

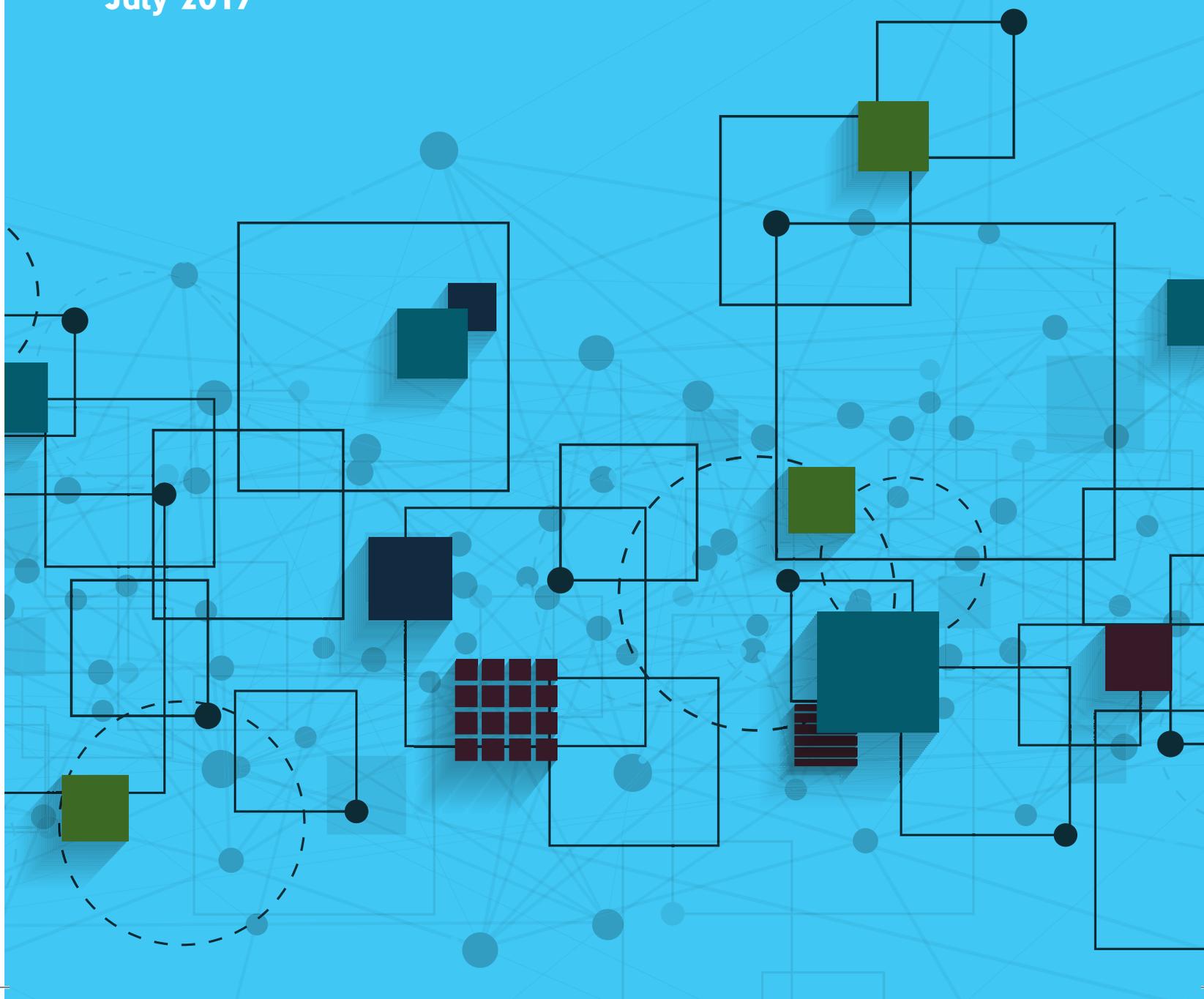
RAPID REVIEW OF EVIDENCE FOR BASIC DIGITAL SKILLS

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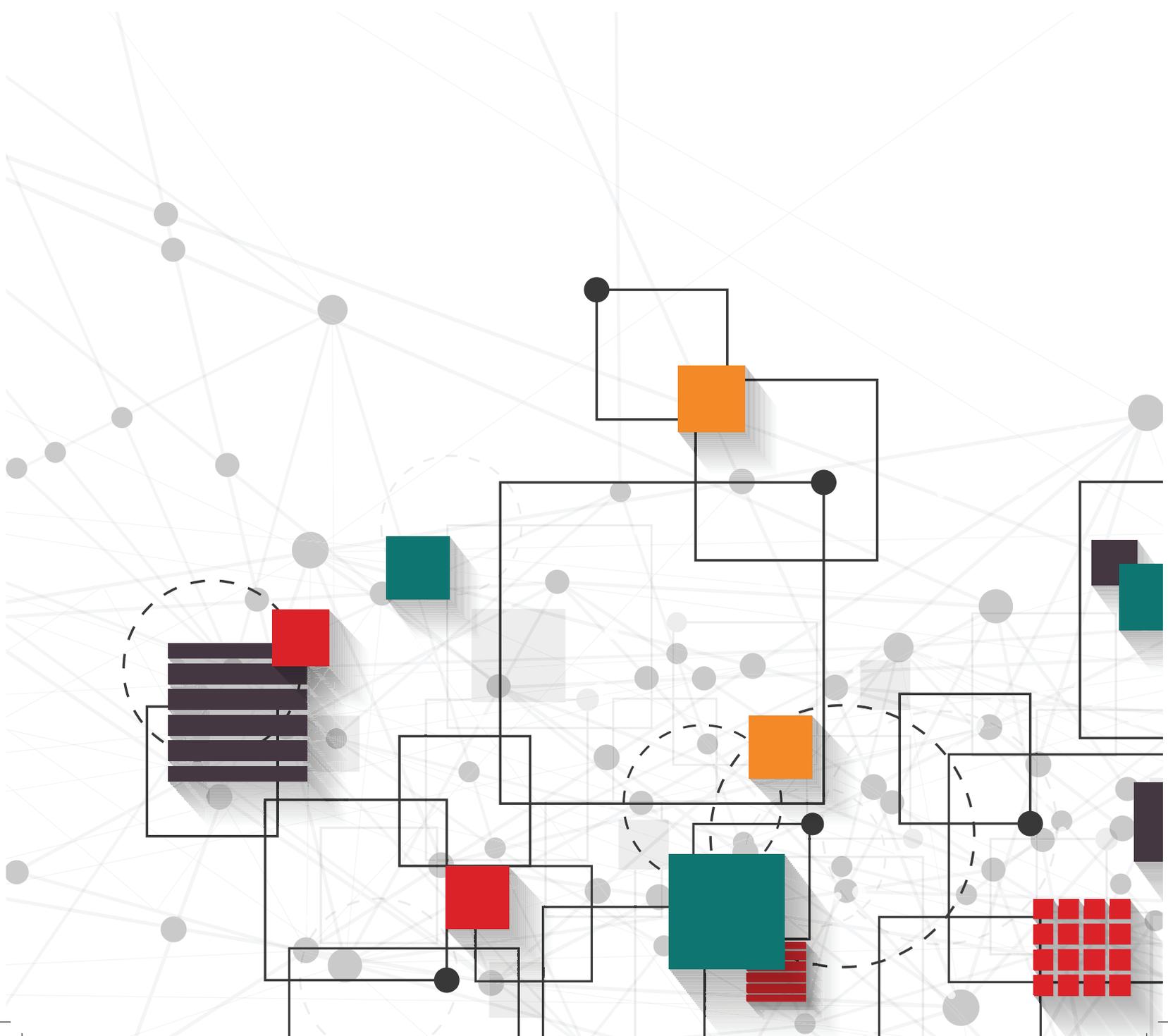
UWS



