



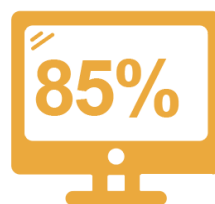
National Survey for Wales, 2017-18 Internet use and digital skills

22 August 2018
SB 53/2018

People were asked whether they had internet access at home, the type of connection used, satisfaction with connection speed, whether they personally used the internet, and how they connected when away from home. They were also asked how often they use the internet, whether they need help to be able to use it, and whether they have recently performed a range of online activities. Further questions asked which public service websites people have visited and how satisfied they were with their experience.

Key findings

- 85% of households access the internet: 89% of households in privately rented accommodation, 88% of owner-occupied households and 73% of households in social housing.
- 95% of households who access the internet use a fixed broadband connection; of these, 38% use superfast broadband.
- 85% of people use the internet at home, work or elsewhere, ranging from 99% of 16 to 24 year olds to 40% of those aged 75 or over.
- 83% of internet users also connect to the internet away from home.



85%
of people use
the internet



73%
bought things
online in the
last 4 weeks

63% of internet users had recently performed online activities associated with at least 4 out of 5 basic digital skills.

- 79% of the working age population who use the internet and are in employment visited public service websites, compared with 71% of working age people who were economically inactive and 67% who were unemployed.



82%
satisfied with
public service
websites

About this bulletin

This bulletin provides more detailed analysis of the 2017-18 results for questions on **internet use** and **digital skills**. It also compares results over time.

The full questionnaire is available on the [National Survey web pages](#).

More tables can be found in the [Results viewer](#).

In this bulletin

Introduction	2
Household internet access and connection types	3
Personal internet use and digital skills	6
Government and public service websites	13
Terms and definitions	14
Key quality information	16

Introduction

[Digital Communities Wales](#) is the Welsh Government's digital inclusion programme. It focuses on helping partner organisations offering support to people with very limited or no digital skills. It helps these organisations engage their clients; make use of volunteers; provide front line staff training; and embed digital inclusion into their activities.

The Digital Inclusion Strategic Framework and Delivery Plan (March 2016) set out a goal for reducing digital exclusion so more people can benefit from being online and using digital technologies. It covers the period to 2020. The [Digital Inclusion progress report and forward look](#) (March 2018) provides an overview of key activities across Wales since the release of the Framework and Delivery Plan, and identifies key challenges for the next 12 months. National Survey findings are used alongside evidence provided by other organisations (e.g. Ofcom, DWP, local authorities, private sector) to identify digital needs in Wales.

In addition to increasing digital inclusion amongst the people of Wales, the Welsh Government's [Programme for Government](#) 'Taking Wales Forward' focuses on helping people gain the basic digital skills needed for the 21st century, and offering access to fast, reliable broadband to properties in Wales. Through the [Mobile Action Plan](#) the Welsh Government also recognises the growing importance of mobile technologies in digital connectivity and aims to work with industry and regulators to create the right environment for investment in mobile infrastructure. In 2017-18 the National Survey for Wales asked people how they connect to the internet at home and elsewhere and whether they have recently performed a range of online activities.

In addition to reporting results on internet access and use, the National Survey provides contextual evidence by asking questions regarding the public service websites people have visited and whether they were satisfied with the sites or not. The information is relevant to Welsh Government's [Digital First](#), a high level strategy for digital transformation of public services, published in 2015. Also, the Welsh Government's [Digital Action Plan](#), updated in 2017, provides a framework for the improvement of online public services.

Household internet access and connection types

In 2017-18 the National Survey asked people whether they personally used the Internet and whether their household had access to the Internet. It found that that 85% of households access the internet. This has increased from 73% in the 2012-13 National Survey and 43% in the 2004 Living in Wales Survey¹. As more households use the internet there is naturally less scope for increase, which may account for the similarity of results in 2016-17 and 2017-18.

