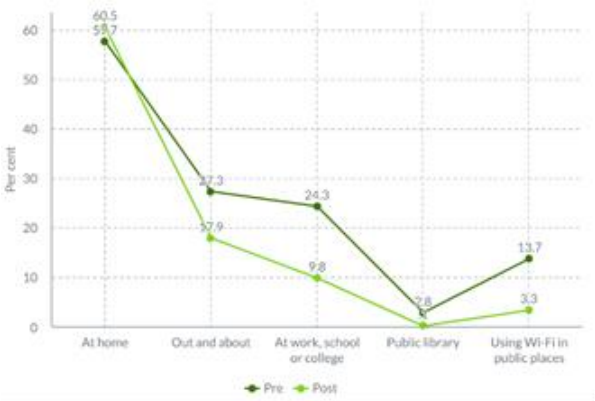
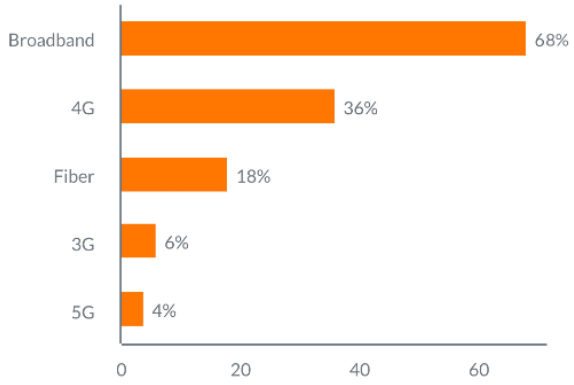


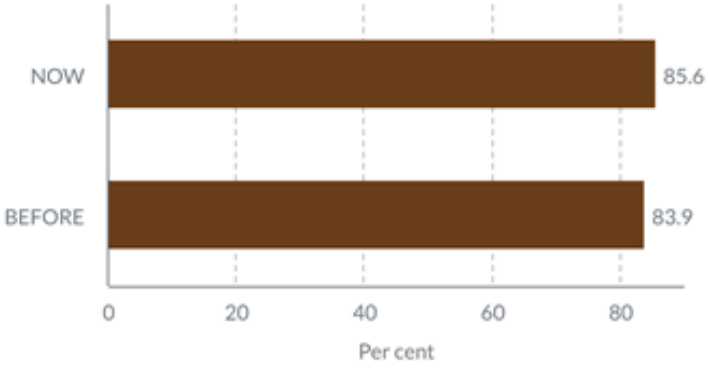
Figure 12. Type of internet at home.



Internet speed before and during the first national lockdown

Our quantitative data show little change in internet speed before and during the first lockdown. Over 80% of households reported being satisfied with their internet speed (Figure 13). However, in their free-text responses, many commented on slow or unreliable internet.

Figure 13. Internet speed at home before the lockdown and now: percentages of people satisfied with their internet speed.



"My internet is very slow even after 3 home visits and new equipment installed. Paying for 200mbps but getting as little as 4.32mbps and as much as 101mbps."

"My issues have been mostly with the net speed and connection, which has meant not being able to teach online or use video during meetings."

"Everyone at home wanting to use the internet at the same time causing slow speed."

Figure 14. Screenshot of internet speed search.

A search using https://www.broadbandspeedchecker.co.uk/isp-directory/United-Kingdom/Bristol.html suggests that parts of Knowle West have lower average broadband speeds than the UK average (71.8Mbit/s[1]) and other areas of Bristol.

Monthly cost of the internet

186 households provided information on their monthly internet service costs. Prices ranged from £4 to £134, with an average of £37.42. Given this wide range and free-text responses which suggest that internet-only packages are not readily available, some participants may well have included in their answer other services, such as TV packages or mobile phone allowance. It is also likely that some people have internet access but do not use it because it is bundled into TV/phone packages.

In a community with high proportions of low-income households, internet costs cannot be ignored when considering digital exclusion. Some participants mentioned additional costs associated with internet use, such as landline costs, electricity bills and the cost of purchasing and maintaining devices. Some cited TV licences as an additional burden. Many respondents also mentioned concerns about getting into debt because of the ease of online spending using a credit card.

"I use Virgin media, and the reason I have the TV, phone and internet package is because internet only is the same price. I feel it is far too expensive and should be cheaper so that everyone can afford it."

"Due to being on benefits, I can't afford to pay for broadband at the moment".

Among these participants, the amount they paid did not seem to affect how satisfied they were with the internet speed after the lockdown.

