I am connected: new approaches to supporting people in later life online

By James Richardson

CENTRE FOR AGEING BETTER

Good Things Foundation

About the Centre for Ageing Better

The Centre for Ageing Better is an independent charitable foundation. We are funded by an endowment from the Big Lottery Fund. We are part of the network of What Works organisations that promote the better use of evidence.

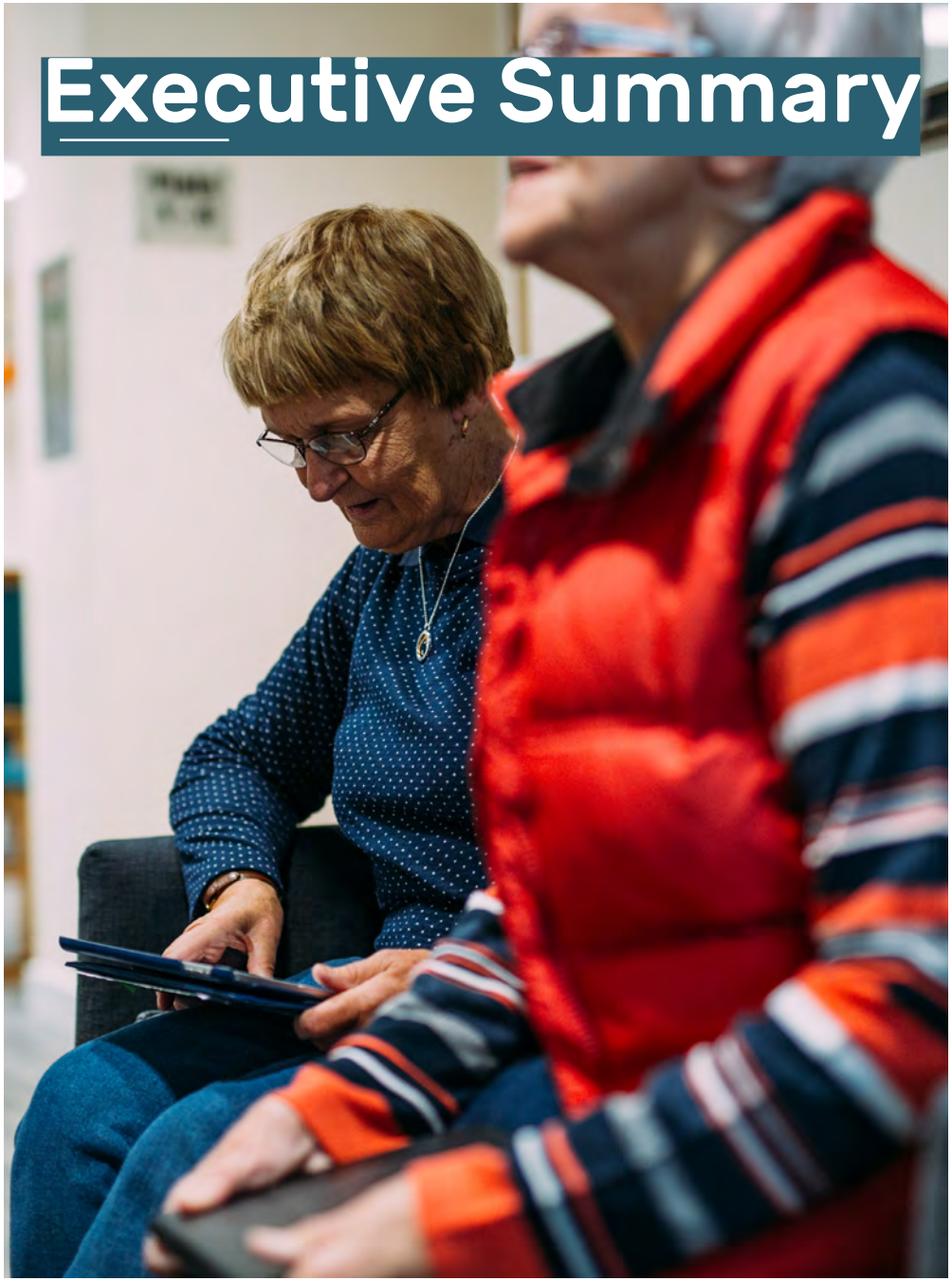
Our vision is a society where everybody enjoys a good later life. We believe that more people living longer represents a huge opportunity for society. But changes are needed so more people enjoy good health, are financially secure, are socially connected and have a purpose in later life.

We bring about change for people in later life today and for future generations. Practical solutions, research about what works best and people's own insight are all sources that we draw on to help make this change. We share this information and support others to act on it. We also try out new approaches to improving later lives.

About Good Things Foundation

Good Things Foundation is a social change charity, working in communities both nationally and internationally. We're committed to helping people improve their lives through digital. We work with the 5,000 strong Online Centres Network, who engage people that others fail to reach. Along with our network, and other partners including public sector and industry partners, community organisations and volunteers,we have tackled some of society's toughest problems through digital. We have supported over 2 million people to improve their lives through digital since 2010.

Executive Summary



For almost a year from spring 2017, Good Things Foundation carried out research for the Centre For Ageing Better, to try and understand the underlying reasons for older people's digital behaviour. Our methodology combined analysis of major datasets including the Online Centres learner survey and Ofcom's Adults' Media Use & Attitudes Report, as well as original qualitative research in the form of interviews, focus groups and observations. Rather than testing existing theories or assumptions, we took a grounded theory approach focused on the following research questions:

- What are the benefits of personal use of the internet for older people, and can these benefits be obtained offline, or through a friend or family member?
- What prevents and enables people in later life from making meaningful, sustained use of the internet?
- What characteristics distinguish the older online and offline populations, and what makes the difference at an individual level?
- Why do some older people continue to choose to not use the internet, and what strategies - if any - might encourage them to do so?
- With non-users becoming increasingly rare, how can digital inclusion practice remain economical in the short to medium term?
- What mechanisms can be used to identify at what point a change in personal circumstances turns the internet from an optional extra to a lifeline?

National survey data shows that most older non-users cite a lack of interest to explain their behaviour. This position is not necessarily straightforward: lack of interest may obscure an underlying lack of confidence, or arise from misinformation about the risks and benefits of the internet. But in other cases, lack of interest may be a reasonable and well-informed choice.

One of the clearest findings of our research is that older people with

good social resources and little need for health and public services are able to live - and thrive - without access to the internet. It is derogatory and unhelpful to describe them as facing 'motivational barriers', and to assume that they could be persuaded to go online if only the right message or incentive can be found: digital is a means to an end, and older people can and do achieve these ends in other ways.

We also found that a rejection of the internet was not incompatible with accessing online deals and information through family members. In fact, non-users cited this proxy use as an explanation for their personal non-use. But again, proxy use did not appear problematic, and was certainly not viewed as such by most of the older people we spoke to: it formed part of their interdependence and reciprocity with those close to them.

Policymakers and practitioners need to recognise the difference between this unproblematic non-use of the internet and true digital exclusion: non-use which accompanies and exacerbates other forms of social exclusion and disadvantage. When major life changes such as bereavement, retirement and redundancy impact older people's wellbeing and social resources, the internet can change from an optional extra into a vital lifeline. Proxy use may become impossible, and established use may lapse.

Digital inclusion policy and practice should focus efforts on these moments of transition and crisis, which bring older people into contact with social programmes and support services. These contacts can and should be used to provide an entry point into digital as a relevant and integrated part of wider support. This is especially important for engaging non-users who may not seek help from standalone digital initiatives, no matter how well-designed. Anyone supporting older people in difficult circumstances, in any way, should have the skills and confidence to use digital as part of the solution.

Helping older people to get online requires intensive, tailored support, and an open-ended time commitment, especially for those experiencing low confidence and facing multiple barriers and disadvantages. This kind of provision may not come cheap, but it is a far better investment than the false economy of short-term 'tasters' and 'one size fits all' courses. By damaging older people's motivation and confirming their assumptions that the internet is irrelevant, these approaches may be worse than doing nothing at all. Digital inclusion for older people should not be about high volume, low cost-per-head programmes that focus on specific skills as measures of success, but on focused activities aimed at improving the motivation and perceived value that creates independent, self-guided learners.

Finally, older people themselves should be put in control of their digital destinies. We observed peer-support digital inclusion models that utilise the skills and energy of self-supporting communities; these approaches provide an exciting and underexplored avenue for action research. Co-production of programmes should also be business as usual when it comes to developing strategies for engaging and supporting older people with digital. Recent work in these area has yielded positive results, but interaction between service users and service designers needs to become the default position.

Being offline is not always a disaster for an individual, nor is getting online necessarily a silver bullet for all of their problems. In the right circumstances digital can be an incredibly valuable tool for social inclusion, but it is only one of many resources that can be brought to bear to improve older people's lives; we only make this less likely by treating it as a special case. We hope that our research will lead to many new conversations: between those delivering digital skills and other support services to older people, between researchers and practitioners, between policymakers and those whom policy is designed to help. It is only by changing the terms of the debate around ageing and digital that we will help more older people to get online and improve their lives.

Introduction

Older adults' digital behaviour

Over the last several years, the proportion of older people using the internet has risen considerably faster than for the general population, albeit from a much lower baseline, and the rate of increase has increased in line with age: in 2017, more than twice as many people over 75 used the internet as did in 2011; a great deal of this rise is due to older people's increased ownership of tablet computers (Ofcom 2018).

	Number (000s) and proportion of population (by age) using the internet		% increase between 2011 and 2017
	2011	2017	
All ages	39,684 (79.4%)	56,742 (88.9%)	12.0%
55-64	5,434 (74.7%)	6,888 (90.0%)	20.5%
65-74	2,799 (52.0%)	5,031 (77.5%)	49.0%
75+	898 (19.9%)	2,050 (40.5%)	103.5%

Table one: Internet use in previous three months, 2011 vs. 2017 (ONS 2018)

The result is that older internet users are more likely to have been online for less than five years. Given their lack of experience it is not surprising that they less likely to be confident in their usage, and less likely to understand how websites are funded or how search engines operate. Older internet users are also much more likely to be 'narrow' users, carrying out only a small number of online activities themselves, and significantly less likely to use the internet to communicate, use government services, create their own content, or participate in democratic action. Narrow users make up more than half of users aged over 75, and the proportion is increasing (Ofcom 2018).

	Proportion of population, by age group, that are narrow users of the internet	
	2015	2017
All ages	11%	28%
55-64	20%	32%
65-74	28%	49%
75+	45%	55%

Table two: Narrow use of the internet, 2011 vs. 2017 (Ofcom 2018)

The reasons for the rise in narrow use among older people are not clear. Narrow use correlates with recent internet uptake, and older people are more likely to be newer users (Ofcom 2018). But this can only be a partial explanation, since many narrow older users have been online for more than five years: among users over 75, only 23% are newer users, but 55% are narrow users (Ofcom 2018). It may be that older users prefer to do certain things offline, or cannot do them online because of barriers such as fear and the design of certain websites. There is qualitative evidence that supports both theories, and the balance of factors will depend on individual circumstances (Damodaran et al 2014). Narrow use may be problematic, but is not necessarily so in all cases.

Older people are also more likely to be lapsed users: former users who have stopped going online. Although the proportion of lapsed users has fallen steadily overall and for the 55-64-year age group, the reduction is less pronounced among 65-74 year olds, and the proportion has actually risen among those aged over 75.

Lapsed use or 'digital disengagement' among older people has been described as a 'fourth digital divide', in which older people make "an internal decision to stop the activity or when factors in the participants' external environment caused them to cease being engaged" (Olphert and Damodaran 2013). If some lapsed use occurs because users come to feel the internet has nothing to offer them, this is certainly not true in all cases: compared to those who have never been online, lapsed users are significantly more likely to want to use the internet again in the future, and to access the internet indirectly via a proxy (Oxford Internet Institute 2011). Factors driving older people to stop using the internet may include bereavement, disability, cognitive decline and sensory impairment: all things which disproportionately affect older people.

	Internet users have who not used the internet in the last three months	
	2011	2017
All ages	2.8%	1.8%
55-64	4.2%	2.0%
65-74	5.1%	3.8%
75+	3.9%	7.3%

Table three: Internet users have who not used the internet in the last three months, 2011 vs. 2017 (ONS 2018)

Finally, older people are more likely to have never used the internet at all; in 2017 people over 55 made up 78% of those who have never been online, and people over 75 more than half. The population of 'never useds' has decreased rapidly across all age cohorts since 2011, but still comprises 4.8 million people - 390,000 of whom are under 55 - and seems unlikely to disappear in the next few years (ONS 2018).

Those who have never been online are more likely to work in lower-skilled jobs, have low educational attainment, and have entrenched negative attitudes towards the internet and their ability to learn (Ofcom 2017, Good Things Foundation 2018).

	Number (000s) and proportion who have never used the internet by age group	
	2011	2018
16-34	239 (3%)	62 (1.4%)
35-54	1,251 (14.5%)	227 (5.1%)
55-64	1,515 (20.8%)	484 (10.9%)
65-74	2,293 (42.6%)	1,059 (23.7%)
75+	3,441 (76.1%)	2,627 (58.9%)

Table four: Number and percentage of age cohorts who never used the internet, 2011 vs. 2017 (ONS 2018)

Never used	Has never used the internet (ONS 2018)	Never used and lapsed users together comprise non-users
Lapsed user	Has used the internet, but not in the last three months (ONS 2018)	
Narrow user	Current users who have ever carried out up to four of 15 types of online use (transactions, communications etc.) (Ofcom 2018)	
Newer user	Started using the internet less than five years ago (Ofcom 2018)	
Established user	Started using the internet at least five years ago (Ofcom 2018)	

Definitions of different categories of internet use

Digital inclusion activity in the UK

There is currently no overarching basic digital skills training programme in the UK. The largest single programme is the five-year Future Digital Inclusion, funded by the Department of Education and delivered by Good Things Foundation, which has supported more than 980,000 people to gain basic digital skills since 2014. Other major initiatives include the DWP Work and Health programme, which incorporates digital skills training into a broad package of support for jobseekers; the £5.8 million BLF-funded Online Today programme, designed and delivered by RNIB to support 125,000 people with sensory loss to get online; and Reboot UK, also funded by BLF and delivered by Good Things Foundation, which has provided lower volume, higher cost-per-head support for 2500 individuals facing complex barriers.

At a local level, provision is available from Age UK branches and University of the Third Age (U3A), housing associations (not necessarily limited to their own tenants), and local authority adult and community learning services; there have also been co-ordinated city- and region-wide initiatives, such as Go ON Liverpool (2011), Go ON North East (2013), and Salford Digital Everywhere (2017). Libraries have statutory obligations to offer access to internet-enabled devices, but not all have the capacity to provide adequate levels of digital skills training.