Chart 1: Household internet access, by tenure type and year

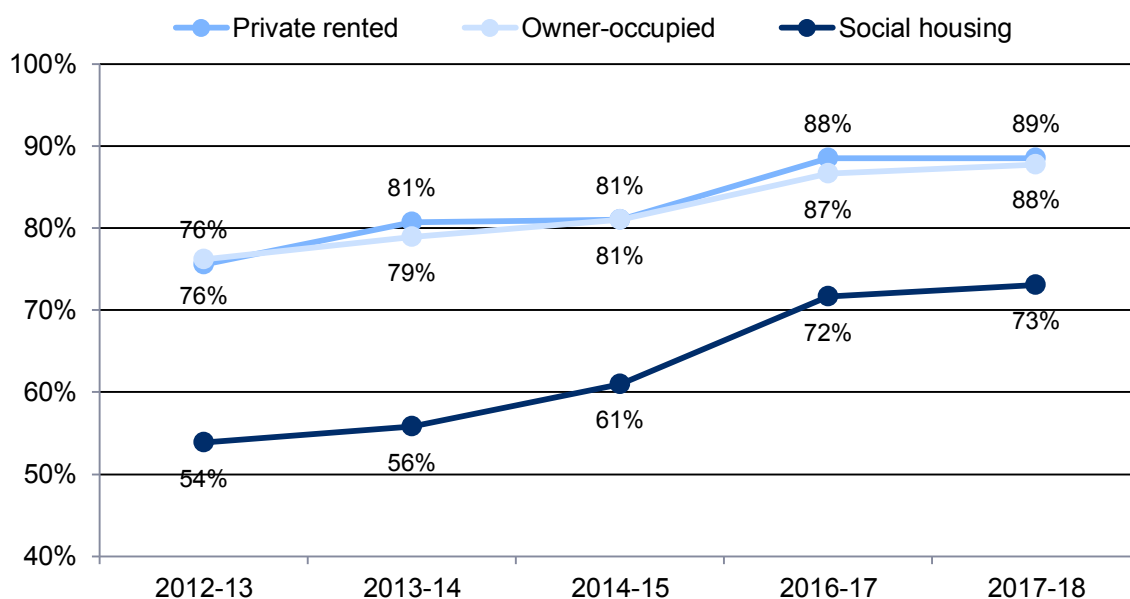


Chart 1 illustrates the proportion of households with access to the internet over time (2012-13 to 2017-18) and by different types of tenure. It shows that:

- Since 2012-13, internet access has increased from 76% to 89% for households in privately rented accommodation; from 76% to 88% for households in owner-occupied accommodation; and from 54% to 73% for households in social housing.
- There was no significant change in internet access by any type of tenure in the last year.
- Households in owner-occupied and privately rented accommodation have historically had internet access in similar proportions. Households in social housing are less likely to have internet access than households in other types of accommodation, though faster growth in the former has narrowed the gap between them over time.

¹ The [Living in Wales](#) survey was a predecessor to the National Survey that ran from 2004 to 2008. Like the National Survey, it asked people whether their household had access to the internet (although the way the respondent was selected differed between the surveys). As such, it can be used to track the long-term trend in internet access.

WIMD² area deprivation also highlight differences in household internet access.

- 90% of households in the least deprived areas had access to the internet in 2017-18, up from 81% in 2012-13.
- In the most deprived areas, 78% of households had internet access in 2017-18, up from 67% in 2012-13.

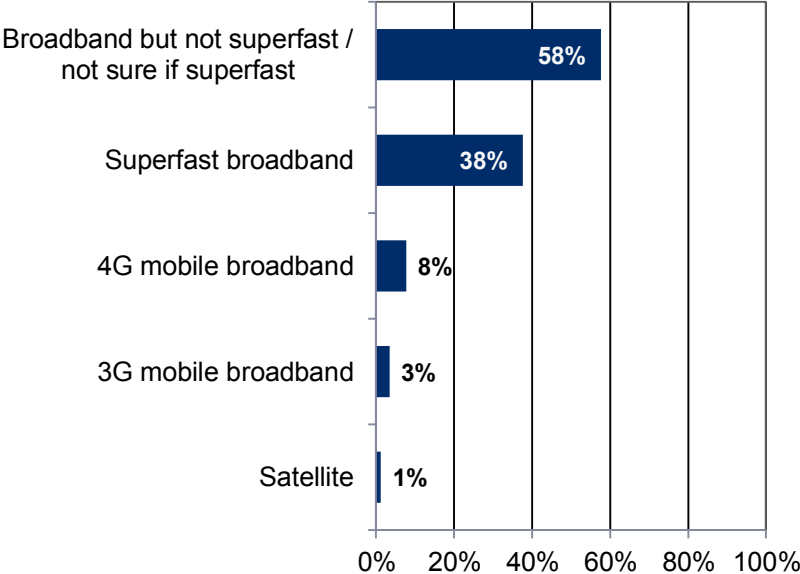
Internet connection type

The “[Internet use and attitudes \(2017\)](#)” report by the Office of Communications (Ofcom) showed that 79% of households in Wales had access to fixed broadband at home in the first quarter of 2017 (January – March). This is the same proportion that was observed in the 2016 report. It also reported that 88% of households in Wales had access to the internet via a broadband connection or mobile device. This figure has increased from 86% in 2016.

In 2017-18, the National Survey asked households what types of connection they use to access the internet at home. The results are illustrated in Chart 2³. Since 2014-15:

- The proportion of households with internet access that connect through superfast broadband has increased from 21% to 38%.
- The proportion of households with internet access that connect through a fixed broadband connection that is not superfast (or are unsure whether their connection is superfast) has decreased from 77% to 58%.