Internet use and most often-used websites

Almost half of the participants said they used the internet for entertainment, closely followed by socialising and shopping (Figure 15). Facebook and YouTube were the most frequently visited websites, followed by Netflix (Figure 16). Keeping in touch, entertainment and shopping were also key themes in the free-text responses, which suggest that these uses of the internet were vital during the lockdown and a source of mental health support:

"All of our entertainment also comes from the internet, so we would have been bored and cut off without it."
"Ability to get online to get shopping for shielding relatives"
"I've found keeping in touch with people extremely important at the moment, especially because I live alone and work for the NHS. It's been a really weird and stressful time, I don't think I would've been able to cope without contact with family and friends."

Figure 15. Internet use.

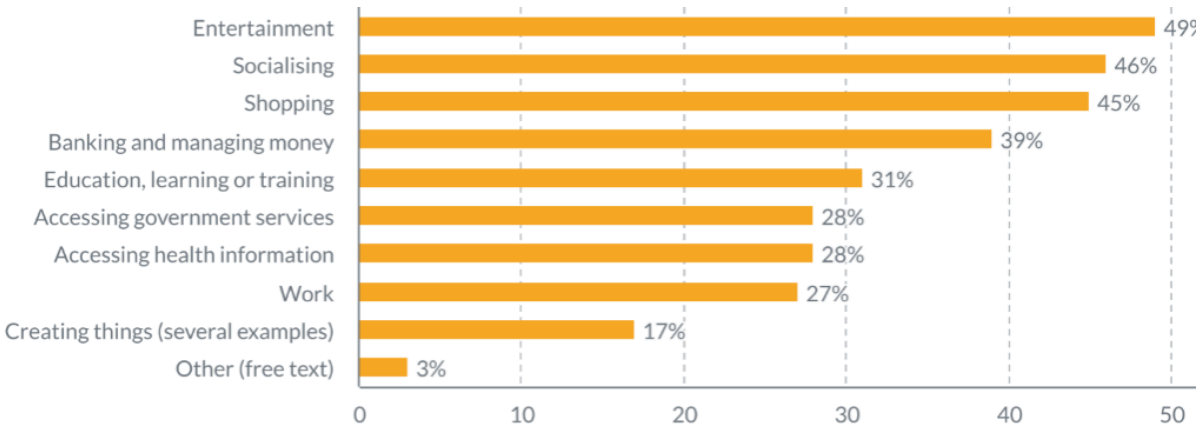
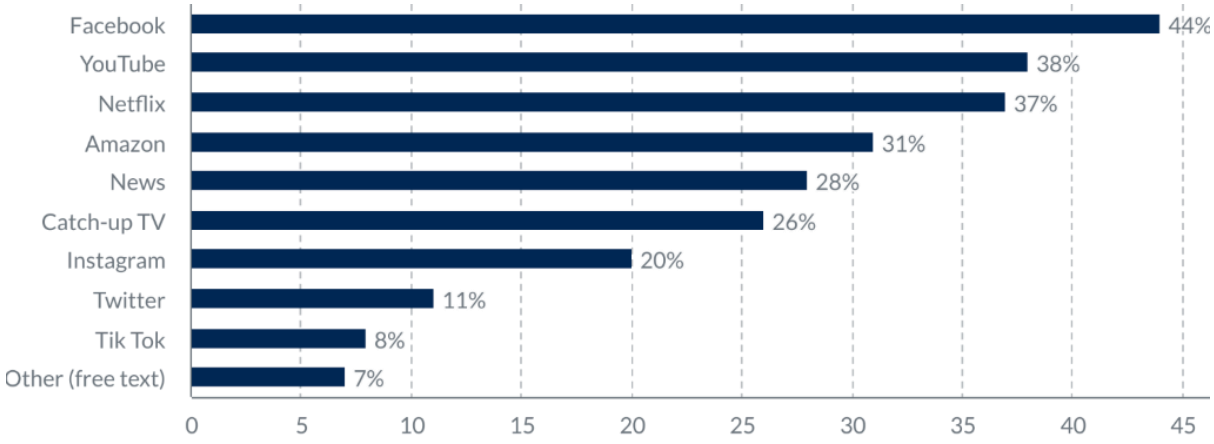


Figure 16. Websites used most often.



The open-ended questions also provide evidence that the internet was vital for enabling many participants to **work from home** during the lockdown:

"I wouldn't have been able to work from home without it and could have lost my job."
"it is a massive step forward to be able to have people working remotely, more companies need to embrace this."

Another theme is the use of the internet as a key way to **keep updated** with both national and local information and events, especially during the lockdown. Participants' comments about the usefulness of local websites could feed into strategic decisions.