Although all of this provision can be accessed by older people, they may need to meet additional qualifying criteria, and there is no national digital inclusion initiative specifically for older people. A 2013 survey of available provision in seven UK cities found that just over three quarters could be accessed by older people, but that provision did not always meet the specifications for older people's digital learning developed by KT-Equal (2011), including availability of long-term support and technical troubleshooting, attendees being able

to choose what they learned, and the chance to consolidate existing skills:

- A number of face-to-face courses were available in libraries, community centres and local agencies in the seven cities. These were primarily focused on basic Internet and computer use for mixed age groups, with centres reporting around 30% participation by people over 60. Face-to-face course duration differed from one to two hours per week for eight to 30 weeks per course and class size from six to 20 participants. Tutor support varied from paid to unpaid, trained to untrained, tutor/student ratios ranging from 1:2 to 1:6. Waiting lists also varied but a wait of 6-10 weeks for a course to start was the norm at the time of the study. Course fees also ranged from free to (at the time) £90 for a 30 week course, with £2-£5 per session being common. (Ramondt et al, 2013)

- The availability of opportunities to learn for older people - and others - has been affected by austerity: local authority education services were cut by 29% between 2010 and 2016, and 737 local libraries closed between 2010 and 2016 (DCMS 2018, Press Association 2016). The Online Centres Network continues to provide high levels of support, with a group of more than 150 Centres making up a specialist 'Older People's Network', formed in 2013 and providing dedicated training opportunities tailored to older people's needs. Overall, Online Centres supported 85,000 learners over 55 in 2017-18.

- Funding for the two high-volume national programmes equates to between £15 and £46 per head (for Future Digital Inclusion and Online Today respectively); more than 80% of Online Centres report that this is not enough money to support an individual to become a broad, confident internet user, and many need to combine multiple funding streams, and rely on the support of volunteers, in order to offer the level of support required.

The right to be offline

Even if they continue to decline, lapsed use, limited use and 'never' use among older people do not seem likely to disappear, and policymakers and practitioners have a responsibility to understand and respond appropriately to these behaviours. If they are driven by material or psychological barriers, workable solutions need to be found. But older people need to be able to retain the right to reject the internet in part or in whole, and the right to have this position understood as reasonable and self-interested, rather than something problematic that should be changed - and could, if only the right combination of messaging and support can be found. This is not valid. Older non-users may not have firsthand experience of the internet, but this does not mean that their rejection of it cannot be based on reasoned and intelligent arguments about the role of digital in society based on what they see and hear around them. Some of the concerns they commonly report - about how their personal data may be used, or the negative impact of social media - are surely not alien to many regular internet users in 2018.

Furthermore, it should be borne in mind that older people may be happy to gain similar benefits to those available online - such as communicating, learning or pursuing hobbies - through offline channels; and to access online-only deals and services through family proxies. Getting online may objectively increase independence - the ability to do things for oneself that others would otherwise do for you - but it is not clear that this is something that is good for or appreciated by all older people in all circumstances. Our research suggests that interdependency and reciprocity within social and especially familial networks is a highly valued and valuable part of older people's lives and as long as they can rely on intra-family support, their refusal to go online may not cause problems for them or anyone else. But mechanisms should be in place to help them if such support becomes unavailable, including the loss of a proxy internet user.

For many goods and services, the digital revolution has tipped the balance of intellectual labour away from paid providers and towards unpaid consumers. Too often, the benefits of this transfer - convenience and control - are discussed without recognising that achieving them requires taking on what some older people may see as a 'part time job' (Knowles and Hanson 2018), that was previously the responsibility of professional intermediaries, from travel agents to local authority staff. 'Independence' in this context is synonymous with 'work', and it is maybe not surprising that some older people prefer to rely on intermediaries - whether friends, family or professionals - to do this work for them (or not to do it all). Providing the right kind of support can help to reduce the costs of going online (financial or otherwise), but for some older people there may be no cost so low that it will convince them.

Social policymakers and practitioners have a responsibility to help people in need. But to do so effectively they need to recognise where need does and does not exist, to always remember that older people may be able to meet their needs through offline means, and design interventions which are accessible for all, and approachable for the most resistant.

Two notes on language

Firstly, this report uses 'digital inclusion' and 'digital inclusion delivery' to refer to the activities of practitioners working on the front line, in geographic and demographic communities experiencing high levels of social as well as digital exclusion. This is a useful shorthand, which should not obscure the fact that digital inclusion is an active and ongoing societal and cultural process. But to refer simply to 'digital learning' or 'digital skills classes' implies that these are the only things needed by people who may face many other complex barriers and disadvantages, and does a disservice to the efforts of frontline practitioners who do not limit themselves to teaching technical skills in isolation, but also focus on building confidence and self-efficacy, help people to understand how the internet can benefit them, and offer support for those choosing new devices or experiencing problems with ones they already own. This is the kind of practice that works, and which should be supported by everyone with an interest in digital inclusion.

Secondly, it is hard to think of a less internally coherent population than 'older people'. Whatever moment in life is defined as the beginning of older age - and there is not general agreement what the definition should be, or if there should be one at all - it encompasses all social grades, all demographics, all life histories and personal circumstances, and all behaviours and attitudes of everyone beyond that threshold. Our study has included jobseekers in their fifties, with more than a decade or working life ahead of them, and residents of retirement communities in their nineties; when four decades and a completely different mode of existence separates research participants. It is very difficult to make generalisations. Many influences and sets of circumstances become more prevalent in later life, but very few are completely unique to older age cohorts: whatever can be said about older people in relation to digital, can and should also be said of anyone who could benefit from the internet, but faces barriers to getting online.

The Research

Participants

'I Am Digitally Connected' is an eight-month, mixed-methods research project conducted by Good Things Foundation for the Centre for Ageing Better to understand the underlying reasons behind older people's digital behaviour, and the implications for policy and practice. Our research was relatively small-scale and primarily qualitative, involving semi-structured interviews with twenty-seven people aged between 55 and 93. We used cluster sampling, to ensure that the following key groups was represented:

- Resistant non-users: those who do not use the internet, and expressed no interest in doing so.
- Lapsed users: former users, who had decided or been forced to stop going online following a change of circumstances
- Current users: we did not speak to anyone who was using the internet confidently and independently without the need for ongoing support; all of these participants were active learners at an Online Centre; some were absolute beginners, while others were building on previous experience.

Nominations and introductions were made by Online Centres and other organisations participating in the research. Working with them we were also able to ensure that the following secondary characteristics were represented:

- Economic activity: including the recently retired, long-term retired, employed, and those seeking employment
- Education attainment: from those with no qualifications to those with university-level qualifications
- Socially excluded and disadvantaged: experiencing poverty, poor physical and mental health, loneliness and isolation (it was difficult to engage participants who were severely isolated, since they needed to already be supported by some form of socially inclusive service in order for us to be able to engage them;

these limitations have made it especially important for us to contextualise our findings using other datasets and research).

Research Questions

Our investigation was informed by the following research questions:

- What are the benefits of personal use of the internet for older people, and can these benefits be obtained offline, or through a friend or family member?
- What prevents and enables people in later life from making meaningful, sustained use of the internet?
- What characteristics distinguish the older online and offline populations, and what makes the difference at an individual level?
- Why do some older people continue to choose to not use the internet, and what strategies - if any - might encourage them to do so?
- With non-users becoming increasingly rare, how can digital inclusion practice remain economical in the short to medium term?
- What mechanisms can be used to identify at what point a change in personal circumstances turns the internet from an optional extra to a lifeline?

Methodology

Research comprised the following:

- A **literature review** of grey and academic research concerning studies of digital exclusion but also research into cognitive decline in older age, and psychological phenomena which may affect digital behaviour. Initial sources were identified by a search for key terms ('digital inclusion', 'digital divide', 'digital exclusion', 'older people and digital', 'ageing and cognition', 'social ageing', further relevant material was identified through 'snowball' sampling, following up the references of references. The literature identified in this literature review can be found in Appendix 1.

- **Observations** of seven venues across the UK, used regularly by older people for social contact, learning and wellbeing, and where digital inclusion activity was - or could be – incorporated (see Appendix 2). By cross-referencing data from these observations, we were able to identify commonalities in usage of physical space, social interaction, and the different and sometimes contradictory influences of top-down and bottom-up organisation.
- Twenty-seven **semi-structured interviews** with a mixture of current internet users, lapsed users and non-users, on digital behaviour, but also health and wellbeing, social connections, family life, and work history. We supplemented these interviews with insights from Routes to Inclusion, our recent longitudinal study of digital learning journeys. .
- **Review and analysis of quantitative data** from several sources, including Ofcom's Adult Media Use and Attitudes Survey, the Oxford Internet Survey, and Good Things Foundation's ongoing survey of learners in the Online Centres Network. In most cases we reviewed existing publications and datasets, but we also worked with research organisations to carry out new analysis. This work helped to contextualise and complete the picture from our primary research.
- A review of our own and others' research into older people's digital support needs, and **focus groups** with organisations supporting older people and digital inclusion practitioners, drawing on what we learned in our primary research, to develop and refine new strategies to engage and support older people who want or need to get online.

- **A design sprint**, a time-constrained and intensive method of prototyping and testing widely used in developing new products and services. Our sprint tested new marketing messages based on emerging findings, aimed at non-users for whom fear of the risks of going online might be a barrier to engagement.

Research Findings: Making the Difference

There have been many attempts to explain why certain demographic groups are less likely to use the internet at all, or to use it in certain ways. Studies have explored how internet adoption and usage is affected by self-efficacy (a belief in one's ability to succeed) (Eastin 2000); by the uneven diffusion of such technology across society (Andrés et al 2007); and by material barriers such as design and accessibility of digital devices (Damodaran and Machin 2012). It may be possible to describe how each of these factors separately affects older people in abstract, but how do they interact, which are most important, and what makes the difference at the individual level?

The semi-structured format of the initial interviews allowed researchers to discuss common preconceptions about ageing and technology, but also for the conversation to extend into complex personal narratives that explored the roots of attitudes and behaviour. There was little evidence to support some preconceived reasons, such as an inability to afford equipment; other, less expected reasons came up again and again with no prompting. There was also a clear hierarchy, with less important factors being overcome by more important ones. This section presents different influences on digital behaviour in ascending order of their importance among our participants.

Awareness of the benefits of digital technology

Published data from Ofcom show that more than two thirds of non-internet users over 65 believe there would be no benefits to going online for them personally, compared to only 40% of under-65s (Ofcom 2016; the question has not been asked more recently). But this is not the same as not being aware that benefits exist and that others do benefit from going online. The high proportion of older people (48% of people aged 65 and over) who say the internet is 'not for people like me/I don't see the need' suggest that many older non-users believe that, whatever the benefits of going online, they can live without them (Ofcom 2018).

Among the participants in our semi-structured interviews, there was little evidence that awareness of digital technology and its benefits - by itself - encouraged them to get online. All were surrounded by people who used the internet regularly, and all had at least a broad understanding of its benefits. But this indirect exposure and awareness was just as true for non-users as for users, or even more so. Some active learners had taken the plunge without understanding or caring what could be done online in great detail; they talked instead of usefulness in general terms, or described a commitment to keeping up with the modern world for its own sake:

"I want to sort it out so that I can at least keep up with people when they're talking when I go out in the club tomorrow night and they're all saying, "Well, I sent you an e-mail," and I say, "Well I didn't get it," and I just sit there. But now I can join in." - **New learner, female, 65-75, C1**

"I wanted to learn now, everything is coming online...there are so many good things of the computer [sic], you know, but I shall learn that." - **New learner, male, 65-75, C1**

But exactly the same impression - that everything and everyone is moving online - was a source of distaste or even anxiety for others, including some current users:

"[People] have said, 'oh, look at this,' when they've been on Facebook. 'Oh, look at this, you can do whatever.' Or, 'look at this person doing whatever,' and I'm just a bit like, 'really?'. And I do have a look at it and I do read what it says but for some reason it just doesn't interest me, you know...people in town are trying to walk down the street and they're on the phone, why? Can it not wait until you get home?...I don't think it's needed and I think it's rude to be doing it all the time." - **Narrow user, female, 55-65, C2**

"People take it for granted, well, you should be able to do it, because that's the sort of world that we live in now; everything's done with computers, isn't it, more or less? And you feel as though, well, other people can do it, but I can't...It brings me down, more than anything, and it makes me feel as though I'm stupid because I can't do it."
Lapsed user, female, 55-65, D

"The fear I have [is] of the reduced amount of face to face communication we are having now, which I don't believe can be reproduced in this [online] way."
New learner, female, 65-75, B

These responses suggest a connection between the influence of indirect exposure and the theory of the internet as an 'experience technology', for which trust and perceived value grow with firsthand experience (Blank and Dutton 2012). But for our participants, secondhand experience - indirect observations of and judgements about digital technology - often led to negative attitudes which resulted in caution, anxiety, resistance, and lapsed use. If initial positive attitudes to the internet 'help users overcome the sometimes daunting initial learning task', the inaccurate or incomplete knowledge caused by indirect exposure may actually harm older people's chances of getting online.

Indirect exposure to and knowledge of specific benefits also had a very weak and in some cases negative correlation with digital behaviour. Some highly resistant non-users understood in detail what could be done online, but rejected the assumption that this was necessarily better than the offline equivalent:

"I've got a family, since my daughter died there's been a lot of nastiness in the family, and they go on Facebook and it can sound really nasty, but I said to one of the daughters, I said 'How do you know they're nasty? You can't tell', I said 'I'd rather talk to a person', but on Facebook you can take it either way, either that it's nasty or it's okay." - **Non-user, female, 65-75, C2**

The ready availability of alternatives to the internet - to communicate, find information, and shop, among other things - means the belief that digital technology is beneficial or indispensable appears to be very much in the eye of the beholder:

"I think it's better if you just go to the shop...you could spend more [online]...I've got the radio on the telly now. And I've got my little diddy [stereo] system. So no, I don't need it for that. And if there's a film I want to watch, if I've got it on DVD, I'll just put it in the machine and watch it." - **Lapsed user, female, 55-65, C2**

Although perceived value in the internet may grow with usage, simply knowing that it exists and what it does will not necessarily motivate people to get started - or may even put them off.

Awareness of the risks of digital technology

19% of non-users report a concern about internet safety to explain their digital behaviour (Ofcom 2018), and almost all participants in our research discussed the potential risks of going online. But their impressions of these risks were - like their impressions of online benefits - derived from secondhand experience, and as a result were often confused and ill-defined:

"I haven't [done any financial transactions online], because at the moment I don't feel that secure, you know, with all the fraud and, you know, the negative things you hear all the time." - **New learner, female, 65-74, C1**

As with online benefits, there is a critical difference between first-hand experience of and secondhand information about online risks. Trust in the internet grows in line with a user's negative experiences (Blank and Dutton 2012), which may seem counterintuitive, but first-hand negative experiences rise in line with overall use - which will comprise an even greater number of positive experiences, as well as building confidence and knowledge of how to deal with problems when they are encountered. But for non-users, secondhand information about risk is not counteracted by secondhand information about benefit in the same way: risks are all the more frightening for being poorly understood, but it is because benefits are poorly understood they are dismissed as not worth the effort, or as problems in disguise. For some participants, the boundaries between benefit, risk and different activities became so blurred that it became hard to tell exactly where their fears lay:

"You know a lot of phones have been pinched and broken into and it's got all of everybody's details on. And on the Facebook you put all your personal details on there and I just don't need to know about other people's things. You know, the security people can get into if you put your bank - or if you bank online or whatever - I don't know if you do put your bank details in, but if you do, I don't know how - if somebody else can get into it and get your details and you know, it just seems as if you're putting more information out there than what you need to do." - **Lapsed user, female, 55-64, C2**

For participants who had started learning, awareness of risk had less of a negative effect. It did not stop them from carrying out online activities which they felt to be safe, and they generally acknowledged that any online activity could be safe if done properly, although in some cases (notably around online banking) even confident users did not trust themselves to learn tasks well enough to be completely safe. But in general, risk was seen as unavoidable, but managing it was a skill to be learned like any other:

"I'm a bit scared as well, you know, going online, you are not sure which company you are dealing, what is wrong, but if you learn, the safety measures are there, but I have to learn." **- New learner, male, 65-74, C1**

"I thought I'm a bit scared of what you could do because there's so much fraud, fraudsters and wrong people but if they're used in the right way they're alright aren't they?" - **New learner, male, 55-64, C2**

In the early stages of usage and learning, when there is a lower positive to negative experience ratio (especially as mistakes are more likely), it is critically important for digital inclusion practitioners to provide extra support to new users to help them deal with negative experiences, until they reach the point where they can deal with these experiences themselves, rather than being put off by them completely.