1. INTRODUCTION

In order to help inform the development of the Digital Participation Challenge Fund, the SCVO commissioned UWS to produce a robust summary of recent evidence and learning (over the last 3-4 years) around basic digital skills development in the UK. The Challenge Fund is a small grants scheme designed to facilitate investment in community digital participation in Scotland. The Fund is administered by the SCVO with support from the Scottish Government, the ERDF and BT. The Fund has, to date, delivered three rounds of competitive funding and supported a total of 84 third sector organisations across Scotland, with awards typically ranging from £100 to £10,000. As part of the project brief, UWS were asked to review evidence and learning in relation to following key criteria:

- Statistics and trends on digital inclusion across the UK (looking at issues of confidence and motivation, access and affordability, and basic digital skills)
- Identification of the key issues and barriers facing particular groups of people that relate to digital exclusion
- Learning from recent projects and programmes which have aimed to tackle digital exclusion
- Indications of the economic and social benefits of tackling digital inclusion and building basic digital skills



2. METHODS

To meet the project requirements, UWS undertook a Rapid Review (RR) of the published literature. Rapid Review is an approach to synthesising research evidence that draws upon systematic review methodologies whilst being sensitive to time pressures and other practical considerations (see, for example, Khangura et al. 2012). The time taken to complete a Rapid Review cycle is typically between one and six months, which is considerably shorter than the time required for full-scale systematic reviews. Rapid Reviews tend to cover a more limited range of information sources than full-scale reviews and the data synthesis is primarily qualitative and descriptive in nature; as opposed, for example, to meta-analyses. Whilst the conclusions from Rapid Reviews are intended to be tentative, rather than definitive, the approach has been shown to produce robust analyses that can be used to guide strategic decision-making within policy and practice settings. In order to conduct a Rapid Review, the project brief was operationalised into four research questions which were agreed with the SCVO at the outset:

Q1: What is the current extent of digital inclusion in the UK?

Q2: What sociodemographic factors impact upon digital inclusion and how might these barriers best be addressed?

Q3: What interventions 'work' and which interventions look 'promising' in promoting digital inclusion?

Q4: What are the primary social and economic benefits associated with digital inclusion and how are these best realised?

Keyword searches for both academic and grey literature were conducted using Google Scholar. A limited date range of 2012-2017 was applied to all searches. The following keyword combinations were used: 'digital inclusion AND exclusion,' 'digital divide,' 'digital inclusion, factors' and 'digital exclusion, factors'. Each search returned between 180,000 and 1.9 million papers which were sorted by 'relevance.' Peer reviewed sources focussed on the analysis of UK and Scottish data were prioritised though non-UK based studies were included where the subject matter outlined in the abstract was of interest. Additionally, the reference lists of literature included in the study were scrutinised for possible additional sources.

A database of non-academic literature – totalling 25 reports – was supplied by the SCVO. These included reports reviewing digital inclusion and digital skills interventions alongside reviews of digital access and usage among groups who have been recognised as at risk of digital exclusion. These studies and reports were reviewed in order to shed light on the current status of digital inclusion/exclusion across the UK and in Scotland, specifically. Further, these studies provided some evidence of ongoing efforts to tackle issues of exclusion and the relative success of the interventions outlined.

Findings from the review are presented in the following sections and discussed in relation to each of the four primary research questions.



3. FINDINGS

3.1 What is the current extent of digital inclusion in the UK?

The ONS survey of internet access provides a useful overview of internet connectivity and use across the United Kingdom (ONS: 2016). The 2016 survey reveals that 82% of adults (16 years and older) access the internet on a daily or almost daily basis. This compares to 78% in 2015 and a figure of 35% in 2006 when directly comparable record keeping began.¹ The data also indicate, in 2016, 89% of British households had internet access, an increase of 3 percentage points from the 2015 survey and up from 57% in the 2006 bulletin. As a gateway to the internet, PCs are declining in popularity – only 40% of adults are using desktop computers to access the web. Rather, 71% of internet users access the internet using smartphones and, notably, smart TVs are also increasing in popularity with 21% of adults accessing the web through their TV. Over the course of the year, 75% of adults had used the internet ‘on the go’ via mobile or smartphone, laptop or tablet or alternative hand held device (i.e. e-reader).