"Certainly keeping us involved in what is happening locally and around the world has been a boom on the internet. I rarely watch the news so I catch up with what's going on via the internet it's great. Finding more local websites – they are invaluable to someone like me, and I can pass on to my neighbours with no access."

In their free-text responses, many participants also described using the internet as a **learning resource** that supported their interests:

"crafting/ gardening skills – learning new things"
" I study karate and it has continued online using video and Zoom."

Several participants also expressed the view that the **online health care** provided during the pandemic could be extended in the future:
"Hopefully facilitate access to NHS services without having to struggle to get an appointment and waste valuable time."

Number of internet uses

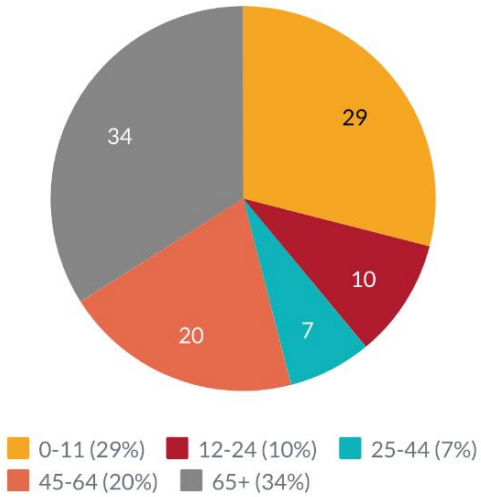
When looking at how many different purposes people used the internet for, we found three similarly proportioned groups. Around one-third of individuals reported using the internet for one to three of the provided options, with another third using the internet for 4 to 6 activities. The final third of respondents appeared to be highly versatile internet users, reporting between 7 and 10 of the options. The more versatile internet users seem to have incorporated internet use into a wider range of everyday activities such as banking and accessing government services, whereas those who use the internet more narrowly tend to use it predominantly for shopping and entertainment.

Single-purpose internet users (n=41, 7% of those reporting how they use the interent) are roughly divided into three groups: one of them groups individuals in the 0-11 age range; another gathers participants in the 65+ group. Other age categories are spread among the other third, being those in the 45-65 the most

prominent (see Figure 17). Notably, the least numerous amongst the single-purpose internet users are those between 12 and 44 years old. Potentially, these are more actively engaged in formal education and employment, and might be more represented in the more active online users. Most single-purpose internet users are white and perform an employment in NS-SEC categories 4, 7 or 8.

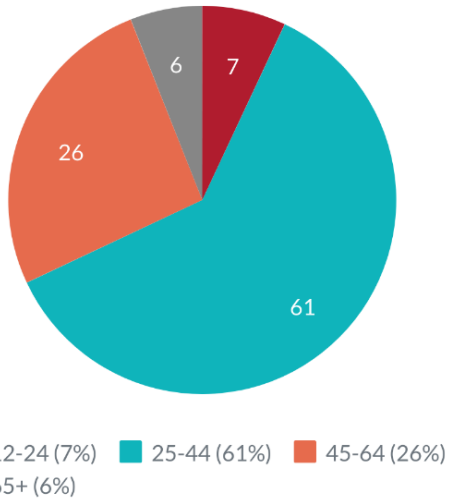
The most active internet user group (i.e. 7 to 10 purposes) is more numerous (n=171, 30% of those reporting how they use the internet) and mostly integrated by individuals in the 25-44 age group, being 45-64 the second largest. Most participants in this classification are white and perform employment activities related to NS-SEC categories 1 to 4, as shown in Figure 18.

Figure 17. Single-purpose internet users.



NB calculated based on a sample n=41

Figure 18. Multi-purpose internet users (7-10 purposes).



NB calculated based on a sample n=171

SECTION 3: Internet Devices

Internet devices at home and age of internet devices

The survey asked about internet devices in the household and their age. Smartphones were the most common devices owned, with two smartphones in about a third of the households. Over two-thirds of the households had at least one laptop, and just under two-thirds at least one tablet. The vast majority of families had no PCs at home (72%), see Figure 19.

Smartphones were also amongst the newest gadgets these participants owned. Most technological appliances, including smartphones, were between two and five years old. The oldest internet devices tended to be laptops, PCs and tablets (Figure 20). This is important information because, as one of the interviewees pointed out, different devices offer different online opportunities:

"there's limitations on what you can do on a smartphone if you've got to fill in forms or access new Universal Credit stuff".

Figure 19. Household internet devices.