The problem with risk as an explanation for non-use is that it very rarely appears in isolation. It is cited by between 1% and 8% of non-users as the most important reason for their non-use (Helsper and Reisdorf 2013, Ofcom 2017); far more non-users cite a lack of skills, access, money or - especially - interest. Since perception of risk declines with firsthand experience, it is much more likely to be an effect rather than a cause of non-use.

However, we found some evidence that specific instances of perceived danger, compounding existing fears, may cause use to lapse - if the user is so new that they do not have enough firsthand experience and knowledge to act as a counterbalance. Here is one new learner, who had been attending her Online Centre for only a few weeks:

"I'm a little bit wary of putting my banking details on the computer. They [the bank] showed me that it's absolutely secure and all the rest of it, but my daughter was conned out of two or three thousand because somehow or other they got her details and somebody had ordered all this carpeting from somewhere." - **New learner, female, 65-74, B**

She soon afterwards stopped attending classes completely, explaining to the centre manager that the reason was a well-publicised data breach at a major national telecoms provider. Her internet use did not make her any less safe, but from her point of view she made a rational choice: aware that risk existed, and not being able to differentiate between safe and risky activities, she took the position that 'you can't lose, if you don't play the game'.

The perception that the internet is a dangerous place does not end at the moment someone moves from non-user to user; in fact, the prevalence of this perception is higher among newer users than it is among non-users (Ofcom 2017), perhaps because new users are aware that they are exposing themselves to risk for the first time. Blank and Dutton note that older people are more likely to belong to a subgroup of users which they term 'adigitals', who:

'...do not feel that the Internet makes them more efficient, nor do they enjoy being online simply to pass the time or escape from the real world. To members of this culture, the Internet is likely to be perceived as out of their control, potentially controlled by others. For example, they feel frustrated because the Internet is difficult to use and harbours too much 'immoral material'. Compared to the other [internet user] cultures, the adigital group appears to resonate mostly with the problems generated by the Internet. They feel more excluded from a technological context that is 'not made for them'. **(Blank and Dutton 2013)**

These findings match the findings from our own interviews: resistant non-users talked very little about the risks of going online to explain their behaviour, but established users consistently cited risk as the reason they avoided certain online activities. Perception and understanding of risk may help to explain limited internet use, but does not explain non-use.

Education, employment history & life course

Events and experiences in life affect each other in complex ways, and can in turn affect an individual's opportunities to use, and attitudes towards, technology. Workplace experience of digital - or lack of it - was a common theme in interviews, with some non-users emphatic that their lack of computer use in the workplace explained their current digital behaviour:

I've never had to use it for work, in any form whatsoever. I certainly didn't use it when I was decorating or driving a coach. So most of my mates, they had jobs where they had to use computers, so they actually got into it. But I didn't, so I haven't. - **Non-user, male, 55-64, C2**

But this is not a straightforward position. For a start, other non-users with no workplace experience were strongly motivated to learn, whether for general or specific reasons: whatever the average effect of workplace exposure on digital behaviour, at an individual level other factors are also in play and may have a greater influence.

In addition, a requirement to use digital in the workplace - at all, more or less regularly, and at different levels of complexity - correlates with other factors which might affect digital behaviour. The Online Centres learner survey shows that, among over 55s, lack of workplace computer use also correlates with education below Level 2, and that female learners over 55 were significantly more likely than men to have had workplace computer experience. Attitudes based on experiences across the lifecourse also appear to be significant, with men and those with lower educational attainment less likely to have enjoyed learning at school.

Although the survey identifies other correlates, gender and experience of education are significant because both can profoundly influence an individual's circumstances, attitudes and behaviour before they start work, and may therefore directly affect the kind of work they do and their exposure to technology in the workplace. Participants looking for explanations of their behaviour may look to what is obvious - a lack of direct exposure - while not recognising the more subtle processes of socialisation. Further research is also required to understand the relationship between type of usage in the workplace and future digital attitudes and behaviour - all other things being equal, different levels of regularity or complexity of usage may have different long-term effects.

Even if they are directly related, we found some evidence that lack of exposure could be the result rather than the cause of fear or lack of interest, at least in the early days of computers in the workplace, when using them was rarely compulsory, and those who did so were those who wanted to:

"[Computers] were just coming in, and we had the people who were fanatic in the schools...but I didn't want to go on it." - **New learner, female, 75+, B**

"I felt [colleagues] wasted valuable time messing about - as I called it - with computers...but I suppose in a way it was an excuse [to avoid them]." - **New learner, female, 65-75, A**

Both of these participants had managerial jobs in which using a computer would be non-negotiable today; but in lower-skilled jobs it may still be possible to choose whether or not to engage with computers in the workplace. Conversely, more than one participant had been able to avoid using computers in the workplace as a direct result of their seniority, relying on subordinates to do so instead:

"I was originally a teacher and then I trained teachers both at county level...so during the latter part of my career, computers were increasingly in the forefront in the curriculum. I was in the fortunate

position - I thought then - of having secretaries of my own, extremely efficient secretaries, and that gave me an excuse not to use computers myself because they were highly efficient and I felt I had much more important things to do at the time." - **New learner, female, 65-75, A**

A small number of female participants at lower social grades reported a connection between employment history which was stronger, and qualitatively different, from the issues reported by others from professional backgrounds. For them, social expectations had limited their employment prospects, leading to missed opportunities and low self-efficacy:

"When I left school you didn't go to college unless you had money. Or somebody sponsored you to go. I wanted to be a nurse or a hairdresser but my Mum was putting my brother through being a mechanic. He was being a mechanic so she couldn't pay for two of us to go to college. And when I went to school, literally, girls were not encouraged to do like girls are encouraged now. We were more or less told you're here to have families. You left school, went to work for a couple of years, you finished work and you had your family and that was it. That was your life...You have children and you put your children first and then you do get in the same pattern and you stay where you are and then you get a bit scared. You know, 'Can I do it? Can I not do it?'...I'd always wanted to use [a computer]. But too frightened, too scared. Because I didn't know how to. Because as you get older you do lose your confidence. You get used to staying in your own little niche." - **New learner, female, 55-64, D**

"I would like to learn to use it, but I'm not too good, like I say, with my reading, and stuff like that, so do get quite a bit flustered and confused...That's why I never bothered, I thought it would be hard, you know, I'd get frustrated or annoyed with it...I had my children so I just stayed at home with them." - **New learner, female, 65-74, D**

These accounts show that self-efficacy may be negatively affected by a life course influenced by socioeconomic factors, which could explain - in part at least - the clear correlation in national data between digital behaviour, education and employment history: in the National Readership Survey social grade classification, grades D (semi-skilled and unskilled manual workers) and E (casual or lowest grade workers, pensioners, and others who depend on the welfare state for their income) make up 25% of the UK population, but 45% of those who do not use the internet (Ofcom 2018).

The digitised labour market

Since 1992, the proportion of people aged 50-64 in the labour market has risen from 61% to 74%; for people over 65, it has almost doubled, from 5.8% to 10.5% (ONS 2018). This phenomenon is set to continue as lifespans, state pension and retirement ages continue to rise. Older people in employment may not need to use digital, either within or outside their job, but for those claiming jobseeking benefits - Jobseekers Allowance, Employment Support Allowance and Universal Credit - it has become unavoidable. Since 2012, claimants are required by the Department for Work and Pensions to carry out a mandatory minimum amount of job search and application activity online, monitored automatically through the Universal Jobmatch and Universal Credit online portals; claimants can and do face benefit sanctions if they do not comply (National Audit Office 2016).

For older people still in the labour market, especially those with poor educational attainment, the need to use these portals and negotiate an increasingly digitised labour market is one of the main drivers of engagement with digital skills learning provision: 42% of Online Centres learners aged 55-64 learn about Online Centres from a Jobcentre, rising to 56% for those with no qualifications (Online Centres learner survey). In our research, several participants had been directly referred:

"I wasn't really that good with computers so [the Jobcentre] said, why don't you go to [Online Centre] and see if they can help you."
New learner, JSA claimant, female, 55-64, C2

As well as help with finding and applying for work online, older jobseekers are also more likely to need additional support with CVs and covering letters, or advice to support a change of career. As noted by an Online Centre manager in North East England, the decline of primary and secondary manufacturing means that getting back into the same kind of work may simply not be possible, meaning that learning digital skills to find work is inseparable from wider questions about career choices:

"The big industries declined...so what you tend to now have is a lot of people coming to you who are perhaps 45 to 60 who have maybe had one or two roles in just one or two industries and therefore their whole background of skills and knowledge and things that you put on a CV, qualifications, are limited. There's no point in saying, 'well come to us and we'll redo your CV and we'll log you on to Universal Jobmatch' and hope you'll find positions. What you've also got to say is, what's the impact of that going to be in that microeconomic change? The steel industry paid really well but when you're 50 do you still need that level of salary and if not what else can you be looking at? What others roles can he be looking at? What do those roles need? So you start to work through that and then you're starting to work through [questions like] do you need qualifications for those and are you ready for the interview. So you're building up a much more detailed picture that feeds into that more macro picture."

The threat of benefit sanctions is not the best motivation to learn digital technology, and can cause stress and logistical problems for older jobseekers with no experience of computers (House of Commons, 2016, National Audit Office 2016). But with the right kind of support it can trigger engagement where none previously existed, with positive results:

"If I hadn't been made redundant then I wouldn't be here. But I think [attending the centre] has actually learnt me a lot more [than in the workplace] because it was, as I say, it was quite a restricted amount of computer stuff we were allowed to do...I think here is much broader...Coming on this course has been good for me because the last time I did a CV it was in 1989...And so coming here I was able to sit down and we were able to put a CV together." - **New learner, JSA claimant, male, 55-65, B**

"I just got a letter [from the Jobcentre] saying that I needed to go to this meeting which I did... They just had this whiteboard up, and it said 'computer [classes]...so I asked them about it and they said come. So I plucked courage up, come across and I'm enjoying every minute of it." - **New learner, ESA claimant, female, 55-65, D**

The way that the digitisation of Government services for jobseekers has been approached is part of a wider shift - beginning with the New Deal of the last Labour administration - based on the assumption that jobseeking benefits, by themselves, encourage dependence and act as a disincentive to finding work. Requirements to use digital have to be seen in the context of requirements to treat jobseeking as a full-time activity, with 'no...option of an inactive life on benefit' (House of Commons 2001).

As with the use of online services, the contemporary benefits regime shifts the burden of work away from paid support staff to end users. But the situation is compounded for claimants of Universal Jobmatch and Universal Credit, who are placed in a position where they must do this work, or face the loss of their benefits. Jobcentres are, therefore, uniquely able to influence older jobseekers' digital behaviour, and although there is ongoing debate as to whether such

influence is appropriate, it should be clear that the responsibility to find stable and satisfying work implies the right to receive adequate time and support to do so.

Plenty of evidence from the Online Centres Network shows that success can be achieved by close relationships and regular communication between Jobcentres and local support organisations, who are able to combine informality with a broad range of services alongside digital skills to deal with more complex cases. But the frustration and confusion reported by many claimants of jobseeking benefits suggest that this provision remains underfunded and inaccessible to many of those who need it most (National Audit Office 2016).

Ageing and cognitive impairment: perceptions and realities

Several factors affect cognitive function in older age, and the extent to which cognitive function influences digital behaviour. Even outside of the various forms of dementia, varying levels of non-pathological physical deterioration of the brain are universal and irreversible as age increases (Hedden and Gabrieli 2004). These changes make it more difficult to learn and retain new skills and information, a process which generally starts at age sixty and increases more rapidly from the mid-seventies (Crawford 2004).

At the same time, cultural assumptions about the difficulty of learning in later life may result in stereotype threat. This well-researched phenomenon occurs when awareness of a stereotype about oneself increases anxiety, leading to worse performance at a task. For people in later life, believing that 'older people can't learn to use computers' may become a self-fulfilling prophecy (Pennington et al 2016). Stereotype threat can exist alongside - and exacerbate - real cognitive impairment, resulting in even worse performance (Scholl and Sabat 2008). Lifestage also contributes, with retirement often leading to a less stimulating environment, and cognitive function deteriorating through lack of use (Mazzonna and Peracchi 2012).

In addition, a lack of self-efficacy - the belief that one can and will do well at a given task - may not itself reduce cognitive performance, but may affect an individual's ability to deal with any impairment. Students with high self-efficacy 'participate more readily, work harder, persist longer, and have fewer adverse emotional reactions when they encounter difficulties than do those who doubt their capabilities.' (Zimmerman 2000). Self-efficacy makes the difference between viewing a novel task or situation as stimulating or intimidating: it reduces stress and anxiety related to learning, resulting in less avoidant behaviour, and less stereotype threat. A lack of self-efficacy can be a serious hindrance to successful ageing, since older people will avoid using new tools such as digital technology to adapt to change if they think they are unprepared to make such an adjustment (Slangen-DeKort et al, 2001). In terms of digital engagement, van Duersen and Helsper (2015) note that 'older adults with limited internet experience are likely to have not only low computer self-efficacy but also may have higher rates of computer-related anxiety, both of which correlate with slow technology adoption'.

Part of the problem with the effects of stereotype threat and mental retirement is that they are not common knowledge. If psychological process and changes in environment cause some level of cognitive impairment, older people may take this as evidence of an irreversible physiological decline, leading to a decrease in self-efficacy, a further increase in stereotype threat, and worse mental performance: a negative feedback loop. Conversely, awareness of these phenomena may help to reduce them, or to give older people the motivation to persevere. If the existence and effects of stereotype threat are explained to someone before they perform a task at which they might expect to do badly because of intrinsic factors like age, negative performance is reduced (Lamont et al 2015).