Chart 2: Connection types used at home



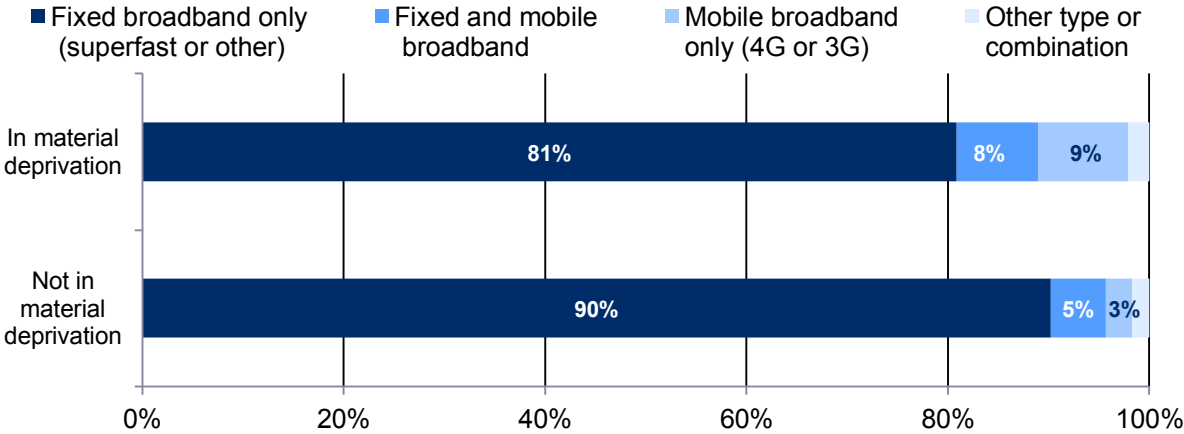
² WIMD – see [Terms and definitions](#)

³ As respondents were able to select more than one connection type, proportions may not add to 100%.

Chart 3 shows that there are some differences in the ways households connect to the internet at home, depending on whether they are in material deprivation⁴ or not.

- Households in material deprivation are less likely to be using fixed broadband (superfast or other) to connect at home (89%) than those not in material deprivation (95%).
- Households in material deprivation are more likely to exclusively rely on mobile broadband (4G or 3G) to connect at home (9%) than those that are not in material deprivation (3%).
- There is no variation by material deprivation in the use of other types (e.g. satellite) or combinations of connections: 2% of all households of connect this way.

Chart 3: Connection types used at home, by material deprivation



Satisfaction with speed of connection

Overall, 68% of households with internet access were satisfied with the speed of their connection whilst 22% were dissatisfied. Looking at satisfaction by fixed broadband type shows that:

- 78% of households with superfast broadband were satisfied with the speed of connection whilst 14% were dissatisfied. In 2014-15, 86% of such households were satisfied and 10% were dissatisfied.
- 61% of households with fixed broadband that is not superfast (or where households were unsure if their connection was superfast) were satisfied with the speed of connection, and 28% were dissatisfied. This compares to 66% and 26% respectively in 2014-15.

⁴ Material deprivation – see [Terms and definitions](#)

Personal internet use and digital skills

The Welsh Government’s [Digital Inclusion progress report and forward look \(2018\)](#) states that “There is a need to keep pace with technological advances, and support people to gain maximum benefit from the vast opportunities they present. Despite significant progress over the last five years, there are still too many people missing out on these opportunities. Those who remain digitally excluded are in danger of being left behind in society, as more and more services, including vital public services, go online” (Introduction, para. 4).

In 2017-18 the National Survey found that 85% of adults aged 16 or over personally used the internet at home, work or elsewhere, thus 15% of adults in Wales were “digitally excluded”.

The [Internet users, UK: 2018](#) publication by the Office for National Statistics (ONS) reported that 89% of people in Wales had used the internet in the past 3 months. This varied by UK region from 86% in Northern Ireland to 89% in Scotland and to 92% in the South East of England. The figure for the UK as a whole was 90%.⁵

Chart 4: Personal internet use, by age and year

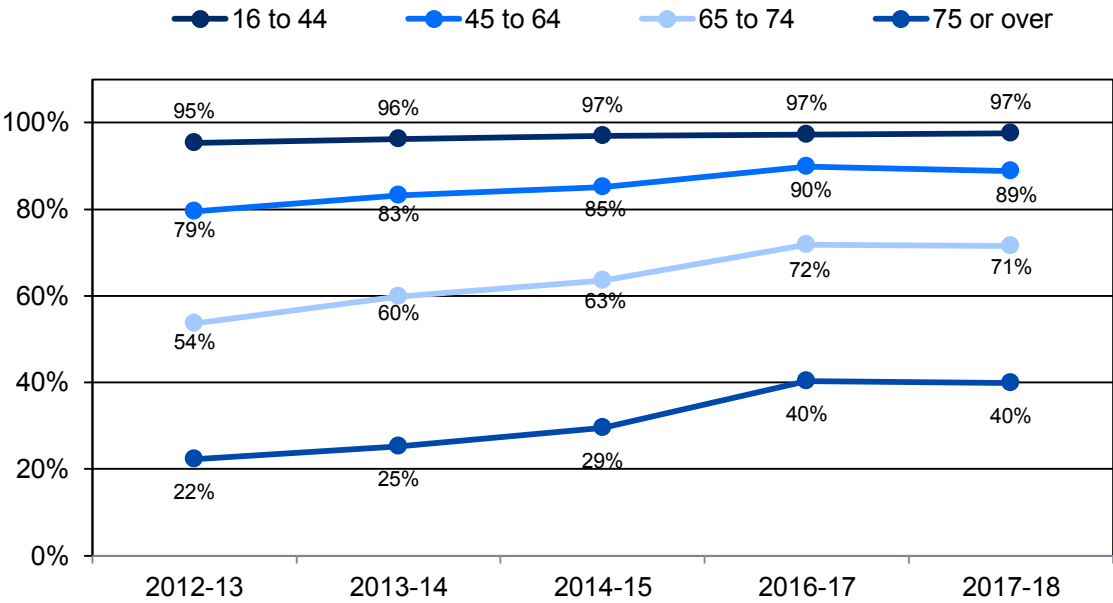


Chart 4 shows the proportion of people that use the internet over time and by age group.