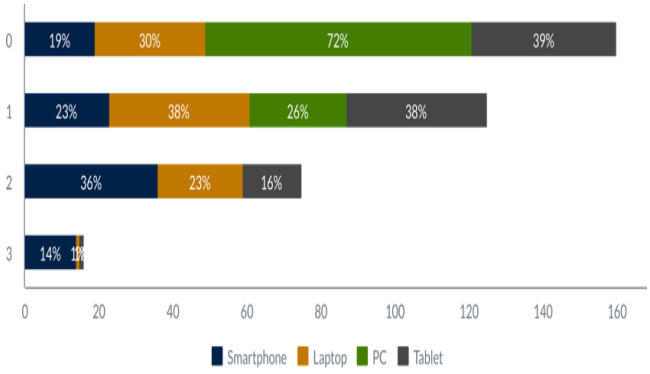
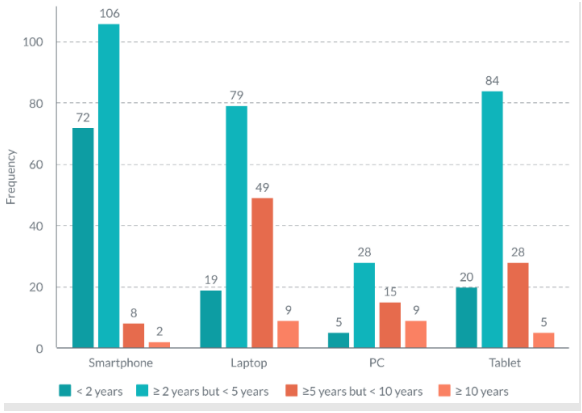


Figure 20. Internet devices' age.



"I have had to change phone (android) to one with more storage and find that differences, apart from storage such as uses of screen etc are hard to follow"

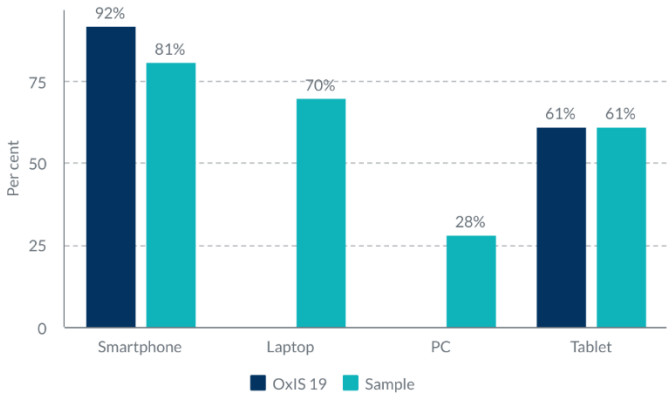
"I have a laptop but the wire fire cable is faulty and can't get the internet on it."

"I would like everyone to be compatible and for digital technology to last longer."

24 households in the survey had no internet devices. More than 60% of these households had 2 members, while the rest had 3 and 4 members. Nearly half of households with no devices had members aged 74+. There were also 24 households with only one gadget. For seven households, this was a smartphone; eight households had one laptop; five had one PC, and 4 had one tablet only.
The evidence shows that few workers do not have internet devices, which mirrors findings related to access to the internet among these participants.

When comparing the availability of devices with the national data reported in the Oxford Internet Survey 2019 (OxIS19), it is observed that, nationally, there is a higher proportion of individuals with a mobile phone than respondents of the Knowle West survey. Concerning Tablet devices, there is an exact correspondence between OxIS19 and Knowle West (Figure 21).

Figure 21. Availability of internet devices at home compared between OxIS and Sample.

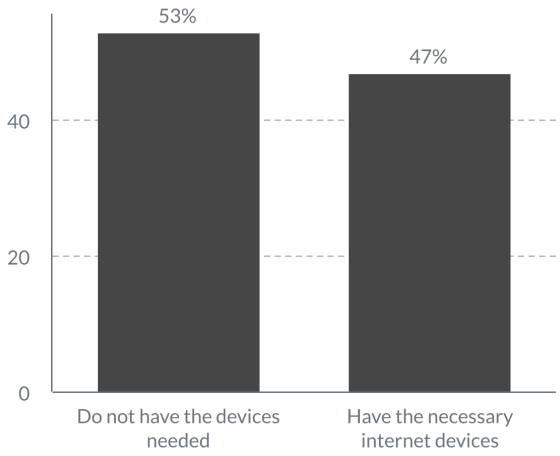


Internet devices for schoolwork

A question asked whether the households had the necessary internet devices for schoolwork if they needed it. As Figure 22 shows, over half (57) of the 108 families who reported needing devices for educational purposes felt they did not have enough. Of these, 55 families identified as white (i.e. 96.5% of families with insufficient devices for schoolwork). Households with members with disabilities also seemed to be worse off for devices for schoolwork. A lack of sufficient devices for schoolwork seemed to affect households in all NS-SEC categories alike.