But it is not clear how, and how much, these cognitive changes affect digital behaviour. Non-users in our own research did not use it to explain their digital behaviour. Although it is possible that other explanations may have obscured real fear about their ability to learn to use computers and the internet, it is perhaps more likely that the effect and implications of cognitive impairment are only felt if and when the learning journey begins. It was new learners - faced with mastering a skill for the first time in many years - who were placed in a position where they had to confront why learning to use digital technology might be different, or more difficult, for them as older people:

"It's not like when you're a young man when you remember these things quicker, your grasping power is not as good at this age."- **New learner, male, 65-75, C1**

There was some indirect evidence that these learners might be affected by stereotype threat, in which awareness of a stereotype (that older people are not good with technology) negatively affects performance at a task:

"I think it makes us seem stupid. This is what you're frightened of. With people. And you're not, but it's a different world. It's much quicker than we're used to." **- New learner, female, 75+, B**

But there did not seem to be a straightforward relationship between cognitive impairment and (lack of) self-efficacy; if the belief that one could and should learn existed, non-pathological impairment was seen as a challenge that could be overcome:

"Maybe it appears harder, like to be able to memorise, or maybe it's the idea that as you get older you shouldn't really bother so much, that's somewhere in the brain somewhere, and as I just keep telling myself, 'It's not true, never mind how old I am, my mind is still working'. In a way, you get to a certain age, it's almost like, 'give up, just lie down, curl up and die.' No, that's not life, no." - **New learner, female, 65-74, C1**

"I do think it's an age thing, yes. But I wouldn't let it beat me, not sewing. I will not let sewing beat me. But the computer - one false move and it's out the window...It just petrifies me at times." **- New learner, female, 65-74, B**

There was also recognition - again, among new learners rather than non-users - that 'too old to learn' could be a self-fulfilling prophecy:

"The doctor told me, after my operation, 'keep walking, even if you have pain, do walk, that will take away your stiffness'. Same with the computer." - **New learner, male, 65-75, C1**

"If you make up your mind you're not going to know it there's no way you can pick it up." - **New learner, female, 65-74, C1**

Research has shown that memory problems can contribute to digital disengagement: they make it harder to retain knowledge between learning sessions; even where the individual tasks in a process may be remembered, the correct ordering may not (Damodaran et al, 2014). But whatever the influence on lapsed use, evidence from our participants suggests that non-pathological cognitive decline is not a major barrier for older people getting online in the first place, since it is only when they start actively learning that they have to grapple with its implications. Self-efficacy seems to play a much more important role. Without it, the smallest setback - caused by cognitive impairment or anything else - can be taken as evidence that success will never come; where it exists, almost any obstacle to learning a new skill becomes negotiable.

The influence of family

Close family relationships were central to participants' lives, influencing where they went, what they wanted, and what they felt they could achieve. The influence of family was enormous, organic, and chaotic - families are not planned structures with central coordination, and interviews revealed a complex interplay of shared benefits and commitments. As such, although family played a big role in participants' awareness and usage of digital technology, this role was filled with contradictions. The influence of family on older people's digital behaviour can be broken down into three key areas: engagement and learning, proxy use, and access and troubleshooting.

Family, engagement and learning

We have seen how awareness of the benefits of digital technology does not provide much motivation for non-users to go online, and the advocacy of trusted family members did not alter the situation

"They all say, 'dad, you should learn it'. No, I've got no interest. How many times am I going to book a hotel room? Is all the shops going to shut? Is all the banks going to close?" - **Non-user, male, 55-64, C2**

"[My family] have said, but I'm not interested. I've got a daughter in South Africa, and I phone her occasionally, and I tell her something, and she says, I already know. Because she's seen it on Facebook. I mean, I know there is all that, but no, at my time of life, [I'm happy] as I am." - **Non-user, female, 65-74, C2**

And even where participants were interested in learning, encouragement was not much good if it was not accompanied by any further support:

"My daughter was like, 'oh mum, shop online', but they won't show me how to shop online." - *new learner, female, 65-75, B*

Even when further support was offered, it was often not of the right kind. Research had identified key ingredients for successfully supporting older people to learn to use digital, including the avoidance of jargon and the ability to repeat to consolidate learning (Damodaran & Olphert 2013). But these ingredients were not usually provided by family members, and the nature of the relationship and the sheer size of the knowledge gap made the process mutually frustrating and discouraging:

"I haven't really [asked family for help] because they haven't got the patience with me...they think it's all easy, they do it too quick, you know what I mean, they show you too quick and then they expect you to get it the first time they tell you." **- New learner, female, 55-64, D**

"My 26-year-old granddaughter...she's tried to teach me, and she'll say, 'oh, Nan, we've just done that. We've just done that.' But I'm a very slow learner. Have been all my life" **- New learner, female, 65-74, C1**

As an aside, it is worth noting that reactions like this do nothing for older learners' fragile digital self-efficacy. Too often, participants reported that family members would take control of the device and complete the task themselves - easier for both parties in the short term, but a missed opportunity when older relatives are expressing an interest in learning. However, it was notable that one participant was able to start learning from her son, once she had built up the relevant vocabulary and understanding of basic concepts elsewhere:

"He said, 'what do you want to go there [an Online Centre] for?' I says, 'to learn how to use a computer'. He said, 'well we'll show you.' I said, 'but you don't, you just do things for me. If I want something you put me onto whatever I want and I've not learned nothing.' Whereas now I go home and Liam will say something and I'll have a think about it, and I'll say something back. I used to just say, 'put me on that page where you can get things.' Whereas it's 'the webpage' now. I think he's enjoying it because I sort of know." **- new learner, female, 55-64, D**

Family may make poor teachers for absolute beginners, but national data suggest that they are better at providing support once basic skills are established: older users rely more on family and friends than any other source of support for 'help if they got stuck or were unsure about how to do something online': 72% of those aged 65-74 and 87% of those aged over 74, against an average of 60% (Ofcom 2018).

Family, access and troubleshooting

The most obvious and direct influence of family on participants digital behaviour was through mediating personal access to digital devices: providing them, and solving problems with using them. Several new learners had taken their first steps after a family member had given them a device as a present or hand-me-down - whether solicited or not:

"I think one of them had an old computer, rather than throw it away, he sort of passed it onto me and so I just took it from there." - new learner, male, 75+, B

"My son-in-law said, "I can get an iPad for you," and I said, "oh I don't want that, I don't want that, I don't think I can use that." He said, "oh you would," and he bought it and that was the best thing that's happened to me really, because it's mine, nobody else touches it." **- new learner, female, 65-74, B**

"[My children] said, 'What do you like?' I said, 'No idea; you know, whatever you are using.' So I have an Apple iPad now." **- new learner male, 75+, C2**

Although it gave some participants a reason to learn, several others admitted that their new device had intimidated them - especially as family members had not accompanied it with lessons on how to use it - and it had ended up being put away for a long period of time. One Online Centres learner described how a family member's well-meant intervention had stopped her usage completely:

"But when it came to using a computer myself, I had a computer with a keyboard, right? That was fine. But then my daughter talked me into having a laptop, and bought me a new keyboard to go with the laptop. But to do that, you've got to have the keyboard here, the laptop's there, and it keeps going forward, if you know what I mean, if you're typing here, it's inclined to fall backwards all the time. And it unnerves me, and I completely lost the plot until when I came here." - **new learner, female, 65-74, C1**

In other cases, relatives' expectations seemed to be overly optimistic, given the attitude of the recipient:

"I had no choice…[My son] rang us up and says, 'it's time you had a laptop'. I said, 'I don't want one' He said, 'yes, you do'. I said, 'no, I don't'. He said, 'you can do your banking on it, your shopping on it'. I says, 'I don't want to do banking on it. I don't really want to do shopping on it'. So he bought us one at Christmas." - **non-user, male, 55-64, C2**

As well as devices provided by children and grandchildren, a few participants had access through a household computer used primarily by a partner or spouse. But easy access did not always encourage use:

"My husband's got a computer, because he's treasurer. He used to be treasurer of this village hall. And he's the treasurer of the Methodist church, so we've got a computer, but I never went on it…I used to be frightened of it, to be honest. Really frightened of it."

And with only one device in the house, one person's usage could get in the way of another's learning:

"I'm a computer widow when [my husband] gets on the computer, if you follow. You say to him 'can I go on there?'. He says, 'yeah, just a minute'. And he's into warplanes and all things like that. So before you know it, a couple of hours may have gone by...The computer to me was just something that I dusted." **- new learner, female, 55-64, D**

However, the availability of devices provided by family members did seem to make a positive difference to participants who were already interested in digital technology, as it gave them a means and a reason to learn. Family are also the first point of call for older users who need help with the internet: 58% of retirees ask family for help, compared to only 23% who would seek help from sources such as libraries and training courses (Oxford Internet Institute 2013).

Family and proxy use

In 2017, more than two in five non-users (44%) have asked someone else to use the internet on their behalf in the past year (Ofcom, 2018). In 2017 41% of non-users over 55 asked someone else to do something online for them (Ofcom 2018), and this indirect access - usually termed 'proxy use' tends to be carried out by a family member (Oxford Internet Survey 2013). As measured by Ofcom, proxy use has risen rapidly - it stood at only 18% in 2012 - and is probably much higher in reality. By defining it as instances where the non-user has asked for help, Ofcom's measure excludes unsolicited proxy usage: older people may not be aware that family members have used the internet to find them information on things like bus timetables or the weather. One study has found that proxies often look up health information for others online 'without necessarily being asked to do so' (Abrahamson and Fisher 2007).

Proxy use was almost universal among participants in our research, But, as with other factors discussed elsewhere, it cut across both users and non-users, making it a poor explanation of overall digital behaviour. It is also difficult to look at participants' attitudes and see proxy use as problematic, especially when they did not do so themselves:

"If wanted anything my son in law would say 'I'll get it for you and you just give me the money', so that's what we do, we've got an arrangement and it's lovely." **- non-user, female, 65-74, C2**

"I always get my granddaughter to do anything like that… I bought her twins a Post Office set each, and then she does it for me on her computer...I give her the money for that and she must have done it on her one. I'm quite happy with [my family] doing it." **- limited user, female, 75+, C2**

Almost all proxy use reported in our interviews was related to financial transactions, which matches national data which show that two thirds of proxy use is connected to online purchases (Ofcom 2017). There was a widespread awareness that better deals were available online, with current users drawing a line between their own activity and what they perceived as the higher level of skills and knowledge required for transactional activity: where proxies are

available, awareness of the risk of online fraud does not stop older people from accessing online deals, since beneficial but potentially risky situations can be turned over to trusted family members.

Although the presence of a proxy might seem to make personal use unnecessary, more than one participant with an available proxy still felt motivated to learn:

"I don't want to be dependent on people to do it because I want to be able to do it myself." **- New learner, female, age 65-74, C1**

"I wanted to know more about the internet, computer system, because I depend on my kids a lot and sometimes they don't have the time to advise me or to show me what to do." **- New learner, female, age 65-74, B**

Rather it is the unavailability of proxy support which may drive older people online. Only 13% of Online Centres learners give as their reason for learning that 'someone used to do online tasks on my behalf but now I have to do them for myself'; for over 65s the figure is more than double, at 28%.

Children moving away, or the death of a friend or life partner, may suddenly prevent older people from taking advantage of the internet, and also means the loss of a source of other forms of support and social contact, making the need to go online all the more pressing. It was notable that reliance on a spouse as proxy user was seen by some participants as relatively problematic, compared to reliance on a child or grandchild:

"When I retired, I had a husband who although he is by no means an expert on the computer, was a mathematician by nature, and to some degree self-taught, and I became dependent on him when I needed anything done on the computer…[he] has recently been ill for almost a year that too has made me realised how important it is that I am independent of him." **- New learner, female, 65-74, B**

"We got our first computer because my son's teacher said 'I think you need to get a computer at home'…And of course, that's how my husband learned, and I was sort of left aside again, because then it was him and the boys, it was sort of their sort of domain….I have become so dependent on my husband this last 12 months. I am so dependent on him for a lot of things." **- New learner, female, 55-64, D**

However, rates of (relatively unproblematic) proxy use through children are almost three times higher than rates of proxy use through partners and spouses. Broadly speaking, proxy use through family may remove the need for older people to go online, but it is important to recognise that it is the loss of a proxy which can cause difficulties - and to more than just an individual's levels of digital inclusion.

Lack of perceived value & personal relevance

In the major UK surveys of digital behaviour, the most commonly cited reasons for internet non-use are related to a sense that the internet is not valuable or relevant to the individual non-user (50% of people aged 55 and over and 47% overall). Like absolute use and breadth of use, this lack of perceived value correlates with age; unlike them, it does not correlate with social grade and education level (Ofcom 2017, Helsper 2013). Other reasons for not going online include affordability, safety and complexity, but these are cited by many fewer non-users than relevance. This section explores some of the possible explanations for a lack of perceived value in the internet, and how they might be connected to older age.

	Main reason non-users give for not going online			
	Affordability	Safety	Complexity	Relevance
All ages	9%	11%	13%	47%
55+	6%	11%	13%	50%

Table five: Data from Ofcom 2017

Misunderstanding the internet

Survey questions which ask people why they do not 'go online' (Ofcom) or 'use the internet' (Oxford Internet Survey) present the internet as an undifferentiated whole rather than a range of activities; terms such as 'online' and 'internet' may also have negative associations for non-users - of risk or lack of personal relevance - leading them to give negative answers. The Online Centres learner survey provides some nuance, by asking respondents about interest in specific online activities, such as communicating with friends and family, and finding health information; data show that respondents over 55 are more likely than those under 55 to be more interested in learning how to do any given activity, if they do not do it already.

Although these data are not representative of the general non-user population, they suggest that older non-users may not be interested in 'the internet' as an abstract concept, but may see more or less value in individual online activities. This is more than just a methodological problem: older non-users need to be able to access information and support that helps them to understand the specific ways in which the internet can benefit them as individuals, rather than being presented with digital as an intimidating and confusing monolith. One participant who observed that "I don't know what the internet is" was nevertheless using it in a limited way via her smartphone, and wanted to do more, but she had found a class put on by her housing provider to be a missed opportunity - "a bit boring really, and I think they took a lot of time on different things" - leaving her reliant on family for information and inspiration.

Further evidence comes from the Sus-IT research project funded by the New Dynamics of Ageing initiative, to identify 'ways to help older people to be confident and competent users of computers and other digital products'. During interviews, two participants stated their firm intention to remain offline, and their belief that the internet was not relevant to their lives; within fifteen minutes of supported searching for activities of interest, they had become convinced that the internet had something to offer them. The authors note that:

"Fundamental change in beliefs and intentions about digital technologies and its use can be achieved in a very short time... Misperceptions are quickly corrected through experiential learning." **(Damodaran & Burroughs 2017)**

There may be other reasons why older people reject the internet as not relevant to them - but to make an informed choice, they need to properly understand exactly what it is they are rejecting.

Cohort effects

Some of the reasons behind a lack of perceived value in the internet may be due to cohort effects: specific characteristics of the current cohort of people aged over 55. Most obviously, they are less likely to have been exposed to digital technology in either their personal or working lives, and are therefore less likely to feel they need it in their lives; as one participant put it, "we've lived all these years and we're not bothered now." This lack of exposure may even result in older non-users seeing themselves as fundamentally different from those who use the internet, as evidenced by one of our participants

describing regular internet use as often frivolous and ill-mannered; her attitude was not 'I choose not to do that' but rather 'I choose not to be like that':

"That's where I'm different from everybody else. People would rather read things or do whatever on the computer; whereas I'd rather have it in my hand to go back to if I need to...I don't think I'd get the use out of it that other people do. You know people who are on it every day, twice a day or three times a day, it just wouldn't interest me. If I had something else to do I'd go and do it, you know...if you go for a meal and you go somewhere a bit smarter, and you're sat round a table and there's somebody on the phone, I just think it's rude. Is it needed? You know, is it urgent? Do you have to do it now?" - **non-user, female, 55-65, C2**

Already sceptical about the internet and their ability to learn to use it, current older cohorts may also be especially sensitive to the effects of badly-designed digital learning opportunities, which extinguish rather than kindle their interest. Some of our participants reported this problem, which was also a finding of the Sus-IT programme; the implications for practitioners are discussed in detail in the section Older Digital Learners' Support Needs.