Almost all young adults (ages 16-24) had accessed the internet using mobile devices in 2016 while of those aged 65 and over, only 33% had accessed the web using a mobile portal. The popularity of smartphones continues to increase, at 70% and up 4% points from 2015 while the popularity of portable computers has declined and is down 9% points from the 45% marker of 2015.

In 2016, sending/receiving email and finding out about goods and services comprised the most popular internet activities overall though some significant differences in use were apparent depending on user age. For example, while the two most popular activities remained constant for all age groups of 35 and over, web users aged 35-44 used email to the greatest extent (90%) while 53% of those in the 65+ age group did so. People in the 14-24 group were the most likely to engage in social, leisure and recreational activities on the web while those in the 25-34 bracket were most likely to utilise internet banking services, to read newspapers and magazines or engage in other such ‘day-to-day’ undertakings.

The social networking element of internet use has continued to grow in popularity and, in 2016, 63% of adults made use of the web to engage in networking activities; up from 61% the previous year and 45% in 2011. In the 55-64 age bracket, 51% were thus engaged, dropping to 23% for the 65+ age group.

In evidencing the extent of internet use and connectivity across the UK, the ONS survey demonstrates the extent to which ‘information and communication technology (ICT) has become an indispensable part of both the workplace and our own leisure activities’ (Hatlevik & Christopherson, 2013:240). The findings also hint at the potential detriments that may be encountered by those who are not able to access the internet (i.e. White, 2016:2). Additional contextual considerations – such as policy positions advancing digital-by-default approaches to service provision or the provision of favourable prices/rates for online customers or service applicants – might potentially serve to amplify such exclusion. Indeed, it is estimated that lacking basic digital skills and being offline costs an average of £744 annually.² Thus, while the ONS data reveals a household connection rate of over 80% across the UK, it is notable that only 69% of households in Scotland’s 20% most deprived areas are connected to the internet and 25% of adults in these areas reported that they did not use the internet (compared to a figure of 16% for the rest of Scotland) (Hogan, 2016: 8). In addition to deprivation, location also influences the likelihood of connection to the web. People living in rural Scotland are less likely to have a mobile phone than their urban dwelling counterparts (80% compared to 86% for town and city residents) or to possess a 3G handset (17% compared to 27% for urban dwellers). Further, 40% of Scottish adults who do own a mobile handset regularly experience reception problems (compared to a UK average of 33%) and, 87% of people in Scotland are able to pick up a 2G mobile signal coverage (compared to a UK wide average of 97%) (Velaga et al, 2012:108). These issues are of increasing pertinence as Helsper and Reisdorf observe with the ever increasing reach of internet connectivity/use ‘social exclusion and economic disadvantage have become stronger determinants of digital disengagement than they were when research into digital divides started, indicating the

¹ In 2014, the UK was placed 8th among EU & candidate (plus Norway) countries in a ranking of regular internet use (at least once per week) behind only Iceland, Norway, Luxembourg, Netherlands, Sweden, Denmark and Finland (European Commission, 2014: 3).

² *Doteveryone*: <https://projects.doteveryone.org.uk/digitalcommunities/index.html>

emergence of a digital underclass' (2016:13). Thus, although numbers of non-users are shrinking year on year those who remain unconnected are increasingly likely to be vulnerable and socially isolated across a number of social and economic indicators and, at risk of becoming permanently left behind in a fast changing, technology driven landscape (also see White, 2016). If, therefore, this underclass is to avoid becoming entrenched it is crucial to understand the reasons for non-engagement with digital technology and associated opportunities and, for these reasons to inform efforts to assist people to overcome their exclusion.



3.2 What sociodemographic factors impact upon digital inclusion and how might these barriers best be addressed?

3.2.1 Socioeconomic deprivation

The clear differences in internet use across social categories have been apparent to researchers since they began documenting ICT phenomena in the mid-1990s (Bach et al, 2013:249). Further, the high degree of correlation between digital inclusion/ exclusion and social inclusion/ exclusion has also been recognised (Mervyn et al, 2014:2). Literature on the topic strongly evidences the link between social and economic disadvantage and digital disadvantage/exclusion.³ Furthermore, it shows that assisting excluded citizens to engage digitally cannot usefully be approached in an undifferentiated manner. Rather, a nuanced understanding of individual, local and community barriers acknowledging a far broader scope of issues than might initially be apparent is required if interventions are to be successful.

³ White (2016:8-9) records that internet users are more likely to have 'access to a car, to have taken a flight in the last 12 months, a driving licence, been to a cultural event or place (cinema, library, live music event) in the past 12 months, undertaken activities such as reading, dancing, singing, playing a musical instrument in the past 12 months, used council services in the past 12 months, volunteered, visited outdoors for leisure and recreation at least once a week.' Non users are more likely to have 'used the doctor once a month or more, used a post office once a week or more [and] used public transport once a week or more.'

Beattie-Smith’s survey of computer and internet use among Citizens’ Advice Bureau (CAB) clients who approached the organisation with a benefits-related issue is revealing in this regard. The research conducted across 38 CABs in Scotland and based on 1181 responses (representing approx. 57% of average weekly clientele numbers) concludes that only slightly more than half of CAB clients (54%) had an internet connection at home, 36% of survey participants reported that they never used the internet and a further 11% related that they hardly ever did so (Beattie-Smith: 2013). Further analysis of the data collected over a week-long period reveals that only a quarter (24%) of respondents would feel confident in applying for benefits online with nearly three-quarters (72%) stating that they would struggle to apply for a job online. The data also show the disparity between younger and older clientele; steep declines in computing and online confidence with age was evident. A companion study was completed among a similarly recruited cohort in 2016 and, this demonstrates that while internet activity has broadly increased across all age groups represented in both studies, engagement continues to lag behind the average levels of engagement at a country wide level.