We looked at the number of people in the households with insufficient devices for schoolwork and found that 70% (i.e. 17 households) were 2-person households and 81% (32 households) had three members. Larger families appeared to be relatively better off for devices.

Figure 22. Internet devices for schoolwork.



"how annoying it is when [the internet] goes down during work or home school time" (from survey)

"if you're a family with four kids and… you say, 'Yes I've got access to the internet', but it's one phone. That's no use." (from interview).

"Using my phone I was able to print school work for my children during the school closure." (from survey)

These qualitative responses throw additional light on technology-related challenges of home-schooling during the lockdown and how participants managed. Simply having access to adequate devices is only part of the story however, as one interviewee pointed out:

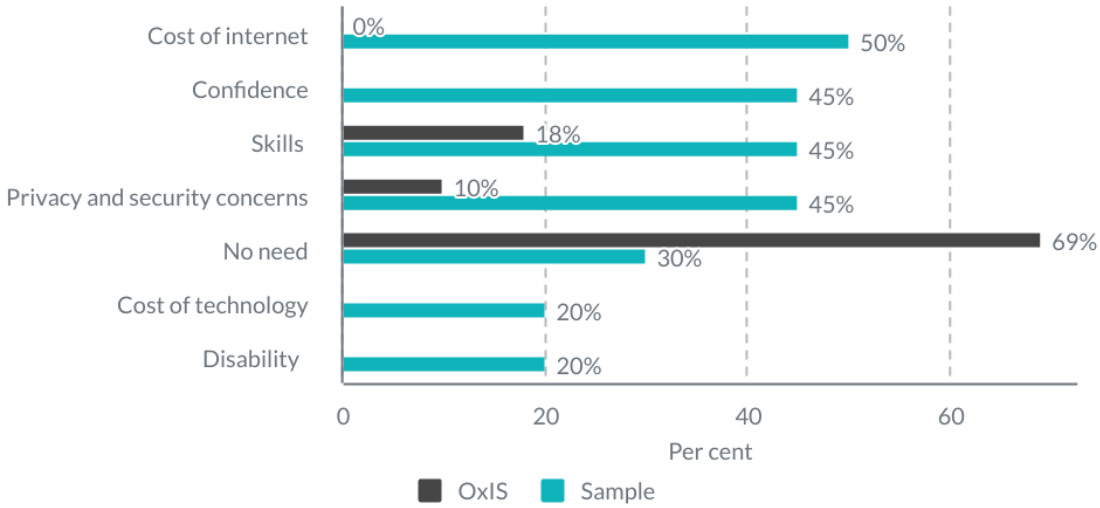
"lots of young people are sharing bedrooms with their siblings, they're in a small house. Not everyone's lucky enough to have a spare room that they can set up as their office... it's all linked. 'Yes you may have a device but do you have headphones to be in a quiet space? Do you have to share the device? How long do you have the device?'"

SECTION 4: No Internet Access - reasons

As mentioned, access to the internet in this sample was high. A question asked about reasons for not accessing the internet, and a handful of participants responded to this question. These responses were contrasted with national data from OxIS19. The comparison requires careful reading as the response categories were not identical for these two studies. Only three items could be contrasted: skills, privacy, and the perceived need for technologies. From this comparison, it is remarkable that 27% more people in Knowle West than in the national study said they did not use the internet *because they did not know how to*. And 35% more people in Knowle West reported privacy concerns as a reason for not using the internet. Another revealing finding was that only 30% of people in the Knowle West study said they

did not need the internet, compared with 69% nationally who reported not being interested in using the internet (Figure 23). This might be explained, however, by timing of the questionnaires. The OxIS 19 was reported before the pandemic and the KWMC during the pandemic.

Figure 23. Factors for no internet access compared between Oxis19 and sample.



NB: sample sizes as follows OxIS 2019 (n=290); Knowle-West Community (n=47)

Non-users who explained they did not access the internet because of a lack of confidence or skills, privacy and security concerns and technology costs tended to fall into the 35 years old and above age bracket. This lends support to an idea raised by one of the interviewees that

"it's yet to be proven, but there's a generation of people who didn't use the internet at school and they do manual work and so they haven't had to have access to the internet so it's a generation there, between the younger children and the older people, who've got really limited access to computer or digital"

Notably, no need for the internet and disability were prominently mentioned by people 65 years old and above. The qualitative data support this finding but also suggest that confidence may also play a role in deterring older people from using the internet:
"quite scary for people my age – 78".

Some comments from older participants point to a sense that they are unable to participate in an increasingly digital future or are simply uninterested:
"I am 77 years old so honestly the future is not really for me."
"Good for the younger generation but not us. Too old to care."