Finally, today's older non-users may be more likely to have their non-use 'locked in' because they have adult children and grandchildren who use the internet on their behalf - in the future, older people will be more likely to be current users with existing skills which they can build upon. This is an under-researched area, but our evidence suggests that lack of interest in personal use is not incompatible with a desire to take advantage of the internet via a proxy.

Age effects

Unpublished research by the Oxford Internet Institute shows that older people's lower levels of internet use are an age effect as well as a cohort effect. It is not just because today's older people 'did not grow up with' the internet: people in general are more likely to become lapsed users as they age. And lapsed usage is associated with lapsed interest: more than two thirds of lapsed users do not plan to go back online (Oxford Internet Institute 2011).

It is impossible to tell from existing quantitative data to what extent lack of perceived value in the internet is a cause or an effect of lapsed use. As people age, the benefits of remaining online may increasingly become outweighed by the cost of doing so, and barriers such as disability and social isolation become more prevalent (Olphert and Damodaran 2013). Conversely, people may feel they have less need to use the internet as they grow older: as long as they remain active and socially connected, and do not need to make regular use of online services, they may prefer to access specific online benefits through proxies. Preferring to do things offline may also indicate needs that are especially important to older people and that digital cannot reproduce, such as the face-to-face social interaction of going to the shops, and supporting local employers and employees (Knowles and Hanson 2018).

Van Duersen and Helsper (2015) note that non-users over 75 are much more likely to say they are 'too old' to start using the internet, compared to those aged 65-74; lack of interest may be connected to the further age effect of an individual's belief that it is simply not worth learning a new skill that they may have little opportunity to use. One non-user in her 80s we spoke to acknowledged that the need to be online would continue to grow in the future, but felt justified in remaining offline because 'I don't think I'm going to be here.'

Implications

A stated lack of interest may be just that, and may not cause problems to an individual if they have access to sufficient resources through offline channels. One offline participant - with good social resources, and access to the internet via family proxies - did not feel at a disadvantage, and presented his lack of interest as an uncomplicated explanation of his behaviour:

"If you haven't got any interest whatsoever, how is somebody going to persuade you to do it? If they can persuade you to do it, then you've got a little bit of interest. And I haven't." - non-user, male, 65-74, C2

It is hard to argue with cases like this, but lack of perceived value may also be used as a cover - intentional or otherwise - for poor self-efficacy; or be driven by ignorance of how the internet could meet urgent needs. Being able to identify where lack of perceived value is and is not problematic, and respond accordingly, is a critical problem for policymakers and practitioners within digital and wider social inclusion activity.

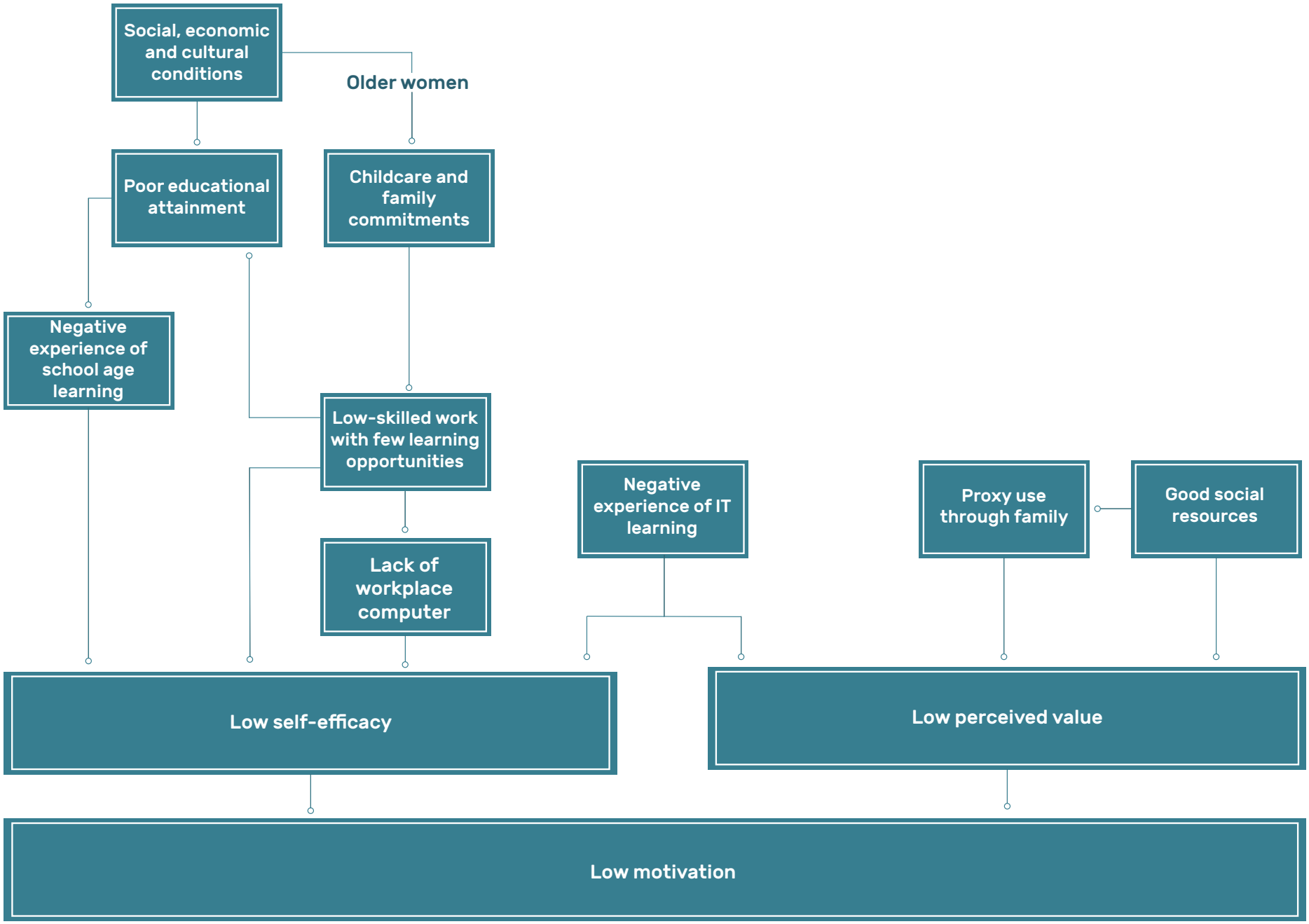
Approaches to engaging & supporting older people

Whatever their relative importance, the range of influences on older people's digital behaviour is vast - indeed, the exact combination of personal circumstances is unique to each individual, and the reasons that might be given for remaining offline, or limiting internet use, may not be what they seem. This diversity, and the difficulty of pinpointing the underlying reasons for behaviour and attitudes, present a challenge for digital inclusion policy and practice. Understanding how to motivate and support older people to use digital means recognising this diversity, but also resolving some of its complexity. Before considering the evidence for different engagement strategies and pedagogies, this section presents a typology which breaks the older population into categories with distinct digital 'personalities'. This typology is not intended to provide a simplistic explanation of the many different influences on digital behaviour, but to present discrete combinations of fundamental characteristics with unique support needs.

Older people and the typology of digital engagement

There have been a number of valuable attempts to categorise digital behaviour based on skills (The Tech Partnership 2017), motivation (GDS 2014) or shared attitudes and beliefs (Dutton and Blank 2013). We would argue that skills and access are becoming less reliable indicators of meaningful digital engagement, especially among older people. Our research shows how many older people remain non-users or limited users, despite having theoretical access through devices provided by friends and family; and specific skills - although important - are by themselves not a good measure of engagement or predictor of future use, since without the motivation to use and maintain them they will be lost. For the purposes of digital inclusion strategy for older people we propose a typology that focuses on three essential non-material factors: perceived value, self-efficacy, and need.

Sources of low self-efficacy and perceived value

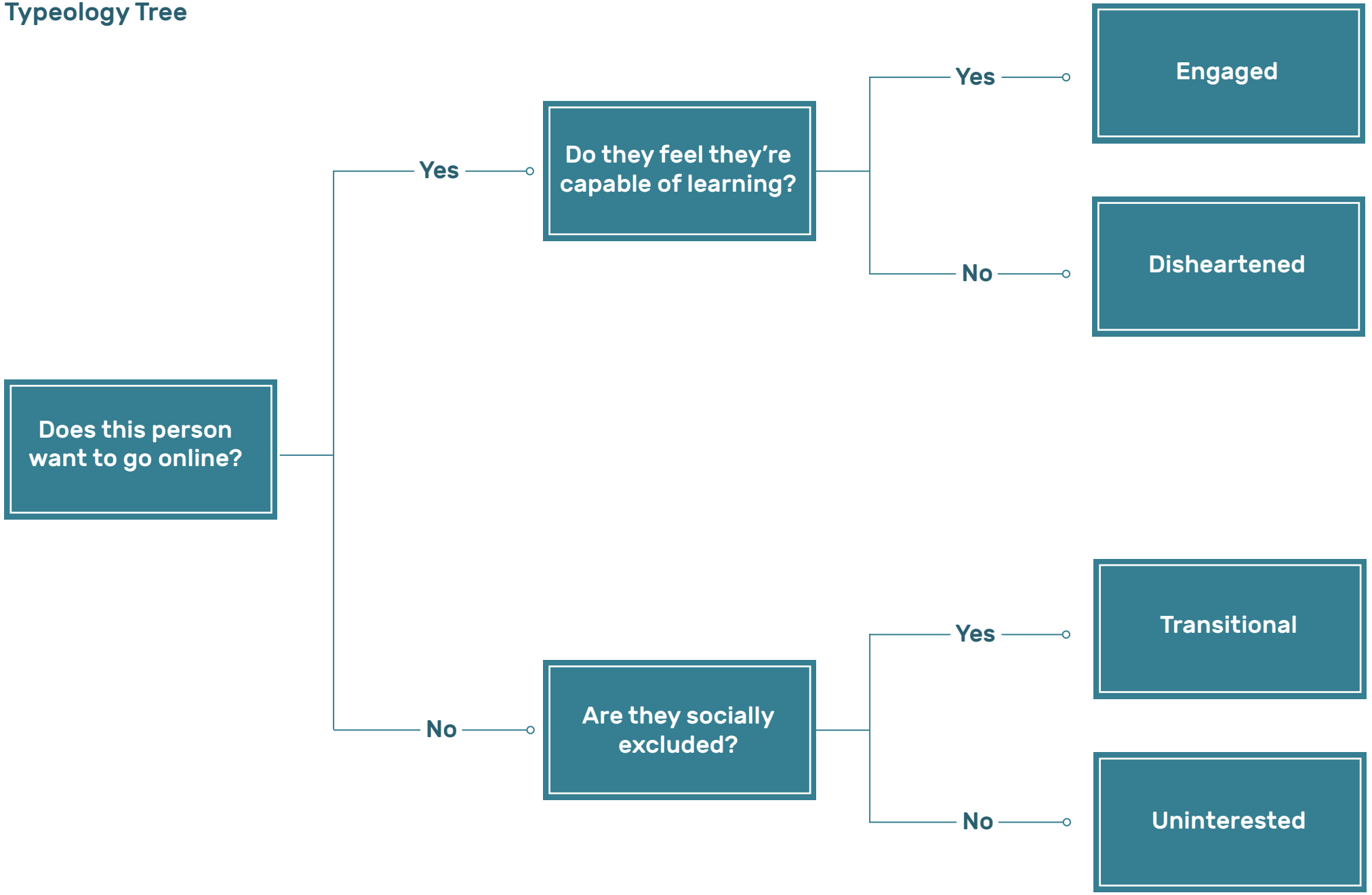


- **Perceived value.** In order to get online and stay online, older people need to perceive the internet as something that is relevant and valuable to them as individuals. This sense of relevance may be connected to specific outcomes and types of usage; or a general interest in the possibilities of the internet, even if these are poorly understood. Perceived value is subjective, and as such distinct from need (below).
- **Self-efficacy.** As well as having a positive view of the internet, older people must also have a positive view of their own ability if they are to learn to how use it. Their self-efficacy may be affected by their assumptions about their age, other personal characteristics, or digital technology itself; by personality traits; or by the influence of previous experiences in learning, work and home life. If self-efficacy is low, perceived value by itself may not be enough for an older person to get online: although they may continue to believe that the internet can benefit them, the slightest setback will reinforce their impression that it is beyond their reach - or they may avoid learning completely. Poor self-efficacy may also contribute towards usage which is limited by a fear of being unable to deal safely with online risks.
- **Need.** Unlike perceived value, 'need' can - and should - be defined precisely. To describe all older non-users as needing the internet is a difficult statement. It may be possible to list digital benefits that are unavailable to any non-user - even through proxies, or offline alternatives - and say that they need to be online. But such a definition of need is too broad to be meaningful, and ignores the wider context of older people's lives. To narrow the field, in this context 'need' is defined as need for personal use (i.e. not possible through a proxy or where a proxy is not available) which can significantly improve the quality of life of someone with poor well-being, and that such an improvement cannot easily be obtained via offline alternatives. This might include the need to find health information or communicate regularly because of ill health, the need to use online portals to find work or access benefits, or the need to communicate with family and friends to overcome social isolation.

Digital inclusion measures and strategies tend to collate all non-material barriers under the heading 'motivation'. This is not unreasonable, but it should be recognised that motivation is made up of perceived value and self-efficacy, which can exist independently. And need - while a crucial consideration for digital inclusion strategy - by itself does not necessarily create motivation: an individual may meet any definition of need, but still not perceive the internet as valuable, or something that they can hope to learn. In fact, national data show a negative correlation between need on the one hand, and perceived relevance and self-efficacy on the other. Younger, more affluent people tend to be broad, confident and regular internet users, but also to have less need for it, insofar as they have higher levels of economic and cultural capital, and are at less risk of poverty, isolation, and poor physical and mental health; for non-users and narrow users the situation is reversed (Ofcom, 2018).