- Since 2012-13 there has been an increase in internet use across all age groups, but figures for all groups remained stable between 2016-17 and 2017-18.
- The majority of people aged 16 to 74 are internet users. In 2017-18, 97% of 16 to 44 year olds, 89% of 45 to 64 year olds, and 71% of 65 to 74 year olds were internet users.

⁵ Care must be taken when comparing results with other surveys due to differences in question wording and methodology, which could have an effect on the results.

- 40% of people aged 75 or over were internet users in 2017-18, up from 22% in 2012-13. It is likely that increases in recent years were a combination of existing internet users falling within the older cohorts, together with new users accessing the internet for the first time.
- In 2017-18, when split into only two age groups, 16 to 49 and 50 and over, 97% of the younger group used the internet compared with 72% of those aged 50 and over.

Personal internet use varied by a number of other demographic and economic factors in 2017-18:

- Gender: Differences only occur for those aged 65+. 75% of men and 68% of women aged 65 to 74 use the internet.
- Health issues: 74% of people with a limiting long-standing illness, disability or infirmity used the internet, compared with 90% of those without such a condition.
- Employment status: Of those aged 16 and over, 95% of those in employment used the internet, compared with 90% of those who were unemployed and 72% of those who were economically inactive. When looking at the working age (16 to 64) population, 96% of those in employment used the internet compared with 90% of those who were unemployed and 89% of those who were economically inactive.
- Qualifications: Of those with no qualifications, 53% used the internet; of those with higher education qualifications⁶ and above, 95% were internet users.
- Tenure: People in private rented homes were most likely to use the internet (93%), followed by 85% of people in owner occupied homes and 76% of people in social housing.

Further analysis – personal internet use

It is important to note that when only looking at one characteristic at a time it is difficult to identify which factors are most relevant to whether people use the internet. It may be, for example, that the lower levels of internet usage amongst those living in social housing are not truly linked to the type of housing at all but are, rather, a result of the fact that older people or those with no qualifications are more likely to live in social housing. Similarly, people living in private rented homes may be younger than owner-occupiers and it is this that accounts for the higher level of internet use.

To get a clearer understanding of the relationship between each factor and who uses the internet, we have used statistical methods to separate out each factor's effects. These methods allow us to look at the relationship of a given factor to whether an individual uses the internet, while keeping other factors constant (sometimes referred to as "controlling for other factors").⁷

⁶ Qualifications – see [Terms and definitions](#)

⁷ This method is known as logistic regression. Information about the method can be found in [Regression analysis](#)

We found that the key factors that relate to whether a person uses the internet were:

- age
- highest qualification
- employment status
- tenure
- WIMD area deprivation
- health issues.

As such, other than gender, all demographic characteristics discussed with respect to personal internet use are still relevant when controlling for other factors. In addition, area deprivation was also found to relate to internet use when controlling for other characteristics: people in the least deprived areas were more likely use the internet than those in the most deprived areas.

While all these factors do relate to whether a person uses the internet, the strongest predictors were age and qualifications. When controlling for other factors, those aged 75 or over and those with no qualifications remain much less likely to use the internet than younger age groups and people with qualifications.

