



Elderly people and digital inclusion

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May 2019



Abstract

The potential benefits of enabling elderly people to access the internet include enhanced social inclusion, reductions in loneliness, increased confidence and fulfilment, maintenance of independence and associated positive health outcomes. This briefing presents some of the academic literature and research that inform practice in this area. These come from Social Policy, in which projects to address loneliness in old age are currently centred around the idea of befriending, as well as Computer Science and Psychology, which theorise Human Computer Interaction and research the relationship between internet use and social engagement. The briefing uses findings from these areas to identify the approaches to address digital inclusion that are likely to be most successful. Key obstacles and challenges are also identified. The briefing highlights that projects that empower elderly people to engage actively with society through the internet are those most likely to be effective in reducing loneliness and increasing life fulfilment. Internet training for elderly people needs to be ongoing, person-centred and provided within reciprocal relationships that enable recipients to give something back, rather than being positioned as passive recipients of help. A key challenge is finding ways to empower elderly people in independent social engagement through the internet, while also protecting them from risk.

Keywords

ICT interventions; digital inclusion; internet use; social isolation; loneliness; older people; elderly people; befriending

Key Points

- Support for elderly people is most welcome and beneficial if provided within reciprocal relationships where recipients are enabled to actively engage and contribute, rather than situated as passive recipients of help.
- Elderly recipients of support need to be seen as individuals with differing needs and potential benefits from computer use. The most appropriate training contexts, hardware, apps and websites will differ between individuals.
- Elderly people with no experience of computer use will need substantial ongoing support over time to make meaningful use of the internet.
- A balance needs to be struck between enabling independent social engagement via the internet and protecting people in a vulnerable group from potential harm.

Introduction

This briefing summarises findings from Social Policy, Computer Science and Psychology, which inform the design of projects introducing elderly people to the internet and new communication technologies. The first section looks at research about befriending, highlighting key factors in addressing loneliness and social exclusion. The subsequent sections discuss research into the relationship between internet use and social engagement and then present findings relating to the development of 'Social Innovation for Active Ageing' and contributions from theory about Human Computer Interaction (HCI). The briefing then applies findings from these areas to uses of the internet and the associated experiences of elderly people. It concludes by summarising the key factors identified as important in developing and implementing digital inclusion projects for elderly people.

Lessons from Befriending

The main focus of government and third sector projects to address isolation and loneliness among elderly people in Britain today is on the idea of befriending. The current scale of befriending projects is substantial, with more than 170 befriending projects and 4,000 befrienders in Scotland and 32,000 hours of befriending taking place each month (Befriending Networks, 2019). As well as home visiting, befriending can be phone-based; in 2017, AgeUK introduced a free website-based phone befriending project 'Call in Time'.

Research on the outcomes of befriending find qualitative evidence that elderly

people are very appreciative of the friendship and support they receive, although a systematic review of research on befriending failed to find statistically significant quantitative evidence for impacts on particular measures such as depression, quality of life, loneliness ratings, self-esteem measures, social support structures and well-being (Siette et al., 2017). Results from qualitative research highlight that befriending is most likely to be welcome and beneficial when relationships are reciprocal, and perceived as friendship rather than as an unequal relationship between a befriender and a passive recipient of support. Sarah Van Putten, Chief Executive of Befriending Networks, for example, says that, 'the mutuality of the relationship between befriender and befriended is often what's most valued and becoming a volunteer befriender provides significant benefits for the volunteers themselves' (Scottish Government, 2018, p. 50). Further, it can be potentially damaging to an elderly person's sense of potential and self-worth if they are positioned as passive recipients in the befriending relationship. Gardiner and Barnes highlighted the importance of social interaction 'as a contemporary or friend, rather than as a patient', and found this to be 'a particular issue for patients nearing the end of life, for whom a growing dependence and unwavering role as a patient can result in a loss of meaningful identity as end of life approaches' (Gardiner and Barnes, 2016, p. 10). They find that befriending should involve 'meaningful interactions with capacity for reciprocal benefit; enhanced sense of purpose; and cognitive stimulation' (Gardiner and Barnes, 2016, p. 12).

The most successful befriending

situations are identified as those in which the befriender enables the recipient to re-engage with wider society, either by accompanying them to, or informing them about events, groups and organisations that they can engage with. Particularly successful outcomes of befriending resulted in the elderly person becoming involved in being able to give something back to the benefit of the befriender or to the community (Minocha et al., 2015).

Does internet use lead to greater social engagement?

An ongoing body of academic debate has looked at how internet use impacts on social engagement. This debate is relevant to the concern that introducing elderly people to the internet may encourage them to stay at home, and so acts as an obstacle to social engagement in the real world. Many researchers have attempted to test the relationship between internet use and social engagement for different social groups, but results have been varied and inconclusive. However, it is hardly surprising that the relationship between internet use and social engagement in the real world is not a simple one. Internet use encompasses a wide range of functions, which may support social engagement or hinder it. At a simple level, the internet can be used passively, for example to watch videos or read the news, or actively, for example to engage in web forums, to engage in virtual work, or to find out about local events in which to participate. To try to find an overall relationship is perhaps analogous to asking whether in general ownership of a television or of a telephone are likely to increase or decrease social engagement.

The internet is another, albeit much more powerful, communication tool that can have various uses and effects.