Table 1: Reported computer and internet use amongst Citizens Advice Bureau clients

Do you use the internet? (%) (2012/2016)					
	Age group	Often	Sometimes	Hardly ever	Never
Age Group	16-24	65 /76	25/10	5/10	4/5
	25-34	50/62	28/24	11/8	12/7
	35-44	35/42	28/35	14/10	23/12
	45-59	26/34	21/24	10/18	44/23
	60-74	14/28	17/22	10/10	49/40
	75+	0/ not given	19/ -	6/ -	75/ -

(Beattie-Smith, 2013:12 / Hogan, 2016: 14)

The relationship between social deprivation and digital exclusion in Scotland is further evidenced by figures from the 2014 Scottish Household Survey which show that only 61% of those living in social rented housing have internet access alongside 60% of those with an income of less than £6k and, 51% of those with an income of £6-10k annually (cited in White, 2016:5).

It is clear that such findings are irreconcilable with the UK government’s own estimations of the percentage of working age benefits recipients using the internet (78%) and incompatible with the stated aim of ensuring 80% of benefits claims are made online (ibid). These data show that those in receipt of benefits – and who are therefore either (or in combination) unemployed, unwell or in receipt of a low wage – are among the least likely to be able to access information and opportunities online. This provides evidence of a strong correlation between socioeconomic exclusion and digital exclusion (also see Clayton & Macdonald, 2013 and Buchanan & Tuckerman, 2016) and points up the irony of the situation that Mervyn and Allen describe whereby ‘underserved people often require a greater degree of public information and services than the more affluent sections of society’ (2012:1126) but are unable to access it reliably.⁴

⁴ Helsper & van Deursen (2017:700/711) note that when it comes to accessing support for effective ICT use, whilst ‘there are no real inequalities in access to and use of support, the quality of the support that people access is unequally distributed replicating existing patterns of disadvantage[...] overall [...] findings suggest that access to support is another level at which the digital divide manifests and strengthens itself’

3.2.2 Disability

The intersections between lived disadvantage and exclusion and digital exclusion is evident in Macdonald and Clayton's study on disability and the digital divide. Here, the authors argue that the move towards the online provision of services has the potential to increase the risk that 'those who are not accessing such channels will become further excluded... [as] disabled people who are not engaging in digital technologies... have the potential of becoming further excluded and experienc[ing] more disabling barriers significantly reducing their life chances' (Macdonald & Clayton, 2013:705). Findings from their study (conducted among disabled and able bodied respondents in a deprived area of Sunderland) reveal that those with a disability were far less likely to use technology than their counterparts in the control group. For example, 42% of the group with impairments (n = 127) stated that they had never used a mobile phone, a computer or accessed the web. The corresponding figure for the control group was 28% (n = 140) (ibid: 709). The data showed that, in spite of government and local agency investment intended to support disabled people's engagement in order to assist them in returning to the workplace, 'these projects do not seem to have played a significant role in improving the employability of the disabled group. Rather, other social, environmental and educational factors combine with the challenges of accessing and using digital technologies potentially adding to the barriers that disabled people face when attempting to enter the workforce' (ibid: 714-16).

It is interesting to note that other studies point to a more nuanced understanding of use-profile for excluded groups whereby examination of 'types of use' shed light on the nature of the challenges faced by some accessing the internet. In their representative study of internet use in the Netherlands, van Deursen and van Dijk (2014) discovered that those with lower levels of education and those with disabilities were spending more of their spare time online than those with higher educational attainment or employed people. However, analysis shows that the type of use undertaken varies significantly and people from the more vulnerable groups engaging in online activities such as social interaction and gaming rather than actions such as personal development and commercial transaction which are more likely to result in a more tangible socio-economic benefit.⁵

3.2.3 The complexity of barriers to digital inclusion

The studies outlined above demonstrate that simply providing underserved and/or disadvantaged people with the infrastructure required to access the internet is an insufficient strategy. Structural issues deriving from poverty such as finance and the cost of purchasing a computer or, affording an internet connection must be addressed alongside those of lack of skills/ confidence resulting in lower rates of computer use in disadvantaged groups. For those with physical impairments, home based computing/internet access can be particularly important as travel and access⁶ to – for example – a library based service is likely to be difficult if not impossible (Macdonald & Clayton, 2013: 707 & 711). Beattie-Smith (2013:28-33) also notes that travel to a library hosted service several miles away is beyond the budget of many claiming benefits.⁷ Furthermore, limits on computer time per user, lack of privacy and lack of appropriate help/ support also serves to put ICT access in such locally provided hubs beyond the reach of many who are socially excluded or disadvantaged regardless of the status of their physical health. (Also see ESRO for Ofcom, 2016, see Alam & Imran, 2015 for discussion of digital and social inclusion among refugees). The benefits of home access are not only limited to convenience. As Piercy points out 'access [to the internet] at home facilitates the development of digital skills. It also broadens internet use by giving more time to explore and access a variety of digital opportunities: informal, exploratory use of the internet feeds other types of more formal use [...] [if, as some studies suggest] home access improves skills and length of period of home access correlates with skill level, and this remains true across socio-economic status [groups], then home access itself is a strong determining factor for the rate of learning and eventual skill level that an individual will reach' (2016: 9).