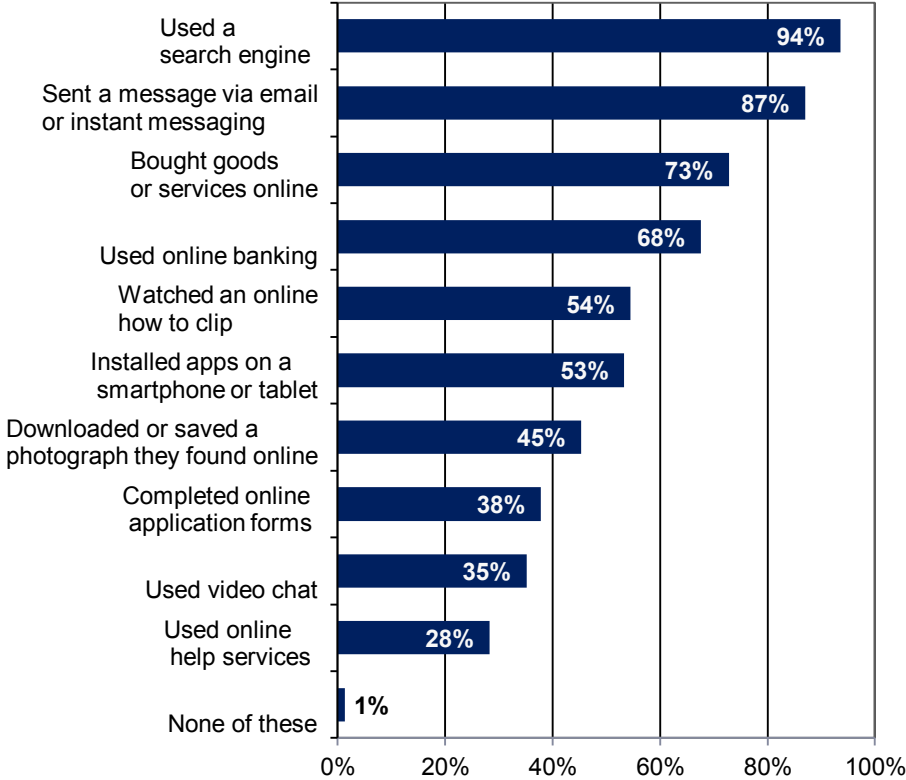
Frequency of internet use

In 2017-18, 94% of people who use the internet accessed it at least daily with 74% accessing it several times a day. The greatest variation in frequency of use was by age. 91% of internet users aged 16 to 24 go online several times a day compared with 33% of those aged 75 or over.

Online activities and digital skills

In 2017-18, the National Survey asked internet users whether they had performed a range of ten online activities within the previous 4 weeks. Chart 5 shows that the majority of internet users had recently used a search engine (94%), sent a message via e-mail or instant messaging (87%), bought something online (73%) or used online banking (68%). Once again the largest variations in results were seen when cross-analysing by age and qualifications. One of the biggest differences was “installing apps on smartphones or tablets”: 76% of 16 to 24 year olds had done this, compared with 14% of those aged 75 or over. Using a search engine was the activity with the smallest difference between age groups; 97% of 16 to 24 year olds and 72% of those aged 75+.

Chart 5: Online activities performed by internet users in the last 4 weeks



Internet users with higher qualifications were more likely to have recently carried out each of the online activities than users with lower or no qualifications.

- The largest difference between the two groups was seen in the use of online banking. The proportion of people with higher qualifications that had recently used online banking was 77%, compared with 61% of people with lower or no qualifications.
- Differences in the proportions of internet users that had recently used video chat were the smallest, with 38% of people with higher qualifications having recently performed the activity, followed by 34% of people with lower or no qualifications.

The Welsh Government’s [Digital Inclusion progress report and forward look \(2018\)](#) highlighted the importance of meaningful engagement with technology in improving employability, financial inclusion and access to services. It has also identified five categories of basic digital skills, which are deemed important in helping new and limited internet users to access these opportunities. The five categories are “Managing Information”, “Communicating”, “Transacting”, “Problem Solving” and “Creating”, and each was associated with a set of online activities.

For each of the five digital skill categories, Table 1 shows the proportion of internet users that had performed at least one online activity that is associated with the category. When considered together the results show that 63% of internet users had demonstrated at least four of the five basic digital skills in the past 4 weeks.

Table 1: Basic digital skill categories and associated activities

Digital skill category	% of internet users that did at least one associated activity	Activities associated with the digital skill
Managing information	94%	<ul style="list-style-type: none"> Used a search engine Downloaded or saved a photograph found online
Communicating	89%	<ul style="list-style-type: none"> Sent a message via email or instant messaging Used video chat
Transacting	87%	<ul style="list-style-type: none"> Bought good or services online Used online banking Install apps on a smartphone or tablet
Problem solving	61%	<ul style="list-style-type: none"> Watched an online how to clip Used online help services
Creating	38%	<ul style="list-style-type: none"> Completed online application forms

We found that:

- 29% of internet users performed activities in all 5 basic digital skill categories
- 34% of internet users performed activities in 4 out of the 5 basic digital skill categories
- 23% of internet users performed activities in 3 out of the 5 basic digital skill categories
- 8% of internet users performed activities in 2 out of the 5 basic digital skill categories
- 5% of internet users performed activities in 1 out of the 5 basic digital skill categories
- 1% of internet users had not performed any activities in the 5 digital skill categories.

Grouping the online activities into the five basic digital skills categories provides an indication of the proportion of internet users that have recently used each type of skill based on available information. However, it is important to note that this exercise does not constitute a comprehensive assessment of the skills and ability of internet users; this would require additional information⁸.

Further analysis – number of digital skill categories

Cross-analysis suggested that people with more educational qualifications tend to have more basic digital skills (over a 4 week period). Variation was also seen by age, gender, economic status, type of tenure, whether an internet user was in material deprivation, and whether they had a long-term limiting illness or disability.

However, we know that these demographic factors are often linked to each other. As with the analysis for personal internet use, we used statistical methods⁹ to investigate the relationship of each factor with whether an internet user has a high number of basic digital skills (four or all five).

This analysis improves our understanding of the survey results and confirms many (but not all) of the trends discussed earlier in the bulletin. It also allows us to interpret the results with greater certainty by considering one factor in isolation whilst holding other factors constant.