Digital inclusion policymakers and practitioners needs to recognise the importance of each of these components, in deciding where and how to direct their energy: whether in terms of engagement, delivery or auxiliary support, there is no 'one size fits all' model. Our research suggests that, for practical purposes, older people fall into one of four digital behaviour groups: the **engaged**, the **uninterested**, the **disheartened**, and the **transitional.**

Typeology Tree



The engaged

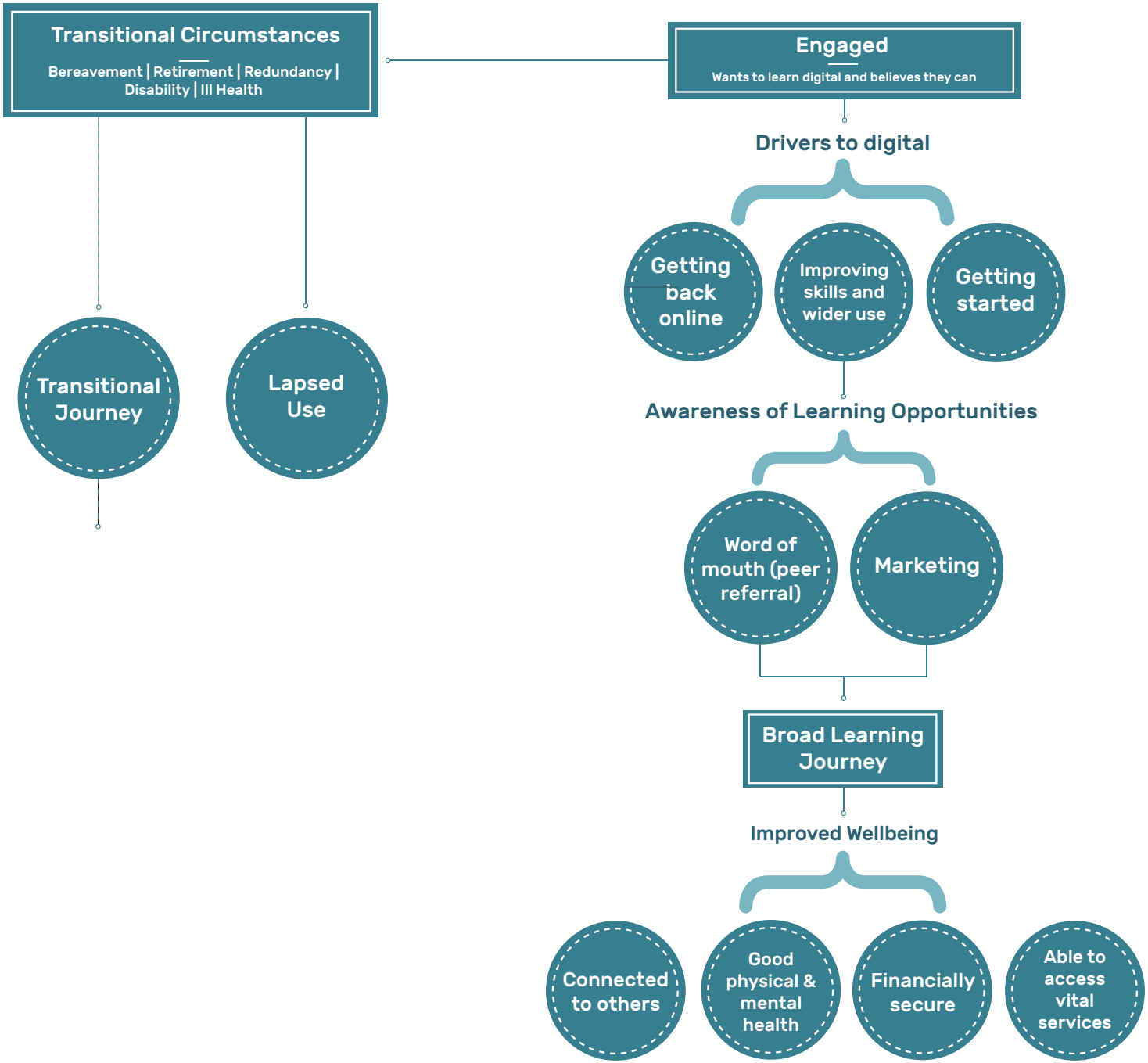
Typical characteristics

- Believe the internet is useful to them personally
- Believe that they are capable of getting online, or improving existing skills
- Believe they are able to manage online risks
- Positive experience of school-age education
- Work in high-skilled and complex job roles
- Experience of learning in adulthood
- More likely to have existing digital skills and access

Description

Engaged older people have both **perceived value** and **self-efficacy** in relation to digital technology: they are already interested in digital technology at some level, and believe they are capable of learning what they need to know. They may or may not have an urgent **need** to learn digital skills, but the presence of such a need may influence what and how they want to learn. If they are non-users their interest may be **ill-defined**, unattached to any specific online activities; or focused on one single activity, with no immediate desire to move on to wider use. Or they may be current users, wanting to broaden their skills and activities, or keep up with the rapidly changing online world. Engaged older people may have tried unsuccessfully to get online in the past, but without damaging the confidence they have in their ability to learn and their sense that the internet has value to them. If they can be made aware of relevant learning opportunities, they will be motivated to seek them out - but it is critical that these opportunities are carefully designed to meet their needs.

"I came because I'm getting behind with my grandchildren. And in life, in general. It's something that you've got to accept is going forward. I know a lot of people of my age who are willing to put themselves out to do it, and one lady said that to me. She said, 'well, if you want to learn, you'll learn'. And I thought, she's right. And I thought, well, I do, and when I heard of the class, I thought, yeah. I mean, today, I've been looking up car insurances on the internet. I'd never sit there and do that by myself, a year ago. I am definitely getting more confident than I ever was before."


Transitional Circumstances
Bereavement | Retirement | Redundancy | Disability | Ill Health
Transitional Journey
Lapsed Use
Engaged
Wants to learn digital and believes they can
Drivers to digital
Getting back online
Improving skills and wider use
Getting started
Awareness of Learning Opportunities
Word of mouth (peer referral)
Marketing
Broad Learning Journey
Improved Wellbeing
Connected to others
Good physical & mental health
Financially secure
Able to access vital services

The Disheartened

Typical characteristics

- Believe the internet is useful to them personally
- More likely to have a need to use online public services regularly
- Believe that the internet is too complicated for them to learn
- Concerned and confused about online risks
- Poor experience of school-age education
- Few opportunities to learn since school
- May have had negative experience of learning digital skills
- Low-skilled career history and/or long periods of unemployment or childcare
- May have access, but don't feel confident using their device

Description

The disheartened have some perceived value for the internet, and may have some need as well, but their low self-efficacy creates a major barrier to their getting online. Their general self-efficacy may have been affected by negative learning experiences at school, or subsequently by a life course where they have not had the encouragement or opportunity to prove to themselves that they can learn new skills. They may also have low self-efficacy specific to learning digital skills, which may have been informed by failed attempts at teaching by family members, or poorly-run computer classes. Whatever the cause, the result is that the disheartened have come to believe that the problem lies with them: they feel that others may be capable of learning to use digital technology, but they are not.

"I couldn't take everything in with the headphones. I mean, I don't know whether I would be better off learning from a book or another method, but I didn't find that method worked for me. It's probably worked for a lot of people, but personally, I didn't find that I was any better off for doing it. There's a lot of things, apparently, that the laptop can't do, but the tablets can, so that's another confusing thing, isn't it? I just find it all very, very daunting, because it's like you go on a site, or you go on eBay, it's, right, what's your password? And, well, I haven't got a password. Or you want to go on, I don't know, Facebook - well, what's your password and your email address? And then you find out that it's different passwords and different email things, isn't it, and I think it puts you off, doesn't it? Probably one-to-one support would work for me. It's finding a method of learning that I'm happy doing."

The Uninterested

Key characteristics

- High general self-efficacy: able to achieve what they want in life
- Strong social resources through family and friends
- Little current need to use public or health services regularly
- Prefer to find information and communicate offline
- Do not see the internet as valuable or relevant to them
- Highly resistant to attempts to get them online
- May make regular use of the internet through proxies

Description

The uninterested have little or no perceived value in the internet, at least in terms of personal use, but they also have no real need for it. They reject the internet from a position of relative strength: they are in good health, not in poverty, and can rely on the social resources of family and friends. They are not seriously disadvantaged by their non-use, since they have little or no need to use online public services, prefer to communicate via offline channels, and can access many of the money-saving benefits of the internet via a proxy. They may wear their status as a non-user as a badge of honour, and be highly resistant to efforts to persuade them to get online, although mechanisms should exist to identify and support them if a change of personal circumstances makes them transitional (below).

"I've never, throughout my working life, never had to use a computer. Never. So I've got no interest in it. I suppose you'd class me as old-school, because we never had them, we never used them. My son rang us up and says, 'it's time you had a laptop'. I said, 'I don't want one'. He said, 'yes, you do'. I said, 'no, I don't'. He said, 'you can do your banking on it, your shopping on it'. I said, 'I don't want to do banking on it. I don't really want to do shopping on it'. He said, 'you've got to move in with the times'. I said, 'why? Is all the shops going to shut? Is all the banks going to close?'. This year we did book a holiday online - well, my lad did it, and I just had to phone up

The Transitional

Key characteristics

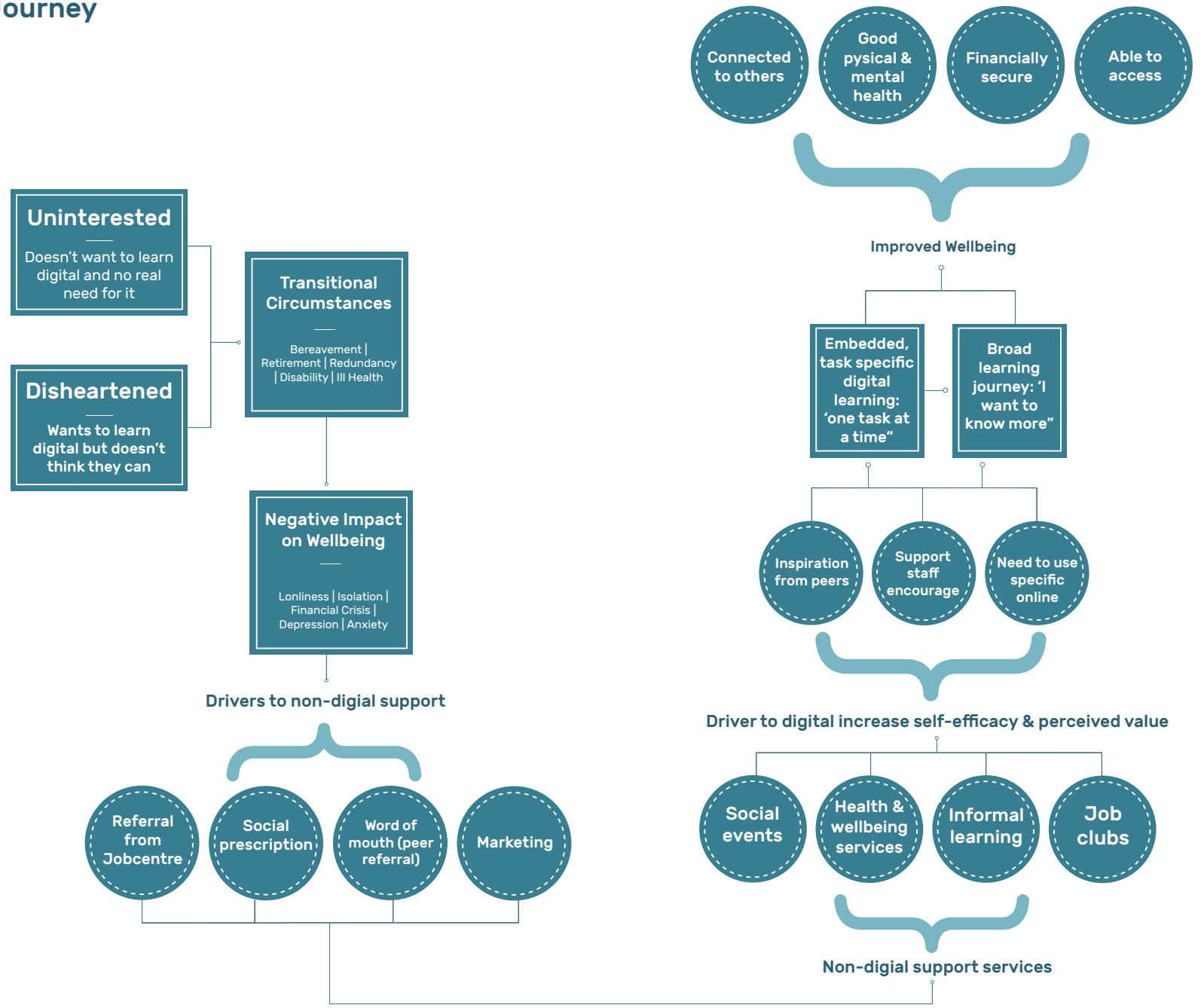
- Recent major life changes, e.g. retirement, ill health or bereavement
- Sudden higher need for health and public services
- No or very restricted internet use, limited to things like social media
- Changing personal circumstances may cause current use to lapse
- May perceive transactional online activities as prohibitively complicated or risky
- If a non-user, may be unable to understand how the internet can help them

Description

The defining characteristic of the transitional is a significant (and often sudden) increase in need for digital technology: changing personal circumstances such as retirement, unemployment, bereavement or worsening health have negatively affected their wellbeing, turning the internet from an optional extra to a vital lifeline. Alternatively, their new circumstances may put them in a position where regular personal use of the internet to access online public services has become more or less unavoidable. Despite this, the Transitional may have little or no perceived value in the internet, remaining unaware or unwilling to accept that they have reached a point where their belief that 'I'm better off without it' is no longer true; or they may want to learn, but struggle with low self-efficacy. Transitional circumstances can spontaneously create not only need but also perceived value in the internet, but this may not always happen (Good Things Foundation 2017); or older current internet users may suddenly or gradually become digitally disengaged if they become unable to access digital technology or learning opportunities (Olphert and Damodaran 2013). The transitional need close and careful support, whether or not they are current users.

"I have become so dependent on my husband this last 12 months. I could not go back doing what I was doing. Because I know how my knees are. They're very painful. I'm on Morphine to kill the pain. As for anything else, I thought I was okay when I first started here, but I didn't realise how much the stroke had affected me. I'd love to learn more. I have got such a lot out of my learning the computer as far as I've gone now. It's completely changed my life. Because I know these things like paying my bills. If I can't get out, I can pay it. And I've got to think, not just for today, I've got to think of the future. Because I don't know how I'm going to end up. Because I've got other health issues as well. So me learning this is important. I'd always wanted to use it. But I was too frightened, too scared. Because as you get older you do lose your confidence. You get used to staying in your own little niche."

Transitional Journey



Connecting older people to digital learning

The models that can connect older people to digital learning opportunities are already widespread at both a local and national level. The engaged and (in some cases) the disheartened will actively seek out the standalone digital learning opportunities co-ordinated at a local or national level, if they are aware of them and believe they will meet their needs. In this case, practitioners need to focus on appropriate messaging and marketing. The more disheartened or transitional may not actively seek out standalone learning, but in any case would arguably benefit more from referrals to programmes which offer a wide range of support services, in which digital can be embedded. It should also be recognised that, for the more reluctant, engagement in digital learning may be a process rather than an event, moving from complete non-use through proxy use, awareness of benefits, supported use, limited personal use, to broad independent use. This section considers the role of messaging and marketing approaches for pure digital inclusion, two existing referral pathways to support services - social prescription and referrals from Jobcentres - in which digital can be incorporated, as well as the underexplored role of word-of-mouth referral among peers.

Messaging and marketing

- Traditional marketing of standalone digital inclusion activities remains an important way to engage older people who already use the internet, but want to improve their skills and knowledge.
- Marketing materials need to be designed with the input of the frontline delivery organisations who will use them, and the older people they are aimed at, in order to be effective.
- Libraries remain a very popular venue for digital learning for older people, especially those of higher socioeconomic grade, and marketing approach should reflect this.

The proportion of non-users over 65 with no intention of going online grew from 87% in 2015 to 93% in 2016, suggesting that the pool of older non-users who are engaged is small, and dwindling (Ofcom 2015, 2016).

But it would be wrong to suggest this means that traditional marketing approaches - posters, leaflets and campaigns - are becoming irrelevant. There are still plenty of older people who are current internet users, but whose skills and confidence are limited, or who believe that the internet is an inherently risky environment (the 'adigitals' identified by Blank and Dutton). These users may already be interested in learning, and as such actively looking for opportunities to do so, like one of the participants we interviewed at a west London library learning session:

"I'm always reading things, you know, I will read any notice anywhere, so that's how I found out, there's a whole list. I think I went to Southall Library, I found out there's a whole lot of places where they were teaching for free." **- new learner, female, 65-74, C2**

Data from the Online Centres learner survey provides further evidence that marketing is particularly effective among older people, including older limited users. 20% of Online Centres learners over 65 had heard about their centre from a poster or leaflet, compared to only 11% of under 65s. Similarly, 9% of over 65s cited a local paper or radio station as their source of awareness, compared to only 1% of under 65s; these higher rates are consistent across education levels. In addition, learners who had heard about their Online Centre from a poster or leaflet were much more likely to have existing, basic skills: 52% against an average of only 36%.

