Digital Inclusion Index for Scottish Borders Council Area

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Summary

- The Digital Inclusion Index was devised to quantify and qualify areas in Scottish Borders which have higher numbers of people who are potentially at risk of becoming digitally excluded.
- The proportion of people who use the internet in Scottish Borders is around average for Scotland, despite the ageing population and rural nature of the region.
- The Digital Inclusion Index found that higher concentrations of digital exclusion are in the 13 largest Scottish Borders settlements.
- Most, but not all, of these towns also have existing free public internet access facilities, such as libraries and contact centres, and many offer training to new users.
- After experimenting with various combinations for balancing the urban and rural aspects of the Index, we recommend that combination labelled "Option 4" in the accompanied maps is adopted as the Scottish Borders Digital Inclusion Index.

Aim of the Digital Inclusion Index

Scottish Government is committed to extending digital connectivity throughout all parts of Scotland via its Digital Strategy, to ensure that all people have an equal opportunity to participate in digital services online. In order to assess how close we are to the ultimate goal where EVERYONE has access to digital services, Scotland's Local Authority areas must estimate how many people currently do not use the internet, where they are and what are the barriers to getting them online. Renfrewshire Council has led the way in launching its Digital Strategy to deliver digital inclusion for all so the aim of the Scottish Borders Digital Inclusion Index is to establish an evidence base to provide the basis for a similar strategy for Scottish Borders.

What We Know About Scottish Borders

According to the 2015 Scottish Household Survey, levels and purposes of digital participation are no different in Scottish Borders than the Scottish average. The Scottish Household Survey uses a very small sample size (only 70 people in 2015) but is the only source of information we have that compares internet usage in Scottish Borders against other Local Authority Areas and the Scottish average.

The 2015 Scottish Borders Household Survey has a larger sample size (2,600 responses in 2015) and provides a breakdown by age and at locality level; it also shows changes over time, all within Scottish Borders only. From this, we know that internet usage has increased since 2013 and now serves 85% of the Scottish Borders population. Internet usage is lower in the Cheviot and Teviot localities than

in Berwickshire, Eildon or Tweeddale and varies greatly with age, dropping off sharply in the over-75 age group.

The challenge is to reach the remaining 15% of Scottish Borders residents who are either unable or unwilling to get connected, and to find out whereabouts in the large Scottish Borders area the highest concentrations of them are living. This will enable us to identify the priority areas where resources are most likely to be well-received and needed.

Barriers to Digital Inclusion: Carnegie Report

A key background document underpinning the Scottish Borders Digital Inclusion Index is the Carnegie UK Trust's 2016 report "Digital Participation and Social Justice in Scotland" which researched which particular socio-economic factors act as barriers to digital inclusion. They identified a number of characteristics that can affect a person's decision to not be able or willing to use the internet. Some of the more measurable of these characteristics form the basis of the Digital Inclusion Index. These come under 4 categories:

1. **Access**

Most parts of Scottish Borders have some sort of Broadband coverage although it is not good quality in places. There are a few postcodes in Scottish Borders that struggle to receive Broadband at all, either because of a lack of physical infrastructure (Broadband rollout) or due to a poor mobile phone signal (mobile internet). Broadband coverage and speed can vary according to network traffic, time of day and local weather conditions so this aspect of digital accessibility is difficult to measure. However, Ofcom now has some detailed data at a postcode/ datazone level of detail on the percentage of households who are not able to access broadband of various speeds. This serves as a starting point to measure households who may be excluded from receiving Broadband due to their location.

The Carnegie Trust does not consider the Urban/ Rural classification of an area to have any bearing on digital exclusion, as broadband "blackspots" and failures can occur in any area, whether in town or country. Besides, people who are already "digitally included" will either tolerate a poor service, pay or campaign to have it upgraded, or access digital services from an alternative location.

Getting a broadband contract with a Service Provider and owning the right equipment to use it carries both one-off and regular cost implications, which can be prohibitive to low-income households, particularly low-earning families. This is a serious impediment to proposed plans to roll out mandatory online services to vulnerable families, such as Welfare Benefits Services and Jobcentre services. There are a number of indicators which can be used as a measure of low income from publically-available small area statistics and the 2011 Census. A selection of these has been used in the Digital Inclusion Index.