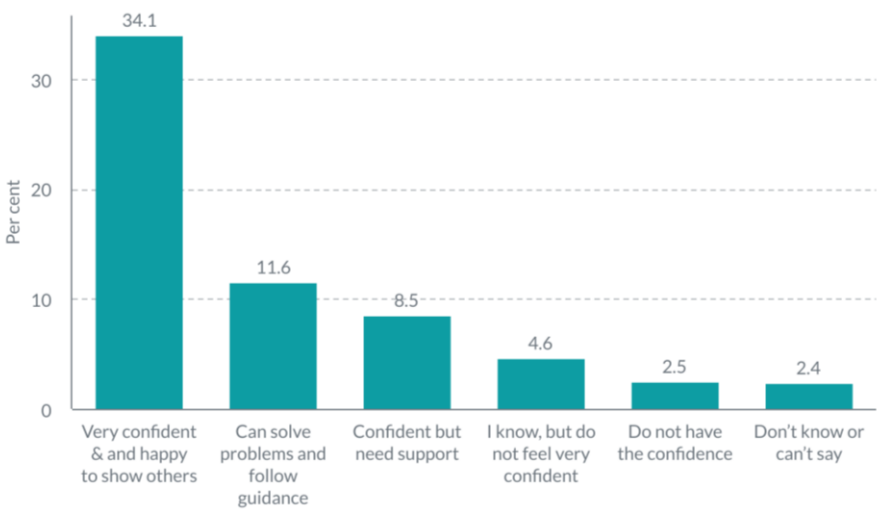
However, there is also evidence that older people without internet skills or access at home may indirectly use technology through younger relatives, and that with support, older residents of the area have been able to derive benefits from technology:
Through my work we have had intergenerational group chats on the phone which has been amazing as it has allowed older people without technology to speak to their friends in a group over their phones and listen and talk to the local nursery children. it has been a huge positive impact on their lives.

SECTION 5: Attitudes to Technology

Confidence

As might be expected, given the internet's currency among most participants, our findings indicate that a large number of the participants (45% or 405 individuals) reported feeling very confident at using the internet and happy to show others or could solve problems and follow others' guidance. Less confident individuals who might need support to navigate the internet represented 13% of the total sample (116 people). Finally, 43 respondents (just under 5% of the total) reported that they did not have the confidence or did not know about using the internet. See Figure 24.

Figure 24. Feelings about using the internet.



"I know enough to be able to use my phone and laptop, there are plenty of educational videos if I am stuck."

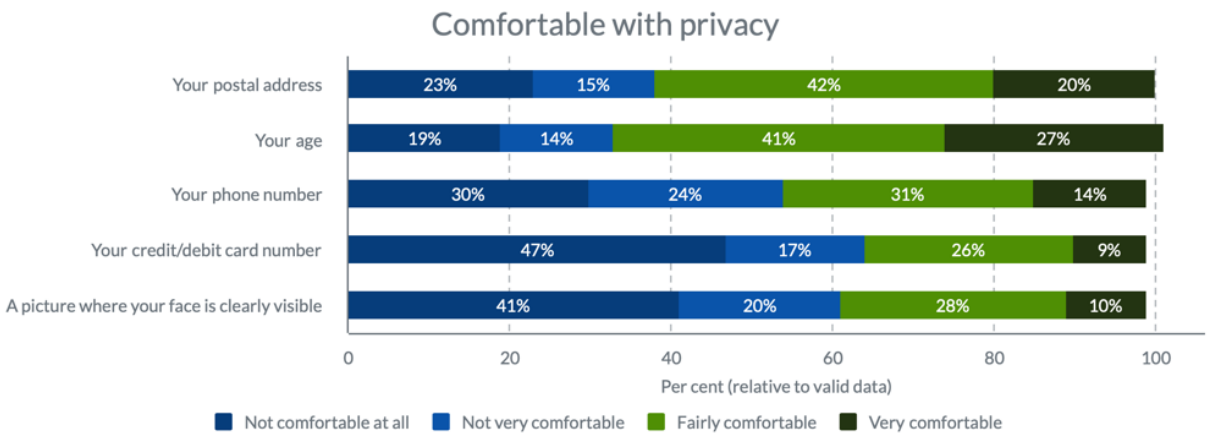
"I wouldn't use it, I don't know how."

Looking into the ages of these individuals, we found that individuals in the two "most confident" categories (the first two bars of figure 20), were significantly older than those who did not feel equally capable[4]. However, older participants also figured highly in the "less confident " categories, such as the option 'I know, but do not feel very confident', and 'do not have the confidence'[5]. This indicates a complex picture that challenges mainstream narratives about older people always being less literate internet users than younger people. These findings suggest that there are plenty of elderly individuals who feel capable of using the internet, but that it is also important not to disregard those in a similar age-group who do not feel as able.