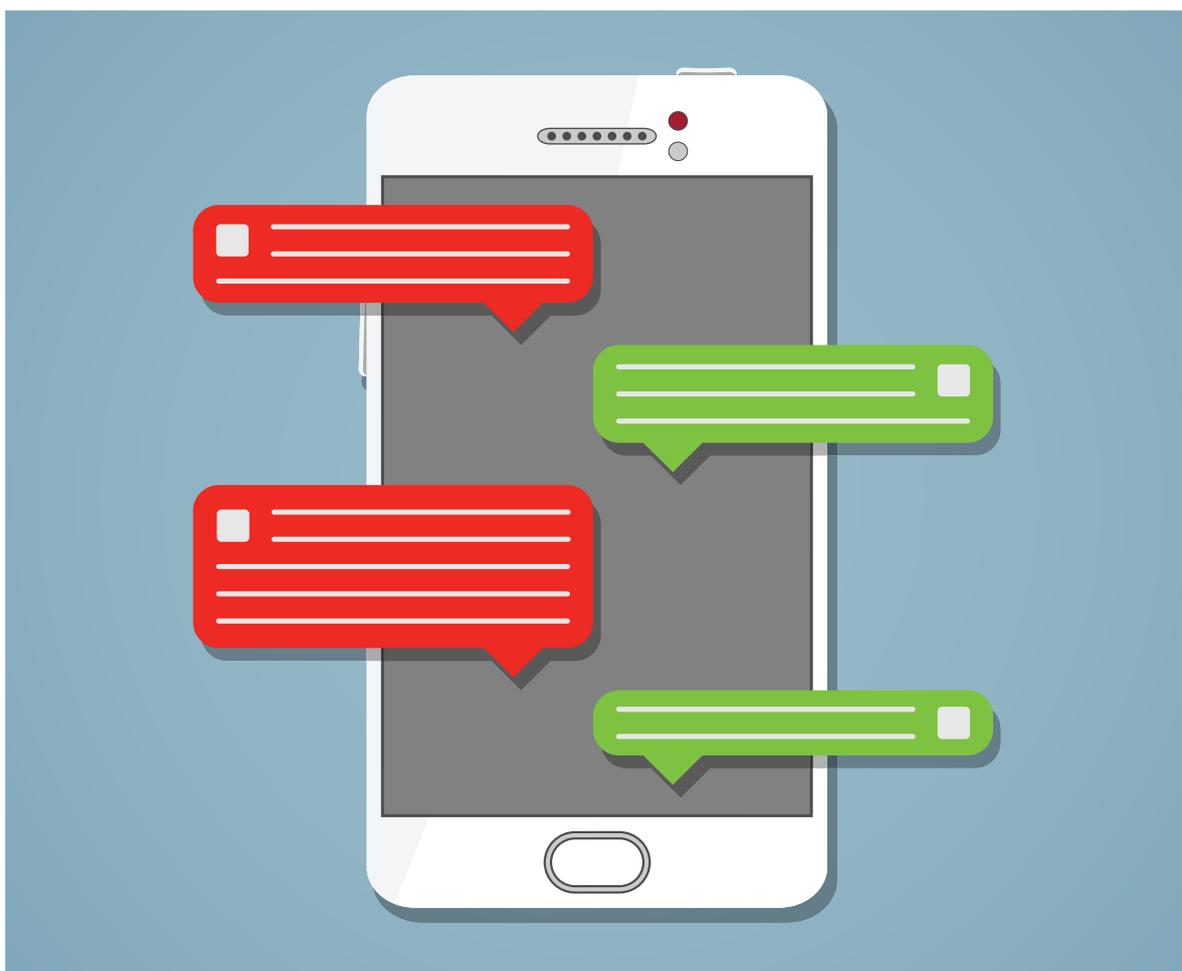
⁵ Buchanan & Tuckerman's work also reveals this tendency among Scottish young people not in education training or employment (NEETs). 40% of the NEETs in their study 'spent upwards of 42 hours per week online' compared to an average of 24.2 hours across their peer group yet these young people were struggling to derive any benefit from their usage and remained disenfranchised in the realms of job searching, application and associated activities (2016).

⁶ The difficulty a disabled person might face in terms of access will differ depending on the nature of their disability or impairment. Someone in a wheelchair may have problems gaining access to the space where the computers are stationed whereas a person with visual impairment may need specialist software and training to make beneficial use of a computer/ internet access (Macdonald & Clayton, 2013).

⁷ Interestingly, in the period between the 2 CAB focussed reports (Beattie Smith, 2012 & Hogan, 2016) the proportion of respondents reporting that they access the internet at the library has fallen from 45% in 2012 to 15% in 2016, a phenomenon which perhaps reflects the impact of widespread local authority cuts (Hogan, 2016: 15). CAS will be updating its research findings in the Autumn of 2017.

As noted above, increasing numbers of adults surveyed by the ONS access the internet using smartphone technology. While it would seem that this is a choice made on the basis of convenience, closer analysis of the composition and motivation of this group of internet users is revealing. Ofcom (2016:6) commissioned research into the composition of internet users accessing the web via smartphone encountered smartphone internet users that – for the most part – fell into two distinct groups:

- Those who were smartphone by default through choice, having decided that a smartphone was the best device for their needs and circumstances.
- Those forced to rely on their smartphone as a result of circumstances, often due to financial difficulties limiting their ability to purchase other devices or home broadband.⁸



Most members of the former group had made an active decision to use their smartphone to access the internet. Furthermore, they usually had occasional access to a desk or laptop computer elsewhere should they need it (Ofcom, 2016). Members of the latter group were, however, restricted in choice due to factors such as homelessness, long term unemployment, poor credit history and lack of capital. This means, for example, that their service is provided on monthly SIM only or pay-as-you-go SIM deals which are less cost effective than contract arrangements and thus they are less able to afford newer handsets and are also spending a greater proportion of their income on maintaining their connected status. Further, internet users in this group are more reliant on face-to-face or telephone services to complete tasks related to claiming benefits or accessing services or resolving associated issues (ibid: 12-14).

⁸This 'smartphone by circumstance' group was further divided into 'microbusiness owners' for whom the element of choice – derived from ease of use and portability – remained and 'vulnerable circumstances' for whom it was largely absent.

3.2.3. Addressing barriers to digital inclusion

As Bach et al argue ‘the problem of increasing socio-economic inequality and social exclusion demands a deeper understanding of the intersection between technology and inequality’ (2013:247). The manner in which this lacuna in knowledge might be addressed must be carefully considered. Helsper (2012:2) notes that different types of digital inclusion are not well known, chiefly as digital inclusion has been ‘operationalized... mainly in terms of amount of ICT use.’ Instead, she argues, it must be recognised that ‘links between digital and social exclusion depend on macro-economic, meso-social and micro-psychological factors, and only by studying these together can research recognise the separate and combined influences of different types of social exclusion on different types of digital inclusion’ (ibid: 3, also see Helsper & Reisdorf’s 2016 analysis of differing characteristics of non-user and ex-users in UK and Sweden over time). Moreover, the emphasis on ‘use’ as a metric indicating engagement might be helpfully replaced by analysis of ‘whether the nature of their use [of ICT] enhances their life’ (ibid: 13). Olphert and Damordan’s (2013) study examining tendencies towards digital disengagement among older people⁹ debunks the idea that ICT use will – once achieved – inevitably remain at a constant level. They discuss the phenomenon of ‘digital disengagement’ in which people who had previously been ICT users either substantially reduce or completely abandon computerised and associated technologies.¹⁰ ICT use is not automatically self-sustaining once established; rather changes in personal and social circumstances can significantly impact interest in and involvement with ICT.