2. **Skills**

The Carnegie Trust found that younger, better-educated people are more likely to have the skills to access the internet, and that the skills-levels drop off sharply in the over 75s and those with no or low qualifications. These indicators are available from the 2011 Census and some have been used in the Digital Inclusion Index.

3. Motivation

The Carnegie Trust considers the "what's in it for me?" question to be a key driver or barrier in internet usage. If people see no reason to use the internet and are quite happy without it, they will not strive to overcome the barriers to buying the equipment and learning how to use it. This can be problematic, as there is invariably a lag-time and a learning curve between getting started with the internet and being sufficiently proficient in being able to use it independently, during which time the user could miss out on essential services. This is not a measurable indicator at sub-Regional level so is assumed to be a constant across the Scottish Borders.

4. Trust

Recent breaches of trust, such as data leaks, fraud cases, data hacks and scams, as well as viruses, bugs and other malware have made people more cautious about whether they can trust the internet with their personal data and whether the information they click on comes from a trustworthy source. Even the more minor inconveniences, such as being bombarded with pop-up ads, unwanted information and confusing messages, can act as a barrier to people's trust in using the internet.

Trust issues can be partially overcome by education and training. The school curriculum routinely instructs children to be cautious about revealing personal data, using social media and clicking on links from unknown sources, but there is little in the way of safety and security awareness training for adult casual users of the internet. This, again, is not measurable at a sub-Regional level and must be assumed to be a constant barrier to internet usage across the Scottish Borders.

The Scottish Borders Digital Inclusion Index and Datazones

Data Zones are communities of around 500 – 750 people, which are designed specifically as measurement units to standardise and present small-area statistics across every community in every Local Authority area in Scotland. Originally designed as a measurement tool for the Scottish Index of Multiple Deprivation in 2001, Data Zones still measure Multiple Deprivation but have evolved to form a comprehensive, yet disclosure-protected, way of measuring any socio-economic characteristics of any small communities in Scotland – as long as the community has at least 500 people.

"Health Warning" when using Data Zone-level Maps

Data Zone geography forms a continuous, unbroken grid across Scotland. Datazones are generally better at representing towns than rural areas, due to the much lower population densities in rural areas. Communities of fewer than 500 people are counted together, with the result that the some Data Zones are geographically larger than others, particularly in regions like Scottish Borders where the population is very clustered in the towns and very dispersed in the countryside. Mapping geographic units that are different sizes is challenging from a cartographic point of view. The Data Zone geography is better-designed to reflect communities than other small-area boundaries but, even so, the size difference between urban and rural Data Zones can sometimes look as if an issue affects a very large area, whereas in reality only a small part of the Data Zone is populated or only a marginal proportion of the population is affected throughout the Data Zone. Other measures

struggle to show up at all if there are insufficient concentrations of affected people in a sprawling, rural Data Zone. As a result, there is a risk that a small number of isolated rural residents may not be fairly represented by the Digital Inclusion Index. Other ways of assessing their needs would be recommended, such as a direct Community Council or Locality approach.

The Digital Inclusion Index: Methodology and Outputs

The Scottish Borders Digital Inclusion Index took a range of eight measurable indicators at Data Zone level, mostly concerning the Access and Skills categories (the other two categories, Motivation and Trust are not measurable at a small-area level) and ranked them from "best to worst" for each indicator and for each of the 143 Data Zones in Scottish Borders.

These ranks were then scored and the scores added together to form an overall score, which was then standardised to form an index. The individual scores for each of the measures and the overall Digital Exclusion score are shown in Appendix 1.

All eight indicators are considered by the Carnegie Trust to be indicators of Digital Exclusion but in order to reflect the relatively higher importance of some indicators than others, several of them were given a weighting which doubled their influence.