The results show that the following are the key factors that related to having a high number of digital skills (four or all five):

- age
- highest qualification
- employment status
- tenure
- gender
- WIMD area deprivation.

When controlling for each factor (keeping the other factors constant), people aged 45 and over are much less likely to have a high number of basic digital skills when compared with younger age groups. In addition, after controlling for other factors, internet users with higher educational qualifications remained more likely to have a high number of skills than those with lower qualifications (below Grade C at GCSE¹⁰) and those with no qualifications.

Age and qualification level had the strongest link with the number of digital skills. However, we also found that internet users in social housing were less likely to have a high number of digital skills when compared to users in privately rented and owner occupied accommodation. Also, when controlling for other factors, internet users who were economically inactive, were living in

⁸ Aggregating online activities up to digital skill categories – see [Terms and definitions](#)

⁹ This method is known as logistic regression. Information about the method can be found in [Regression analysis](#)

¹⁰ Qualifications – see [Terms and definitions](#)

the most deprived areas or were women were found less likely to have a high number of digital skills when compared with users that were in employment, or lived in the least deprived areas, or were men.

The findings show that many of the characteristics that are linked to whether people use the internet are also important factors in whether internet users have a high number of digital skills. However, there are some differences.

When controlling for other factors, people with a long-term limiting illness or disability are less likely to use the internet but of those who use the internet and have a limiting illness then the illness does not affect the number of digital skills they have used recently.

Conversely, when holding other factors constant, gender was not found to be related to whether somebody uses the internet; but when controlling for other factors, men were more likely than women to have carried out internet activities which covered a greater number of digital skills.

Internet connection types away from home

In 2017-18, the National Survey asked internet users whether they also connect to the internet away from home and how they do so. It found that 83% of internet users also connect to the internet away from home in one or more ways:¹¹

- 37% use free Wi-Fi hotspots and 5% use paid-for Wi-Fi.
- 57% use a 4G mobile broadband connection and 25% use 3G mobile broadband.
- 5% use a PC in a library or internet café, and 4% connect in some other way.

There is variation in connecting to the internet by demographic groups:

- 68% of internet users aged 75 and over and 40% of users aged 65 to 74 do not connect to the internet away from home. Only 5% of internet users aged 16 to 44 do not do this.
- Internet users in employment are more likely to use 4G mobile broadband (66%) than those who are unemployed (52%) or economically inactive (42%). This is partly due to fewer unemployed (83%) and economically inactive (70%) internet users connecting away from home when compared to internet users in employment (91%).
- Internet users in rural areas are less likely to connect away from home using 4G mobile broadband (51%) when compared with users in urban areas (59%)¹². 3G mobile broadband is used by fewer in urban areas (24%) when compared with rural areas (27%).

¹¹ Respondents were able to select more than one connection type that they use to access the internet away from home, so proportions may not add up to a 100%.

¹² Urban/Rural – see [Terms and definitions](#)

Government and public service websites

The Welsh Government recognises that there will always be some people who are unable or unwilling to use the internet and that there should be alternative ways to access goods and services. However, the [Digital Inclusion progress report and forward look \(2018\)](#) highlights the need to support those who are currently digitally excluded and lack the necessary skills to go online. Many in this group would benefit from accessing public service websites.

In 2017-18 people who used the internet were shown a list of websites and asked if they had visited these or any similar government or public service websites for personal use in the previous 12 months. The list of sites was:

- Welsh Government website
- NHS Direct Wales website
- GP surgery's website
- Local authority / council websites
- School / college websites.

The survey found that:

- 76 % of internet users had visited these or similar websites (an increase from 61% in 2016-17)
- 68% of internet users in social housing had visited a public service website compared with 79% in private rented and 77% in owner-occupied accommodation
- 81% of internet users living in the 20% least deprived areas accessed a public service website, compared with 68% of those living in the 20% most deprived areas.

As with other analysis in this bulletin the greatest difference in response was seen between age groups. Those aged 16 to 24 and 25 to 44 were most likely to visit these websites (80% and 83% respectively), compared with 43% of those aged 75 or over. Once again it is likely that age is a greater predictor of the level of use of online public sector websites than either tenure type or employment status.

Those who had visited these public service or government websites in the past 12 months were then asked how satisfied they were with the last such website they visited. 82% said that they were satisfied, which represents a drop from 86% in 2016-17.

Terms and definitions

Welsh Index of Multiple Deprivation

The Welsh Index of Multiple Deprivation (WIMD) is used as the official measure of deprivation in Wales. Deprivation is a wider concept than poverty. Deprivation refers to wider problems caused by a lack of resources and opportunities. The WIMD is constructed from eight different types of deprivation. These are: income, housing, employment, access to services, education, health, community safety and physical environment. Wales is divided into, 1,909 Lower-Layer Super Output Areas (LSOA) each having about 1,600 people. Deprivation ranks have been worked out for each of these areas: the most deprived LSOA is ranked 1, and the least deprived 1,909. For this bulletin, we have grouped the people living in the 20% of LSOAs that are most deprived based on WIMD score and compared them against the 20% of the LSOAs that are least deprived. – see also Material Deprivation below.