Privacy

One question asked how comfortable people were to share certain information online. As Figure 25 shows, a greater proportion of participants (60-70%) were comfortable sharing their postal address and age than other personal information. Disclosing their phone number, credit/debit card number and a picture of their face figured highly in the "not comfortable at all" and "not very comfortable" categories. For all of the items in this question, our analyses show that the older the individual, the less comfortable they were with disclosing personal information on the internet[6]. Neither the ethnicity nor occupation seemed to have any bearing on participants' responses to this question.

Figure 25. The extent of comfort with disclosing information on the internet.

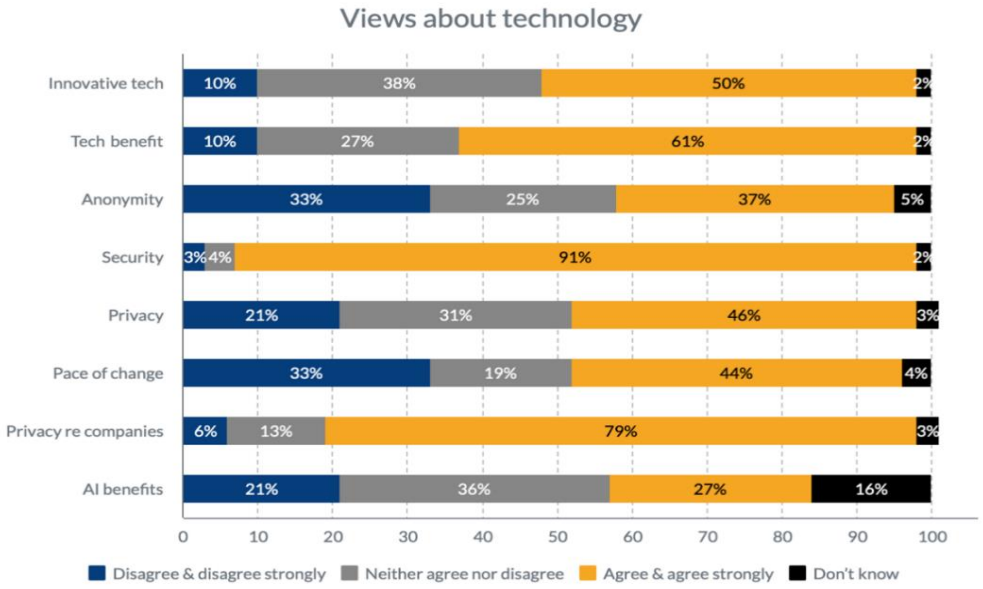


Discomfort about online security also figured highly in the free text responses:
[I am worried about] "someone taking your information and your money."

Views about technology

Another question asked about the participants' views on technology. There were substantial similarities in participants' views on both the potential benefits and the risks of internet use, as shown in Figure 25. The exception to this relates to artificial intelligence, which suggests a less familiar topic to the participants. Overwhelmingly, participants expressed concern about threats entailed using the internet, particularly regarding their financial security and companies' role in data management. This suggests that training on how to stay safe online would be welcomed by many of the participants.

Figure 26. Views about technology.



"I would like to learn how to use the internet more, including what is safe to use."

"I feel there is either a risk of being scammed with increased use of the internet and a high risk of personal information being misused."

"Fake news and the spread of conspiracy theories and misinformation."

Our analyses show that the older the individual, the less they agreed with the two statements:

a. It is a good idea to try new technologies when they are invented
b. Technology is making things better for people like me

Similarly, the older the person, the more likely they were to agree with the following items:

c. People should be able to express opinions anonymously online
d. People should be concerned about the protection of credit card while online
e. Find difficult to keep up to date with new technology
f. Companies that store and sell personal data are a threat to my privacy

Neither people's occupation nor their ethnicity seemed to have any bearing on their views about technology. While disability did seem to affect differences in perceptions for some of the items the difference between disabled/non-disabled participants was marginal from a statistical point of view. (please see the background report for more discussion of these items).

Time spent online

A further theme from the open-ended responses was the negative effect of increased time spent online and information overload on participants' mental and physical health during Covid-19:

"temptation to constantly check news updates. This can sometimes be very distressing and creates further worry and anxiety."

"Screen time increases and I am sitting down more often - both giving me migraines & back issues."

"You can rely on it too heavily. Can stop you from going outside and being active."