Progress towards the dismantling of the barriers faced by those excluded from avenues of digital engagement might be advanced if models theorising engagement recognised both the social impact mediators that affect access (i.e. access, skills, attitudes) as well as classifying the digital fields with which people engage (thus reflecting different ways of engaging with technology, i.e. information, education, entertainment, finance and frequently/occasionally/rarely) (Helsper, 2012:22-29). While proposing a model built on corresponding realms of exclusion at social (real life) and digital levels, Helsper notes that the mechanisms, degrees and inter-relations between the elements of the model are not well understood and observes that future research ‘should try to understand the complex links between the offline and the online as well as how different offline and online fields are related to each other’ (ibid: 29).

Bach et al propose an approach which emphasises the provision and application of ‘digital human capital’ in efforts to overcome the digital divide. Such a framework ‘calls for a more rigorous and grounded response to the digital divide, making sure communities have quality access but also that they possess the tools and skills to use the Internet for social change’ (2013:253). This approach has been developed from the viewpoint that digital skills development and usage must have relevance for those who are to use of it. Thus, a digital human capital approach foregrounds the notion that ‘ICT training initiatives must shift towards critical social and cultural practices that encourage full participation in community affairs, cultural life and official institutions’ (ibid: 263). To this end, it is the operationalization of ICT knowledge – and provision of the concomitant support to learn to be able to do so – on social media and related platforms for individual and community benefit which is central to the success of this approach (ibid: 259/263). This view is supported by others’ findings. Helsper and Enyon (2013:3) observe that ‘individual motivation and digital skills are important in explaining the intensity and breadth of [...] engagement’. Thus, they argue, it is important attempt to measure various types of skills in order to explore more fully the relationship specific skills and specific types of engagement (ibid: 16).

⁹ Hatlevik & Christopherson (2013) note that it is erroneous to believe all high school students are ‘digital super users.’ Rather, their study demonstrates the crucial role of background, home environment and language spoken at home for digital competence and confidence and, shows how the seeds of differentiated ability and future digital inequality can be sown among young people early on in life.

¹⁰ Olphert & Damodaran (2013) observe that age and disengagement are not directly correlated though older people are more ‘more vulnerable to the factors that lead to this outcome’ (2013:564 & 575). Examples given of such factors include, a respondent who used her computer to keep in touch with family, once her brother passed away, she felt she had little further use for it. Another respondent’s computer broke down at the same time his eyesight deteriorated sharply. Their work also foregrounds the issue of what constitutes ‘use.’ Using a computer to keep in touch with an extant network of friends and relations does not automatically lead to involvement in broader social and community networks which might in turn lead to greater social inclusion and it is mistake for policymakers to assume that there is a causal link between all types of ICT use and broader social/digital integration (Olphert & Damodaran, 2013)

3.3. What interventions 'work' and which interventions look 'promising' in promoting digital inclusion?



The complex interaction of factors which contribute to digital exclusion make the task of implementing workable solutions particularly challenging for policy makers (Bach et al 2013:251). Analysis of data collected from Scottish CAB clientele also reflect this position, revealing that users who were least proficient in ICT were also the least likely to take advantage of training opportunities whereas the most proficient also expressed the most interest in taking advantage of training opportunities (2016, also Buchanan & Tuckerman, 2016). Further, the complexity of issues at hand potentially point to the need to take a 'holistic' approach to combating digital exclusion (i.e. access and training/ some ongoing occasional support, see Piercy 2016a for discussion of mixed methodological approach taken in Reboot UK project). As Helsper and Reisdorf (2016) observe the reasons that cause people to disengage with the internet can be different depending on country context and, they can also change over time. These factors must be accounted for if successful interventions are to be delivered. The authors suggest that any intervention designed to tackle the digital divide/ exclusion would need to reflect national context, changing non-user/ ex-user profile and individual experience with the internet.

Piercy identifies 3 potential interventions as key to successfully reaching 'hard to access' populations with poor digital skills. These are: peer support, home access and shared practice. The first of these interventions is already widely used in UK, American and Australasian settings, although a variety of approaches is possible a tutor/mentor –student/mentee relationship is a factor common to all. As this is often a one-to-one relationship, success hinges on its strength. Home access is a potential response to the clear evidence that home based access to the internet improves skills, builds confidence and has a substantial impact on the long-term embeddedness of digital engagement. Although funded pilots have placed computers in disadvantaged homes, to beneficial effect many are still unable to afford a home computer/internet access. Shared practice focuses on cross-organisational collaboration to foster informal digital skills learning environments within specialist service settings (i.e. homelessness or mental health care services) (2016:6-10. Also see Bach et al, 2013).

The HMRC delivered their digital ambassadors pilot through a training programme which combined face-to-face learning, e-platform learning and peer mentored continued development. The programme delivery used a cascading model to disseminate learning through the peer network, thus the first cohort of 30 digital ambassadors each progressed to train and mentor approximately 20 colleagues – directly training 600 co-workers through the pilot framework (Good Things Foundation, 2016:3) In addition the ambassadors were involved in designing and circulating toolkits, running online training sessions and providing telephone based support to their HMRC colleagues (ibid). The project was seen to be a great success overall; raising the level of digital skills within the organisation led to significant cost and efficiency savings. However, it is notable that the digital ambassador role needed to be undertaken flexibly in order to maximise efficacy. In this case for example smaller offices often hosted more digitally savvy employees where those larger offices exhibited more diverse skills and skill levels. The ambassador's role was differentiated on this basis – emphasising guidance on more specific and complex tasks

in the former case and encompassing a broader remit including the provision of 'workplace-specific training and wider digital advocacy' in the latter circumstance (ibid:11).