Urban / rural

“Urban” includes settlements with a population of 10,000 or more and small towns and their fringes, where the wider area is less sparsely populated. “Rural” includes all other areas.

Material deprivation

Material deprivation is a measure which is designed to capture the consequences of long-term poverty on households, rather than short-term financial strain.

Non-pensioner adults were asked whether they had things like ‘a holiday away from home for at least a week a year’, ‘enough money to keep their home in a decent state of decoration’, or could ‘make regular savings of £10 a month or more’. The questions for adults focussed on whether they could afford these items. These items are really for their ‘household’ as opposed to them personally which is why they were previously called ‘household material deprivation’.

Pensioners were asked slightly different questions such as whether their ‘home was kept adequately warm’, whether they had ‘access to a car or taxi, when needed’ or whether they had their hair done or cut regularly’. These also asked whether they could afford them, but also focussed on not being able to have these items for other reasons, such as poor health, or no one to help them etc. these questions were less based on the household and more about the individual.

Those who did not have these items were given a score, such that if they didn’t have any item on the list, they would have a score of 100, and if they had all items, they had a score of 0. Non-pensioners with a score of 25 or more were classed as deprived and pensioners with a score of 20 or more were classed as deprived.

Parents of children were also asked a set of questions about what they could afford for their children.

In this bulletin the non-pensioner and pensioner measures of deprivation are combined to provide an ‘adult’ deprivation variable. The terms ‘adult’ and ‘household’ deprivation may be used interchangeably depending on context.

Qualifications

Respondents' highest qualifications have been grouped according to the National Qualification Framework (NQF) levels, where level 1 is the lowest level of qualifications and level 8 is doctoral degree or equivalent. For the National Survey, respondents have been grouped into 5 groups, those with no qualifications are in the lowest category and respondents with qualifications at levels 4 to 8 have been grouped together in the highest qualification category. [More information about the NQF levels.](#)

To provide more meaningful descriptions of the qualifications, these short descriptions have been used in this bulletin.

National Qualification Framework levels	Description used in bulletin
NQF levels 4-8	Higher education (Level 4+)
NQF level 3	'A' level and equivalent (Level 3)
NQF level 2	GCSE grades A to C and equivalent (Level 2)
Below NQF level 2	GCSE below grade C (below Level 2)
No Qualifications	No Qualifications

Online activities and basic digital skills categories

In 2017-18, the National Survey presented internet users with a list of 10 online activities and asked if they had performed any of these in the previous 4 weeks. The [Digital Inclusion progress report and forward look \(2018\)](#) provides a broad framework for the classification of these online activities into five basic digital skills categories based on their relevance to each overarching skill. While this can be useful in gauging recent engagement with specific activities associated with each basic digital skill, there are methodological reasons that limit interpretation of the results.

For instance, it may be that some internet users have not performed a given online activity in the last 4 weeks, but they have performed it previously and would be able to perform it again given the need. This is particularly relevant to skill categories that may be associated with online activities that are performed less frequently e.g. online annual application for car tax. As a consequence lack of recent engagement may result in an underestimate of digital skill ability.

Conversely, results on types and numbers of online activity undertaken cannot in themselves provide an indication of the different degrees of competence or confidence in performing a given activity. Also, while online activities can be grouped based on their relevance to a particular digital skill, there is currently no evidence to suggest that an individual who has performed a given activity within one skill category is more likely to have performed other activities in the same category than in a different category. As such the digital skills categories are best viewed as broad internet user objectives rather than a measure of internet users' ability or potential.

Finally, there may also be additional online activities associated with each of the 5 basic digital skills for which data was not collected. This may also affect cross-comparability of digital skills categories as currently they do not contain an equal number of activities.

Key quality information

Background

The National Survey for Wales is carried out by The Office for National Statistics on behalf of the Welsh Government. The results reported in this bulletin are based on interviews completed in 2017-18 (1 April 2017 – 31 March 2018).

The sample was drawn from the Royal Mail Small Users Postcode Address File (PAF), whereby all residential addresses and types of dwellings were included in the sample selection process as long as they were listed as individual addresses. If included as individual addresses on the PAF, residential park homes and other dwellings were included in the sampling frame but community establishments such as care homes and army barracks are not on the PAF and therefore were not included.

The National Survey sample in 2017-18 comprised 23,517 addresses chosen randomly from the PAF. Interviewers visited each address, randomly selected one adult (aged 16+) in the household, and carried out a 44-minute face-to-face interview with them, which asked for their opinions on a wide range of issues affecting them and their local area. A total of 11,381 interviews were achieved.

Interpreting the results

Percentages quoted in this bulletin are based on only those respondents who provided an answer to the relevant question. Some topics in the survey were only asked of a sub-sample of respondents and other questions were not asked where the question is not applicable to the respondent. Missing answers can also occur for several reasons, including refusal or an inability to answer a particular question.