In order to be effective, marketing materials and campaigns for older people need to be designed through collaboration between infrastructure, delivery organisations and end users, to ensure messages clearly communicate that the internet is safe, useful, and easy to learn. As part of the current research, Good Things Foundation ran a design sprint with Centre for Ageing Better, to test new marketing messages that could encourage non-users to get online. The design sprint process - designed to answer critical questions rapidly - helped to provide usable evidence within just two days. The sprint focused on highly resistant non-users, and those who might be held back from learning by a fear of online risk. The key findings were:

- Messages that directly addressed fears about online risk were not likely to be effective among non-users, since those interviewed almost universally stated that lack of interest was the main reason they were not online.
- Messaging around personal interest was not necessarily effective for resistant non-users; as in the primary research, most stated a preference for pursuing their interests through familiar offline channels.

These findings are in line with national data, and it is probably not necessary to dig deeper. But design sprints and other user testing methodologies need to be used on an ongoing basis, so that marketing strategies keep pace with older people's changing digital attitudes and behaviour.

Special mention should be made of libraries, which are overwhelmingly popular venues for digital learning among older people. In the Online Centres learner survey, 36% of respondents over 65 heard about digital learning opportunities from their library, against 14% of respondents under 65; 41% of respondents over 65 were learning in a library Online Centre, versus only 16% of those under 65. Libraries are a well-used, known and trusted source of a range of information and services for older people (Arts Council England 2016). Marketing and delivery of standalone digital skills provision in libraries may not attract those with lower self-efficacy or perceived value, but appears to be highly effective among the engaged.

Social prescription

- Social prescription - especially the community signposting model - is an effective way to engage older people who could benefit from digital as a result of poor physical or mental health, or transitional circumstances.
- Community signposting requires good infrastructure and strong local partnerships in order to work well. Existing success stories should be used as the model for scaled delivery.
- Prescriptions work best if they are made to socially inclusive activities with an immediate appeal, in which digital support can be embedded as appropriate. Prescribing to digital-first support is not effective.
- Better research is needed on the effectiveness of social prescribing in order to convince clinicians that it makes a real difference to those who receive it.

Social prescribing - where clinicians and others refer patients to non-clinical health and wellbeing services - is an increasingly popular alternative to clinical interventions. Prescriptions may be made to a specific, highly-structured intervention, but can also follow a 'community signposting' model in which referrals can come from a range of formal and informal sources to a single point of contact - a community worker or volunteer - familiar with a wide range of local support options, who works with the individual to agree an appropriate package of support (Health Education England 2013). The community signposting approach is already being used successfully as part of the Age Better in Sheffield programme to engage and support older people at risk of loneliness and isolation:

"We have a lot of referrals from GPs, mental health workers, social workers, friends and family can refer, volunteers can refer. There are lots of different referral avenues…[the GP] gives them a brief outline of what we do, but it's our staff who will tell them of all the opportunities available to them support wise." **- Age Better in Sheffield delivery partner**

Community signposting may be an important solution for engaging older people who are **disheartened** or **transitional**. Although a digitally empowered individual can do more to manage their own health, this is not necessarily obvious to the individual in question. Findings from the Widening Digital Participation programme delivered by Good Things Foundation for NHS Digital suggest that prescriptions to standalone digital learning opportunities - even when the health and wellbeing benefits are made clear - do not tend to be followed. Higher engagement can be achieved by referring to a 'wellbeing champion' rather than a 'digital champion', and presenting a range of non-digital as well as digital support options. Once the individual has some **perceived value** in the internet, digital can be introduced in a way and at a pace that helps to build **self-efficacy**:

"Just through conversation after lunch [at a weekly social café] we were talking about things that we'd like to do, things that scared us I suppose, what we were frightened of and one of the ladies said that she'd been bought a Kindle for Christmas and it had not come out of the box because she was petrified of pressing the wrong buttons. This sparked off a conversation about 'how computers scare me' and 'I'd like to be able to write a basic letter, send an email, switch a computer on'. I put it to them and said, 'what about a bit of a taster, a drop-in? Nothing formal, set up some laptops, some iPads, you bring your stuff and we'll have a go at seeing if we can get you set up and going.' They were up for it so I came back and spoke to one of our trainers and she agreed to do a bit of a taster session….One thing we really want to do now is either set up something on a regular basis within the group." - **Age Better in Sheffield delivery partner**

The community signposting model is a potentially powerful engagement model, since it draws on the influence of trusted intermediaries interacting with older people personally as well as professionally, but it is not easy to implement: it requires strong local partnerships, buy-in from CCGs and GP practices, and dedicated personnel to triage individuals to appropriate non-clinical interventions (Good Things Foundation 2016). In addition, although the evidence base for social prescribing is growing, evaluation methodologies and data are often below the accepted standard for clinical interventions, which presents a further barrier to adoption (University of York 2015). Further research is required to provide more robust evidence of the effectiveness of social prescribing, and if and how it can provide a gateway to learning digital skills for older people. Social prescribing incorporating digital skills needs to be co-produced collaboratively, with both clinical and non-clinical support staff working directly with older people to design interventions that are valuable and appealing.

Older jobseekers

- Large numbers of older jobseekers continue to need help navigating the 'digital by default' systems of the Department for Work and Pensions.
- Many organisations in the Online Centres Network and beyond are delivering excellent support to jobseekers and maintaining good working relations with Jobcentres, despite a lack of funding and central co-ordination. Much better support could be provided, if these things were made available.
- The pressure of benefit sanctions is especially unhelpful in terms of engagement and progression in learning.
- There is a missed opportunity to give older jobseekers the time and support they need to develop broad digital skills for the workplace and in personal life.

With the rollout of Universal Credit, large numbers of older benefit claimants continue to be referred to venues like public libraries and Online Centres where digital technology can be accessed and support to use it is available at some level. But the requirements in Jobcentre Claimant Commitments to use digital are often biased towards learning to navigate online service portals, rather than developing broad basic skills which could be useful in the workplace; research has also shown that claimants are expected to spend most of their time looking and applying for jobs rather than developing new skills, rather than finding them appropriate long-term opportunities, or giving them guidance and time to make the transition to different occupations (House of Commons, 2016).

Evidence from the Online Centres Network shows that many grassroots digital inclusion organisations have managed to build good working relations with Jobcentres at a local level, since the launch of Universal Jobmatch in 2012. These partnerships are extremely valuable to older jobseekers, since they often create the conditions that allow them to pursue digital skills and further learning opportunities as part of their journey back to work. According to one Online Centre manager:

"We have had feedback from the Jobcentre, that because of the ethos we've got here and because of our sort of gentle treatment and we can almost give a one-to-one they have tended now to send us people that have a greater need." - **Online Centre manager, West Midlands**

The kind of person-centred, broad-spectrum employment support provided by Online Centres and other grassroots community groups is important for older jobseekers now, and will only become more so as digitisation and automation continue to change the nature of work and finding employment.

However, very little funding is available for the support currently provided, and there is no central co-ordination from DWP to manage demand and establish mutually agreed expectations as to the support older jobseekers need to develop digital skills for employment (House of Commons, 2016). Like social prescribing, the welfare system provides an opportunity for those referred through it to become broad and confident internet users - but only if there is communication and collaboration between policymakers, infrastructure organisations and practitioners.

Word of mouth

- Word of mouth is one of the most important ways in which older people hear about digital inclusion provision.
- It includes informal word of mouth, but also the recommendation of friends and family through community signposting programmes.
- Word of mouth could be leveraged by digital inclusion programmes at a large scale, by directing tailored marketing and messaging towards those who are already engaged.

Word of mouth recommendation to digital learning sits between marketing and formal referral processes. It includes referrals by friends and family to community signposting social prescribing programmes; or older people who are already engaged acting on the informal recommendation of friends or family. The Online Centres learner survey suggests that word-of-mouth recommendation may be especially effective among older people: 37% of respondents over 65 heard of Online Centres support through word of mouth, compared to only 29% of under 65s. Participants in the current research also described how the influence of friends encouraged them to start learning:

"After my friend came I thought well I'll go out because I don't like being stuck in the house anyway, so I thought I'd come on here and do the computers and not only that, you meet people and you talk to people." - **Gerald**

"I was going to go and see what it was all about and then in the meantime I'd spoken to my neighbour and of course he gave me a knock and he said, "Are you coming down?" So I went." - **Joan**

Although word of mouth recommendation is by definition informal and uncoordinated, it could nevertheless be made more effective through co-production of tailored messages in marketing campaigns; by asking those already learning to encourage others; or by broadening referees for social prescribing programmes to include those providing informal and social support.

Delivering digital Inclusion to Older People

Making learning relevant

Older people may come to digital by different paths but, once they are engaged, their support needs are broadly similar. The Sus-IT research project found that provision needs to focus on the foundations of engagement - perceived value and self-efficacy - rather than teaching skills in isolation (Damodaran et al 2015). For this reason, structured ICT courses are not generally suitable for older learners: they are inflexible and focus on skills to the detriment of perceived value and self-efficacy; the pre-existence of these foundations is taken as read (Damodaran and Sandhu 2016). A broad, fixed curriculum may be suitable for working age adults looking to improve skills for the workplace, but more than one participant in our research described how the personally irrelevant context of formal classes had put them off so much that their usage had lapsed completely:

"I did have lessons for all that [digital skills] but I didn't like it...I got a certificate but I don't know what for because I really didn't understand it, a lot of it. I felt it was a bit boring really, and I think they took a lot of time on different things." **- limited user, female, 75+, C1**

"I went on to do another course, but then that was [Microsoft] Office, and that was beyond me. I didn't need it. Very difficult to learn things you don't need." **- new learner, female, 75+, B**

Flexibility and pace

A fixed curriculum moves at a fixed pace, running the risk of leaving behind people who need to consolidate what they have learned. This is especially true of older learners, who may find that low-level cognitive impairment makes it important to take things at their own pace:

I'm slower. I don't think I've got dementia or anything yet...I don't want to learn much new except the essential things, because you haven't got room for it. Your brain won't take in more information." - new learner, female, 75+, B

"When I first came, I said, I don't want to know about going online, I don't want to know about emails...all I want to do is to do the [residents' association] accounts [using Microsoft Excel]. When I know exactly what I'm doing I might go into emails. Might do." - new learner, female, 75+, C1

Finding the right language

Structured provision also tends to focus on vocabulary and technical terms which - for new learners at least - does little more than remind them what they don't know:

"They talked about a mouse; well, I didn't even know what a mouse was. I do think people don't realise how older people don't know the jargon, the speech; that's what floors you." **- new learner, female, 75+, B**

In addition to being confusing, overuse of technical terms may be counterproductive as well, since older learners tend to have 'more scepticism about the role of technology in society' (Blank and Dutton 2011), and be less likely to trust the internet either as a place to share personal data or as a source of information (Ofcom 2017). These feelings are more likely to be aroused by provision or well-meaning glossaries that draw older learners' attention to the technology they are using, rather than what they are using it to do. Misconceiving or misunderstanding terminology may also explain the high number of older people who cite lack of interest as the reason they are not online. This is maybe less surprising when one considers that questions about overall use must necessarily refer to 'the internet' or 'going online'; they do not talk about specific benefits or activities. Whether for researchers trying to understand digital behaviour or practitioners encouraging uptake, 'don't mention digital' may be a useful thing to remember. It is hard to think of other examples where the technology itself is the focus of attention, rather than the benefits or activities associated with it.

Nor is using or even knowing the 'right' language necessary for functional use: one self-described non-user was pleasantly surprised to find out that she was, in fact, already online:

"I'm quite pleased with it really [a new smartphone], and I've just started, been taking photos and sending them to my family...Is that internet? See, I don't know that." **- smartphone user, female, 75+, C1**

The tutor-learner relationship

By contrast, informal and open-ended provision in a community setting puts personal relevance and confidence to the fore; it is more likely to engage older learners in the first place, more likely to sustain their interest, and more likely to meet their needs (Damodaran and Sandhu 2016).

Discussion with active learners during interviews suggests that informal support is effective because it puts the interpersonal relationship between learner and tutor at the centre of the learning process, rather than adherence to a fixed curriculum. The importance of tutors as a source of self-efficacy is underlined by the fact that no participants discussed their support in terms of developing specific skills or using the internet in new ways; rather, tutors were described as providing confidence, and taking the time to ensure concepts were understood:

"I do feel confident with them, I could ask them anything...they always make time for you, and all that. And they always explain it." - **new learner, female, 65-74, C1**

"It's just like they're my friends now and if I need any help I come here or I phone them up and they help me. You know, if it's anything that they can help me with, they do and they've been fab." - **limited user, female, 55-64, C1**

"I didn't know Richard before at all but the whole atmosphere that he sets up just makes you feel that if you came in and you just didn't feel very brilliant, you could sit down for two hours and just go over the things that you have started to learn...he listens, and he doesn't give you too much at a time, and he is patient." **- new learner, female, 65-74, B**

The most powerful source of self-efficacy is 'enactive mastery experience', in which learners have the opportunity to recognise and reflect on their success (Bandura 1997). A close personal relationship between tutor and learner makes enactive mastery experience more likely: tutors will be better able to draw learners' attention to successes. Another key source of self-efficacy is verbal persuasion: tutors can provide help and encouragement to deal with mistakes which may cause 'internet stress and self-disparagement [which are] negatively related to internet self-efficacy' (ibid).

Tutors who devote time to building communication and trust will be better able to maintain learners' interest in digital, and increase their self-efficacy, especially in the early stages of learning when even minor mistakes can seriously affect the confidence of those who do not think they are likely to succeed. In other words, effective digital inclusion practice requires intensive, person-centred support, and an open-ended commitment: rigid and time-limited provision is a false economy. Whatever the positive effects of digital inclusion pilots, 'tasters' and short courses, these will fade quickly when learning opportunities end (Damodaran and Sandhu 2016). Such an approach may be worse than doing nothing at all: perceived value and self-efficacy are precious commodities, difficult to create and easy to damage, and the wrong kind of provision may lead to complete digital disengagement.

The power of smartphones

The growing use of and potential importance of smartphones for older people cannot be overlooked. Smartphone ownership has exploded among older people, rising between 2015 and 2016 from 28% to 39% among 55-64 year olds, and from 8% to 15% among over 65s (Ofcom, 2017). But smartphone ownership does not necessarily lead to greater internet use: among Online Centres learners over 55 who own a smartphone, only 42% of those educated above Level 2 use it to access the internet; for those educated below Level 2, the figure is only 29%. But of, learners aged over 55, 71% of those with higher education, and 85% of those with lower education, compared to an average of 65% overall, say that they want to learn to use their smartphone better.