Doteveryone has piloted a number of approaches to improving digital inclusion on a 'test and learn' basis. The approaches used included:

- Digital zones: supported spaces for digital skills learning and practice, providing regular drop in sessions and a relaxed learning environment.
- Deep dives: smaller, more focussed groups helping to address lack of motivation for going online among those with specific needs (i.e. older and homeless people, NEETs).
- Community engagement: grassroots engagement engendering sustainability through community ownership of activities.

The projects were subject to ongoing evaluation to establish what worked and what could be improved in future. The following conclusions were reached:

- Going 'hyperlocal' is the most effective way of engaging the hard to reach,
- People learn best from repeated, informal, face-to-face and one-to-one support,
- There is no 'magic formula' or model for engaging with people, and
- Understanding people's motivation to learn something new is critical.¹¹

The approaches and findings outlined above reflect those taken by the SCVO in the outreach and digital skills work undertaken within the framework of the One Digital Scotland programme. In particular, the Making Digital Everyday (MDE) element of the programme used a cascading skills/training model to reach out to excluded groups. MDE trained staff and volunteers in third sector organisations enabling them to pass on basic digital skills by embedding them into their natural interactions with clients (see McGillivray et al, 2016). The success of MDE was founded upon trust relationships between mentors and mentees which reflected the fact that mentors were well acquainted with the individual issues that their service users/ clients faced in their own lives. The evaluation of the MDE element of the One Digital project concluded that 'for such [successful] outcomes to be obtained, [MDE] training needs to be targeted at individuals with a passion and enthusiasm for passing on digital skills and that working closely with well-networked and trusted T[hird] S[ector] I[n]terface[s] is likely to be crucial in identifying such participants. Similarly, translating learning into targeted action likely requires that the post-workshop activities are introduced to participants in a staged and systematic way, offering flexible opportunities for participants to 'buddy' with others who they feel closely match their own priorities and experiences' (McGillivray et al. 2016:28). This finding once again illustrates the importance of 'local knowledge' and nuanced support for the successful delivery of digital interventions.

The academic literature provides useful tools for recognising those likely to be at risk of digital exclusion and warns of the broader perils associated with remaining thus excluded. Further, recommendations are made regarding the necessity of tackling these issues. It is, however, notable that there is a dearth of academic work hypothesising and subsequently testing the workability of potential solutions; the extensive nature (both in terms of time and type) of any intervention that would be likely to be effective very probably accounts for this lacuna. The grey literature reviewed reveals that many outreach interventions are undertaken – at least initially – on a project or pilot basis (e.g. Good Things Foundation, 2016, 2016a). There are doubtless good reasons for such an approach, such as limited funding and the need for flexibility. It is, however, clear that for many who are digitally excluded long-term and flexibly-delivered support and guidance is likely to be the crucial element of any successful intervention; by providing skills and then guiding users towards truly beneficial use.¹² As Buchanan & Tuckerman (2016) observe in their study of youth who are not in education, employment or training (NEETs) in South Ayrshire, some of those at risk of becoming permanent members of a developing digital underclass (Helsper & Reisdorf, 2013) have specific issues that must be addressed first (such as literacy barriers) in order for them to be able to make effective use of the internet.

¹¹ <https://projects.doteveryone.org.uk/digitalcommunities/index.html>

¹² Piercy's (2016a) interim report on the Reboot UK intervention does provide a valuable insight into to the benefits of a mixed methodology, 'innovate and fail fast' approach to addressing digital exclusion. The project was designed to reach 1000 beneficiaries at an approximate cost of £330 per head through the trialling and embedding of shared practice, peer mentoring and home access engagement models.

3.4 What are the primary social and economic benefits associated with digital inclusion and how are these best realised?

As noted above, digital exclusion comes with a price tag; missing out on opportunities and good deals that appear 'online only' costs those without digital skills approximately £750 annually.¹³ Both economic and social benefit is clearly associated with digital skills and engagement. As employment and social opportunities are increasingly 'digital-by-default' it is clear that those with the skills to access and utilise these chances stand to gain the most both in terms of personal and professional development.

Further, the potential to save money and/or deliver services in a more streamlined and effective manner is evidenced by findings in a number of digital innovation projects. The HMRC's Digital Inclusion Pilot was modelled on cost-benefit analysis which projected a social return on investment¹⁴ of 1:1.5, giving £1.50 in positive value for every £1 the HMRC invests in its training programme (Good Things Foundation, 2016:2). Moreover, investment in channel shifting – encouraging service users to move to online platforms to access and use services and to increase staff productivity – saved £2.48 per telephone transaction and £8.47 per face-to-face transaction, equating to £94,360 and £298,220 over the 6 month life span of the project (ibid: 4).

Similar cost savings are apparent based on extrapolations made on the basis of findings from the Good Things Foundation Health and Digital project which focussed on reducing burdens to health services through digital skills training (Good Things Foundation, 2016a). The behaviour change that resulted from the intervention (i.e. decreased calls/ visits to the GP, fewer calls to NHS 111, fewer A&E visits) could potentially save the NHS £3.7 million in GP visits and £2.3 million in A&E visits annually (ibid:10).

Increasing the clarity and accessibility of benefit application procedures and, ensuring that these processes can be viewed and accessed using smartphone technology (see Hogan, 2016) would likely assist those who use their phones as their primary route to access the internet to access information. Further, utilisation of these digital-by-default interfaces to register and track their claims would deliver cost savings on face-to-face transactions/enquiries.

As White (2016: 2) notes 'digital technology is increasingly at the heart of how we function as a society [...] [and] the digital world has brought many opportunities for improved wellbeing through more personalised services, cheaper goods and products, more choice, wider connections with others and radically improved access to knowledge and communication' yet, it is clear that the notion that the laissez faire approach to inclusion based on the idea that 'digital participation would eventually address social exclusion once technology access and basic technical skills were administered to residents and citizens,' (Mervyn et al, 2014:8) has been debunked. As technological development continues apace it is equally clear that those left behind risk exclusion that is costly both economically and socially; as the number of those who remain offline diminishes the likelihood that they, as members of this digitally excluded group, are socially and economically vulnerable in other ways increases (i.e. Helsper & Reisdorf, 2016), the poor health, wellbeing and life chance indicators for those who find themselves in these vulnerable and disadvantaged groups are widely known.