After testing, it was found that the best combination of indicators and weightings were as follows:

1. Scottish Index of Multiple Deprivation
2. Children in Low-income Families
3. Percentage of people in the Social Rented sector
4. Percentage of people aged 16 plus with no or low qualifications

The following indicators were considered more important and were given a double-weighting:

5. Percentage of the population that is aged 75 plus
6. Percentage of people aged 65 plus with no or low qualifications
7. Percentage of people aged 16-74 who have never worked or who are long-term unemployed
8. Average percentage of households that do not receive a minimum standard of Broadband

This is shown as "option 4" in the accompanying maps.

The Digital Inclusion Index for each of the 143 Data Zones was divided into 5 "Quintiles", each containing 28 or 29 Data Zones: a 20% share. Each option is shown in a pair of A3 colour maps. The first shows the whole Scottish Borders at a small scale, giving a clear view of the region at a regional and rural locality level. The second one shows details of the 15 largest settlements at a 1:50,000 scale, in order to give a clearer view of the individual settlements. For each option, the two maps give a clear view of where the areas of highest concentration of digital exclusion are.

Results

All of the areas where there are likely to be higher numbers of digitally-excluded people are in the towns. This is because there are higher concentrations of people with the socio-economic characteristics associated with digital exclusion in the towns. Parts of Jedburgh come out as more excluded than parts of Kelso, followed by parts of Hawick, Galashiels, Chirnside, Eyemouth, Selkirk,

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Innerleithen, Coldstream, Peebles, Newtown, Newcastleton and Duns. The result in Jedburgh is surprising, given that the town has free wi-fi. It confirms the assertion of the Carnegie Trust that digital exclusion has less to do with the physical availability of broadband technology and more to do with the ability and inclination of individuals to use it.

At a locality level, the double-weighting on the Broadband indicator helps to highlight digital exclusion in rural areas. It shows that Tweeddale and Eildon have concentrations of digital exclusion that are around or below average, but that Teviot, Cheviot and Berwickshire have rural areas which are around or above average.

Facilities offering free public internet access

A map of libraries, contact centres, education centres and businesses that are known to offer free internet access and/ or education and training events to the public was also compiled, based on the best information we have at present. This shows, as expected, that the internet access facilities are in the main towns – which are also where most of the pockets of digital exclusion are likely to be found. This is a starting point for where digital services could be located to meet the needs of the digitally-excluded residents: there is a suggestion that, to an extent, the facilities are already in place.

The map also identifies gaps in each locality, where there are no free internet access facilities over a large area. This is particularly the case in Teviot, in which Hawick is the only town with facilities - a particularly long drive time for residents outwith the town, for example, from Newcastleton.

This map is currently at a draft stage and may not be complete. Any new information about facilities that are not shown on the map is very welcome, particularly in settlements such as Newcastleton, Greenlaw or in the Upper Tweed, Ettrick and Yarrow Valley areas where there are no facilities noted, and there are longer drive times to the nearest facilities.

Conclusion

After considering the socio-economic measures of digital exclusion that are available to us, and tweaking their relative importance in order to balance the rural and the urban aspects of the measures used, the Research & Information Team recommends that "Option 4" is adopted as the Scottish Borders Digital Inclusion Index. This shows that the 20% of small areas that are likely to have the highest proportions of people who are digitally excluded are all in the 13 largest settlements in Scottish Borders.

The companion Facilities map also shows that most of these main towns already have a library, contact centre, or other facility which offers free public access to the internet and / or training (not necessarily free) in computer literacy – although these may not have convenient opening hours for some users.

Rural areas are more difficult to enumerate, due to their sparse, scattered population but Option 4 shows slightly higher levels of digital exclusion in Teviot and Cheviot than in Tweeddale and Eildon (with Berwickshire in the middle), which could serve as a starting point in a Locality approach. There appear to be no internet access facilities and/ or internet training opportunities in the more isolated communities and further survey or consultation work would be needed at Locality or

Community Council level to assess whether there would be sufficient demand for such a service.   In the meantime, intervention in the urban communities is likely to be more fruitful, where the highest levels of digital exclusion have been identified.