There is no national data on how and where older people obtain smartphones. Our evidence suggests that family members are often the driver for smartphone access but - as with other devices - helping older relatives to get a phone does not necessarily lead to confident internet use:

"I want a simple phone that I can understand, but my daughter said I should have one where you can get everything on it. She said, 'when you come down, we can teach you'. But that won't be enough for me, because I struggle with somebody telling me once, that doesn't register. I have to be told and shown, or if they write it down for me, probably when I get home, I could practise. But if it's not written down I can't register. I just don't get it." **- new learner, female, 55-64,** *C2*

"I have got a smartphone. I could do with a class to show me how to use it. I used to have one of the old the Flintstone ones as my kids used to call it. And I loved that to bits. And me now thinking I should get modern, they got me one like that, that you touch and all this.

And I haven't got a clue. I've had it since Christmas and I'm still not sure. I get people mixed up. So now I just say don't phone me on it." - **new learner, female, 55-64, D**

(It is worth noting that both of these learners were relatively confident using laptop and desktop computers).

Smartphone-specific digital inclusion provision does exist in the Online Centres network and elsewhere, but it is not centrally planned or co-ordinated. Its potential is considerable: smartphones are personal devices that are usually carried by owners at all times, increasing their usefulness and by extension the chances of converting potential internet access into real use. Further research and co-creation is vital here: even where the demand is real, meeting it may require new approaches to teaching which look very different to the traditional 'computer class' paradigm.

Peer-to-peer digital inclusion

Our observational research shows that many older people have access to social resources and networks which could be utilised for digital inclusion delivery. Peer-to-peer digital inclusion has unique advantages for older people: based within existing communities, such support is more likely to be sustainable and self-supporting; peers are likely to be known and trusted, and seeing 'people like me' succeed with digital is a valuable source of self-efficacy (Bandura 1997). In addition, a user-designed curriculum is more likely to be based around real needs and interests, rather than on what older people 'should' want to learn online. But creating the conditions in which peer digital support can flourish is not simple. Our findings suggest that several elements are vital for success:

- **Understanding communities, identifying individuals.** We observed how peers who were motivated, connected and trusted were able not only to organise inclusive activities for others within a community, but also to engage and encourage participation. Identifying these people cannot be done from the outside, and looking at formal roles can be misleading. In separate observations we saw how ostensibly similar formal structures - two residents' associations of older people - were viewed completely differently by those they represented. In one case, as an inclusive, shared resource working for all; in another, as an exclusive set unwilling to listen to the wider community. Finding the right people requires a firsthand understanding of how the group in question operates: digital inclusion practitioners must get to know a community before being able to identify, support and encourage key individuals to take forward sustainable digital inclusion activities.
- **Working with, not for.** We observed a stark difference between activity which was organised - with good intentions - from outside a community of older people and without their input, and activity which either closely involved them in planning and delivery, or was completely self-organised. User-led and co-created activities are more engaging, more sustainable, and more relevant to the lives of the older people who will benefit from them; peer-to-peer digital inclusion cannot be effectively embedded without the guidance of those who will deliver and benefit from it.
- **Rebuilding social bonds.** Peer support needs a coherent and mutually supportive community that exists outside of digital inclusion activity. If older people have become isolated - for example following retirement or bereavement - the first step towards sustainable digital inclusion delivery is not putting digital devices in their hands, but organising social activities that help (re)create the strong social bonds that make peer-to-peer digital inclusion possible.

- **Provide ongoing support.** Peer support networks may run into difficulties they cannot resolve themselves, such as queries they cannot answer, or complex technical problems. Without emergency support available on request, support will grind to a halt and networks will fall apart.

Peer digital support bridges the gap between two delivery models: Digital Champions, the formal digital support volunteering role used in different contexts across the UK but especially in the Online Centres Network; and peer mentoring, in which one-to-one relationships are established to help older people learn skills and deal with changing circumstances. Like these models, it creates new capacity of a kind that may be able to reach those who would not be engaged by support which is too formal, unknown or geographically distant; and like them, it requires training, ongoing co-ordination, and funding. It is an underexplored and potentially powerful way to engage and support those who might not be reached through other means, but - like any new solution - it should not be approached as if its benefits will cost nothing. One Online Centre manager described how it had taken seven years of ongoing support for an outreach class to become almost completely self-sufficient:

"Initial contact was via the Housing Association [which] didn't have the expertise to support residents or the funding to supply equipment...We discussed the problem with the group and came up with the idea of them running a computer group themselves with volunteer support from ourselves whenever possible. We helped them form a Community Group with a committee and a bank account... we suggested they apply for funding and they were successful, which enabled them to purchase a set of laptops, printer and internet access. We supported them through the purchase stage to get a reliable setup including installing the wired and wireless network for them. They increased to two sessions per week with increasing numbers and we supported them on one day with a volunteer. They also have their own digital champions who support the group on the other days. Most of our support now tends to be around problems with equipment with many people purchasing laptops and tablets of their own." - **Online Centre manager, East of England**

The Future

The nature and role of older people and of technology within society will continue to change rapidly, with major implication for what digital exclusion means, and how it must be tackled. Policymakers and practitioners need to be ready for these changes and the pressures they create, many of which are already being felt.

Tomorrow's digital exclusion

The digital inequalities currently associated with older age - in overall access, basic skills and perceived value of the internet - have been in decline since records of them began. Even so, it seems unlikely that these inequalities will disappear completely: the circumstances which lead to digital disengagement will continue to disproportionately affect older people, and it will remain critical to recognise if and when non-usage stops being a viable and preferable option and becomes a problem requiring appropriate and accessible support.

However, the inequalities connected to social grade seem less likely to change. Individuals who are better educated, wealthier and in more skilled work will probably remain as they are now: more likely to use digital technology to consolidate their status by learning, producing, participating in debate and decisions, and appraising and using information in their own interests. Those with poorer educational attainment, in lower skilled jobs and on lower incomes, will probably continue to be less likely to use digital technology to shape their lives and the world around them. In the future, digital exclusion and the digital divide will increasingly be related to patterns of online behaviour, rather than usage versus non usage per se (Yates et al 2015).

The effect of these demographic changes is likely to be exacerbated by the growing importance of the internet, and especially social media, for communication and organisation to achieve shared goals, and in influencing social and political opinions and decisions[1].

[1]See for example www.digitalnewsreport.org/ and web.stanford.edu/~gentzkow/research/fake-news.pdf

The reasons for socioeconomic differences in internet usage are complicated. Broad inequalities of opportunity are much more a cause than an effect of digital behaviour, and it is naive to suggest that they will disappear if only we could show people how to use the internet properly. Nevertheless, recent political events in the West suggest that policymakers and practitioners have a responsibility to ensure people of all ages have the critical understanding skills they need to use the internet in ways that enable them to act in their own best interest (House of Commons 2016).

Tomorrow's older age

In the last forty years, life expectancy has increased by more than eight years for men and six years for women (ONS 2017). As advances in medicine continue to reduce early deaths from circulatory diseases, the prevalence of chronic conditions and combinations of conditions will increase, as will deaths from dementia (Age UK 2017). The potential of digital technology to help deal with these changes is recognised, both in terms of improving the wellbeing of patients and reducing the burden on healthcare, but the often unregulated proliferation of digital solutions has led to mistrust and avoidance by clinicians as well as patients (British Medical Journal 2018). Unless action is taken, this problem is likely to get worse, as the oldest members of society become ever further removed from constant innovations in digital health. The various 'test and learn' pilots funded through Widening Digital Participation programme demonstrate how these problems can be avoided by integrating digital inclusion within the digital healthcare model, leading to higher rates of self-management and reduced demand on acute care services (Good Things Foundation 2016). In the future, these integrated models will need to become business as usual within the NHS.

Longevity also has major implications for social care. Whether digital inclusion is delivered as a standalone activity or alongside other support services, it relies on roles and activity outside of digital inclusion in order to succeed. Cuts to social care funding for older people have resulted in reductions in the non-essential support services within which digital inclusion is most effectively embedded (Kings Fund 2016). One Online Centre manager noted how difficult it could be to engage older people and co-ordinate classes in a publicly-funded nursing home which did not have the luxury of a dedicated activities manager:

"I think the difference is I noticed...we've also occasionally have done some outreach at a private care home, not a nursing home, and there they have an activities manager. [She's] always organising something." **- Online Centre manager, rural North East**

As people live longer, financial pressures on social care will continue to rise. If these are not relieved by adequate funding, any new digital inclusion initiatives, no matter how well-designed or well-funded, will be compromised from the outset if they rely on the presence of disappearing infrastructure. Peer support - one of the models for digital inclusion that merits further investigation - could also help to make social care more sustainable through self-organisation and support; but as always, such solutions would not come for free.

Longer lifespans will also mean longer working lives, within a labour market that is changing ever more rapidly in response to new technologies: automation will continue to remove or radically alter existing job opportunities (Frey and Osborne, 2013). If a thriving older working population is to support a high-tech economy, lifelong learning and personal development - of and through digital technologies - will become increasingly important to support adaptation and resilience to change, and opportunities need to be funded, co-ordinated and made accessible, especially within the workplace, and for all levels of skills. People may find themselves needing to retrain in their fifties, and with two decades of work ahead of them; static careers with a skillset learned 'on the job' will become a thing of the past (PwC 2017).

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Appendix 2: Venues Visited as Part of Observations

To maintain the confidentiality of participants, the names of locations have been altered or anonymised.

Ardmore Court is an independent living complex for older people in west London, managed by a private housing association who employs a scheme manager responsible for helping residents to remain independent and organising social activities. Built in 1984, it has 62 private flats, one large main lounge leading onto a shared rooftop garden, and two smaller lounges. At the time of an initial research visit in May 2017, a weekly coffee morning in the main lounge had just been set up by the scheme manager, who had recently arrived in post, because 'there wasn't one already'. But residents were unenthusiastic, preferring to self-organise and use the smaller, more intimate lounges on other floors:

"We've got fed up of the lounge, it's a bit miserable, so we've been coming up here...the lounge downstairs is huge, and I think we feel better just sitting talking here, because it's only about five [chairs]."

At the time of a second visit in October, the coffee morning had been discontinued; despite promotion, and attempts to increase attendance by changing the day and time, it had remained extremely poorly attended. The scheme had a self-organised Residents' Association, but one resident observed that its meetings were poorly attended; she and a friend had tried to be actively involved in it, but left when they felt that their voices were not being heard ('I realised they weren't listening to me so then I came out of it'). Most socialisation took place at the level of very small, self-organised social connections.

The Tuesday Club is a weekly social event organised in a community hall by the Residents' Association of a small village on the

Lincolnshire coast. The village has a large retired population - comprising many people who used to holiday there - and the membership of the Residents' Association and the Tuesday Club itself reflect this. Originally created specifically for older people, the Club now welcomes anyone; the youngest members are in their late 40s, and the older their late 90s, with the majority between 60 and 80.

Members are mostly middle- and working-class, but comfortably off; through the Association and informal social links they have access to considerable social resources, sharing lifts, going on shopping trips and outings together, and keeping an eye on each other's health and wellbeing; the Club is just one of several local opportunities for members to meet and catch-up. The Association and its activities are completely self-organised, and maintained entirely through subscriptions to the Club and fundraising activities; they receive no external funding, and make regular donations to the local air ambulance.

Between sixty and eighty people attended the Tuesday Club at each of the two visits we made; the Club last for two hours, with refreshments, games and activities available. During the first hour small, self-organised groups of 2-5 friends meet at individual tables, talking, playing games and doing jigsaws; some people sit alone and read. During the second hour, several games of bingo are played, with all attendees participating. As with Ardmore Court, there was a striking disparity between the self-organisation of small groups, and the top-down organisation of the bingo: several regular attendees confided that they did not like bingo very much, but went along with it to appease the Association committee member who organised the Club; one attendee, a new arrival to the village, walked out when it began, complaining that it made her 'feel old'. Nevertheless, it was clear that the formal organisation of the Association, and the commitment of committee members, was what ensured the continuation of the Tuesday Club and benefits it brought to members.

Kai Xin Chinese Community Centre, a small but very well-used organisation supporting the Chinese community in a large Midland city, bringing together Chinese student volunteers from the local universities and a large local population of older emigrées. Working in partnership with a local charity run by Chinese women volunteers, the centre hosted 'Smart Phones, Smart Friends', a half-day session for regular attendees exploring the potential for smartphones to help them communicate with family and friends locally and in China.

In the upstairs of a converted shop, the room used for the activity was barely big enough for more than twenty participants and ten volunteers. The high number of volunteers helped to deal with the fact that there was no single shared language: most attendees spoke a regional Chinese dialect, and volunteers provided ad hoc translation services. Activities included an overview of the capability of smartphones for communication, a presentation on health and wellbeing (with attendees asked to complete a wellbeing questionnaire), skills sharing between participants, and a craft activity to create a 'magic smartphone' out of cereal boxes and coloured paper.

Although the room was noisy and at full capacity, the strength of connections between individuals meant there was plenty of energy and smiles, and activities were undertaken with gusto. Organisers explained that the session was part of an ongoing calendar of events that took place in the venue and elsewhere - it functioned primarily as a social session, which happened to involve some digital activities.

Brunswick Hall, a brand new housing scheme for older people in a village on the eastern edge of the Yorkshire Dales, with a mixture of independent living and extra care accommodation. The building had been designed to facilitate social interaction, but not entirely successfully: WiFi was available in individual rooms but not in communal areas, and the dedicated activity room being underused. Part of the reason for this was the absence of a dedicated activities

worked hard to create opportunities for socialisation.

Although the scheme did not have an incorporated residents' association there was some level of informal self-organisation, led by energetic residents and their relatives. At the time of the first visit in June 2017, a local Online Centre had just started working with these residents and the scheme manager to try and establish a self-sustaining, peer-led computer club for residents and other local people. Ongoing problems with the WiFi led to the club being temporarily relocated to a large cafe attached to a local auction house; at the time of a second visit in October, these problems had been resolved.

The session was run in the main lounge, close to the front door to get a strong WiFi signal; the WiFi router had been extended from the scheme manager's office. This was not ideal: cold air kept blowing in when the front door opened, and learners had to use dining chairs and tables rather than the comfortable armchairs and coffee tables in the far corner of the room. The group were friendly, but the location and problems meant there was not the same energy as we observed at Kai Xin. The Online Centre manager supporting the session noted that, based on previous experience, should would have to continue to be involved for more than a year to ensure the learning community became self-sustaining.

The Comfort Zone, a social cafe for older people at risk of loneliness and isolation, delivered by a local area regeneration charity as part of the Big Lottery funded Age Better in Sheffield programme. Established in summer 2017, the Zone runs in a hired room of a church and has had good attendance since inception. Attendees had learned about the Zone through social prescription, word of mouth, signposting from Jobcentre events, and attending other local events. Participants are more likely to be isolated, with higher rates of anxiety and depression.

Subsidised tea and coffee are available across the four hours that the Zone runs, and lunch is provided. Sitting around two large tables, more than twenty people play provided games, do craft activities, read papers, and talk. New members are warmly welcomed and included, by regular attendees as well as staff and volunteers. A volunteer health champion leads the craft activities, and talks informally about attendees' daily lives. This provides an opportunity to identify other problems connected to their loneliness and isolation (e.g. alcohol misuse, poor health), and encourage them to attend other events which could help. Staff and volunteers noted that attendees quickly established relationships which kept them in touch with each other outside the Zone. Although digital was not a focus of activity, the staff co-ordinator reported that several attendees had expressed an interest in learning, and one attendee with good computer skills wanted to be a digital champion. Even without it being a regular activity, informal learning and engagement were observed, with volunteers helping attendees use social media, and advising a new starter on how to get connected via their smartphone.


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