¹³ <https://projects.doteveryone.org.uk/digitalcommunities/index.html>

¹⁴ SROI - a method for measuring and communicating a broad concept of value that incorporates social, environmental and economic impacts. It is a way of accounting for the value created by activities and the contributions that made that activity possible. <http://www.socialimpactsotland.org.uk/understanding-social-impact/methods-and-tools/sroi/what-is-sroi/>

4. Conclusions and learnings

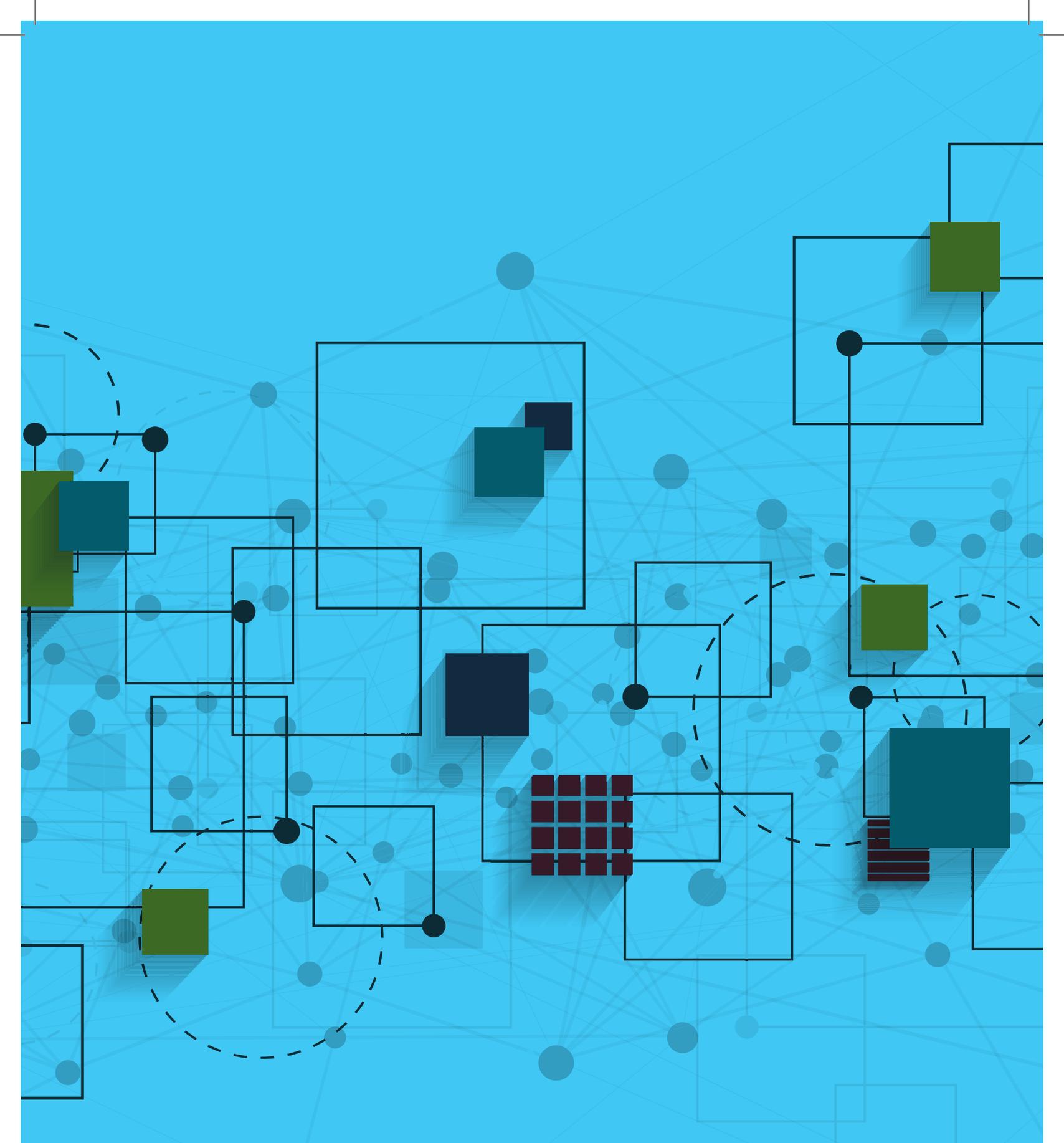
This Rapid Review of the evidence for basic digital skills has identified a number of learnings that SCVO and partners can take cognisance of when considering how best to facilitate digital inclusion through future initiatives:

- **Promoting digital inclusion amongst hard-to-reach populations requires a multi-faceted approach**
 Agencies supporting the development of basic digital skills need to recognise the multi-faceted and multi-factorial dimensions of digital exclusion if they are to effectively reach the hard to reach, 'final 10%' and sustain their digital participation. The growing prevalence of mobile connectivity needs to be built into the design and provision of services and skills development interventions if they are to be future-proofed
- **Digital inclusion needs to be meaningful and consistent with users' overall needs and motivations**
 Programmes concerned with digital skills development must recognise the importance of relevance, interest and motivation if usage is to be encouraged and sustained.
- **Digital participation requires digital capital**
 Facilitating peer support, home access and shared practice is crucial if digital skill gains are to be built upon and maintained across the age range, disability and socio-economic status. Spatial changes in usage also need to be factored into design, especially as people log in on the move.
- **Leadership and mentorship are important**
 Ambassadorial and digital leader models represent promising approaches to address digital disengagement when they strike the right balance between local, face-to-face and repeated delivery. However, they require ongoing funding and associated support in the early stages if activity is to be sustained beyond early successes;
- **Greater understanding of the long-term impacts of digital inclusion is needed**
 Further longitudinal research is required to better understand the long-term social and economic benefits of digital inclusion and participation initiatives. The prevalence of small, short-term research and evaluation projects impedes progress on building a coherent evidence base to inform future investment in basic digital skills

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