"Sometimes, or most of the time we all seem to have our heads in our gadgets and not communicating with each other."

"No escape. No excuse not to be available at all moments. Too much screen time hard to avoid."

"Colleagues and clients expect you to be accessible 24/7."

These are considerable findings, particularly if taken in the context of the number of participants who identified themselves as having a mental health disability, and the perception that increased screen time is unavoidable, especially when people are working online.

Views about children and technology

Many comments referred to the benefits of the internet for children, e.g. remote learning and future employment.

"feel the internet has opened peoples [eyes] immensely older and younger and broadened their horizons."
"It may also offer my great grandchildren employment in the future."

However, many also expressed concerns about the amount of time children spent interacting with technology rather than what they considered the real world. Similar to the views expressed about the amount of time they spent online, these concerns related to over-reliance on technology, to the detriment of their health and social interactions:

"Children/teenagers can become addictive to gaming and don't get enough fresh air."

"Children spend too much time sat in front of a screen you talk to them and all you get is a grunt as an answer."
[I hope] "that the younger generation don't come ultra reliant on technology at the expense of experiencing life in the real world."

Some mentioned safety fears:

"I think the internet has the potential to expose children to online abuse which is a concern. I also wonder how the dark web has influenced the ability for paedophile networks to be found/created/maintained".

One, however, expressed a change in attitude towards safety and children's online activity following the pandemic:

"I have realised I actually need to let my children have more access - I was very restrictive before and realise there is more safe stuff out there than not."

Hopes for the future

In their responses to the question "What are your hopes for what the internet or digital technologies might be able to do in the future?", participants raised many of the issues and concerns identified in the quantitative data.

A key theme was the desire for a safer internet, increased regulation and accountability:

"My hope is that we are left feeling that our personal data is not abused. Safety is paramount for most people, security needs to be improved in all areas. Being able to trust in internet providers... Being able to tell fake news etc from truth."

Others mentioned cheap or free internet access and ease of use as key to digital equality:

"They offer amazing opportunities to level up our society, but they are still too expensive"

"I hope that it can be all inclusive with everyone having access to the internet with easy to use fool proof technologies. Free or affordable to everyone with lots of support and help groups so no one gets left behind."

While many people expressed concerns about people's lack of "real-world" experiences and interactions, many others expressed optimism about what technology could offer in the immediate and longer-term future, in terms of:

- healthcare (both through advances in medical technology and through virtual consultations, increased use of apps etc)
- the environment (both by enabling more coordinated actions but also by reducing carbon emissions through decreased travel etc.)
- connecting people locally and internationally
- education
- quality of life, especially for older and vulnerable people and those with disabilities

SECTION 6: Implications

These findings complicate the over-simplified ideas that "solving" digital inequalities is simply a matter of providing the necessary equipment or that it is only the older generation who are not engaging with technology. Our findings show both that having devices and internet access does not necessarily mean that people are fully using the technology – and, conversely, some people are deriving benefits of technologies in indirect ways, through relatives, for example.

Having internet access and devices is still essential to addressing digital inequalities. We learned, for example, that half of the households who needed home learning devices during the school closures felt they did not have what they needed to do so. However, there is more to digital inequality than access to internet and devices. Deterrents to internet use are varied and include set-up and ongoing costs, skills and confidence, personal preferences for face-to-face interactions, and fears about internet safety and personal data security. Additionally, our interview data show how digital inequalities are compounded by and compound other inequalities, and how all these have been further compounded by the pandemic.

Our qualitative data suggest that increased time spent online during the pandemic negatively affects some people's mental and physical health and social interactions – essential to note in a population with high self-reported levels of mental health disability. However, people also used the internet to support their mental health.

Nevertheless, our evidence also shows that many people in Knowle West are confident and active internet users and use the internet for various purposes. This includes entertainment, socialising and shopping; working from home; staying up-to-date with local, national and international news and information, formal and informal learning, and accessing healthcare and banking services. While analysis of the interviews and open-ended survey responses continues, we also have plentiful evidence of the creative ways in which the Knowle West community has combined online and offline activities, taking advantage of both to swiftly tackle the challenges presented by the Covid-19 pandemic.

We suggest that there is plenty of opportunity and demand for training that helps people understand and potentially benefit from a broad range of internet features for their everyday life. These might include, among other things, how to access health information and government services, how to stay safe and protect one's personal information online, and how to identify information that can be trusted.

"A lot of things for my age I learned some from your computer course. I'd like to learn more."

"[There has been a] Huge push to access all services online making it very difficult to negotiate websites and Apps with little access to help lines and support."

"Inform us in many aspects including how to stay safe online."

"if I can access a class to understand how to use the new technology I will."