Where a relationship has been found between two factors, this does not mean it is a causal relationship. More detailed analysis is required to find whether a factor causes change in another.

The results are weighted to ensure that the results reflect the age and sex distribution of the Welsh population.

Quality report

A summary [Quality Report](#) is available, containing more detailed information on the quality of the survey as well as a summary of the methods used to compile the results.

Sampling variability

Estimates from the National Survey are subject to a margin of uncertainty. Part of the uncertainty comes from the fact that any randomly-selected sample of the population will give slightly different results from the results that would be obtained if the whole population was surveyed.

This is known as sampling error. Confidence intervals can be used as a guide to the size of the sampling error. These intervals are calculated around a survey estimate and give a range within which the true value is likely to fall.

In 95% of survey samples, the 95% confidence interval will contain the 'true' figure for the whole population (that is, the figure we would get if the survey covered the entire population). In general, the smaller the sample size the wider the confidence interval. Confidence intervals are included in tables of survey results published on StatsWales.

As with any survey, the National Survey is also subject to a range of other sources of error: for example, due to non-response; because respondents may not interpret the questions as intended or may not answer accurately; and because errors may be introduced as the survey data is processed. These kinds of error are known as non-sampling error, and are discussed further in the quality report for the survey.

Significant differences

Where the text of this release notes a difference between two National Survey results (in the same year), we have checked to ensure that the confidence intervals for the two results do not overlap. This suggests that the difference is statistically significant (but as noted above, is not as rigorous as carrying out a formal statistical test), i.e. that there is less than a 5% (1 in 20) chance of obtaining these results if there is no difference between the same two groups in the wider population.

Checking to see whether two confidence intervals overlap is less likely than a formal statistical test to lead to conclusions that there are real differences between groups. That is, it is more likely to lead to "false negatives": incorrect conclusions that there is no real difference when in fact there is. It is also less likely to lead to "false positives": incorrect conclusions that there is a difference when there is in fact none. Carrying out many comparisons increases the chance of finding false positives. Therefore, when many comparisons are made the conservative nature of the test is an advantage because it reduces (but does not eliminate) this chance.

Where National Survey results are compared with results from other sources, we have not checked that confidence intervals do not overlap.

Regression analysis

Where further analysis has been carried out selection of the initial variables used in the regression was based on; the results from cross-analysis, policy direction, and the practicality of using the variable. The results for some factors were only available for a sub-sample of respondents, or there were a large number of 'missing' results which resulted in a substantial drop in the sample size on which the regression model could be tested. For this reason some variables/factors were omitted from the investigation. The final models consisted of those factors that remained significant even after holding the other factors constant. These significant factors are those that have been discussed in this bulletin and the use of regression analysis is indicated by the statement that we have 'controlled for other factors'. It is worth noting that had a different range of factors been available to consider from the survey, then some conclusions about which factors were significant may have been different.

More details on the methodology used in the regression analysis in this report are available in the [Technical Report: Approach to regression analysis and models produced](#).

Technical report

More detailed information on the survey methodology is set out in the [technical report](#) for the survey.

National Statistics status

The [United Kingdom Statistics Authority](#) has designated these statistics as National Statistics, in accordance with the Statistics and Registration Service Act 2007 and signifying compliance with the [Code of Practice for Statistics](#).

National Statistics status means that official statistics meet the highest standards of trustworthiness, quality and public value.

All official statistics should comply with all aspects of the Code of Practice for Statistics. They are awarded National Statistics status following an assessment by the UK Statistics Authority's regulatory arm. The Authority considers whether the statistics meet the highest standards of Code compliance, including the value they add to public decisions and debate.

It is Welsh Government's responsibility to maintain compliance with the standards expected of National Statistics. If we become concerned about whether these statistics are still meeting the appropriate standards, we will discuss any concerns with the Authority promptly. National Statistics status can be removed at any point when the highest standards are not maintained, and reinstated when standards are restored.

Well-being of Future Generations Act (WFG)

The Well-being of Future Generations Act 2015 is about improving the social, economic, environmental and cultural well-being of Wales. The Act puts in place seven well-being goals for Wales. These are for a more equal, prosperous, resilient, healthier and globally responsible Wales, with cohesive communities and a vibrant culture and thriving Welsh language. Under section (10)(1) of the Act, the Welsh Ministers must (a) publish indicators ("national indicators") that must be applied for the purpose of measuring progress towards the achievement of the Well-being goals, and (b) lay a copy of the national indicators before the National Assembly. The 46 national indicators were laid in March 2016.

Information on the indicators, along with narratives for each of the well-being goals and associated technical information is available in the [Well-being of Wales report](#).

Further information on the [Well-being of Future Generations \(Wales\) Act 2015](#).

The statistics included in this release could also provide supporting narrative to the national indicators and be used by public services boards in relation to their local well-being assessments and local well-being plans.

Further details

The document is available at: <http://gov.wales/statistics-and-research/national-survey/?lang=en>

Next update

Not a regular output

We want your feedback

We welcome any feedback on any aspect of these statistics which can be provided by email to surveys@gov.wales.

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