Research in this area found, as might be expected, that social engagement outcomes vary for users with different characteristics, and that different kinds of internet use are associated with different levels of social engagement for different groups (Chen and Schulz, 2016; Tufekci, Z., 2010). Nowland et al. (2017) find that, 'when the Internet is used as a way station on the route to enhancing existing relationships and forging new social connections, it is a useful tool for reducing loneliness. But when social technologies are used to escape the social world and withdraw from the social pain of interaction, feelings of loneliness are increased'. This debate highlights that in designing digital inclusion interventions, it is important to identify ways to use the internet that are most likely to enhance social engagement, self-esteem and a sense of fulfilment, and avoid focusing on internet use that is likely to have negative outcomes.

Digital approaches to Social Innovation for Active Ageing

Theory from Computer Science and Psychology offers a framework for designing projects to address loneliness through digital innovation. Sharma et al. (2015) make use of the Active Theory of Ageing, which argues that if elderly people continue engaging in activities and maintain attitudes associated with younger stages of life, then this enables them to live fulfilling lives. They argue however that the Active theory of Ageing has been focused too much on the individual in isolation, and propose a shift

of focus to emphasise the importance of fostering mutual support and community participation. They propose a Social Innovation approach, aiming to turn a problem experienced by one social group into a potential solution to another group's problem. They cite as examples, web-based schemes such as Goodgym, through which gymnasts visit elderly people who support them in their training, and Homeshare, in which elderly people rent spare rooms in their homes to people in need of housing, in exchange for assistance with household tasks and friendship.

Along with other theorists looking at internet use by marginalised groups, they draw on theory relating to Human Computer Interaction (HCI). This body of theory encompasses three paradigms or ways of conceptualising interactions, each of which describes a recent era of machine and computer development. The first and second paradigms, used to describe the approach to human-machine interactions up to the 1990s, saw communication between people and computers in terms cognitive processes in the 'brains' of the human and the computer, and the information transmitted between them. Harrison et al. (2007), however, argued that a third paradigm was needed, as computer developments and increases in the everyday use of computers and the contexts of their use, meant that human computer interactions could no longer be described purely in terms of information exchange and cognitive processes. The social and physical context of the interactions needed to be included for meaningful analysis and understanding. For example, while similar processes occur when an elderly person reads an email on their desktop

computer at home and when a young person reads an instant message on their mobile phone while travelling on a bus, the meaning and usefulness of the interactions can only be described by looking at who the people are, the context in which they are situated, and the particular machines they use. For the elderly person, email may be accessed only once a day and replies sent with lapses of hours or days; typing and email may be an unfamiliar or difficult process; messages are likely to be full and grammatical, replicating the experience of writing and sending a letter on paper. For a young person texting while travelling, messages may be short and abbreviated, exchanges may be instantaneous, young people are likely to have had frequent experience and confidence with using touch-screens; the exchange can relate to immediate experiences, such as arranging meeting up, sharing photos immediately on taking them with the mobile phone; and messages resemble conversation more closely than traditional letter-writing. The situation, the actors and the technology all impact on the meaning and usefulness of the interaction.

Sharma et al. suggest that projects introducing digital technologies to elderly people are a promising site for innovations in Human Computer Interaction within the third paradigm of HCI, looking at addressing elderly people's situations and potential gains and implementing Social Innovation in Active Ageing. They designed a project to provide elderly people with way to contribute to wider society through using the internet. This project linked a group of elderly people in Manchester with students in India who needed to improve their English language, via weekly Skype

sessions. Importantly, this kind of internet use provides the users with more than just someone to talk to, or information that may be useful to them. They argue that this kind of scheme also has the potential for the wider impact of changing perceptions of elderly people in society so that they are seen as 'bearers of knowledge, experience and wisdom, rather than looking at them as a financial and social liability that needs to be managed' (Sharma, D. et al., 2018, p. 10).

ICT in the real world: internet functions and how they are experienced

From a purely functional perspective, functions that the internet might provide for an elderly person include:

- Ehealth: Health-related monitoring by health or care providers. E.g. monitoring physical health indicators, such as blood pressure or heart rate, or monitoring activity levels and behaviours which can flag up when an elderly person may be in need of support or a medical intervention.
- (Passive) Internet use to access entertainment or information.
- Communication with existing friends and family, using one-to-one or group communication via email, Skype, Facebook etc.; sharing of media files - music, photographs etc.
- Online shopping, banking etc.
- Friend-making apps or websites, along the lines of dating apps, enabling older people to meet

new people in person locally, rather than limited to joining an online community. An example of this is the website, 50plus.net in the Netherlands (Health Literacy Centre Europe, 2015).

- Accessing real-world or virtual employment or service provision opportunities, local events, social groups.

However, in the light of the third paradigm of HCI, we can see that these internet functions only tell part of the story. A more meaningful picture is provided when we look at the potential kinds of experiences elderly people have through internet use and the process of being introduced to the internet. These might include:

- ICT training provides social contact with trainers and with other learners; a supportive atmosphere may generate confidence about computer use among participants.
- Skype, email or Facebook may enable cheaper and more convenient communication with existing friends or family, as well as much easier sharing of photographs, videos etc. and lead to closer contact and a sense of continued belonging.
- Access to, and an understanding of news, entertainment and communication on the internet may restore a sense of empowerment and belonging in society to an elderly person, if they have previously felt excluded in relation to ICT use evident from friends and relatives and the media.
- Mutual support and a sense of

belonging may be gained from communicating with or reading about people with shared health conditions or other shared concerns on peer-support forums.

- The possibility to make contact with and meet new people through the internet. This could potentially address the isolation that results for older people who are no longer able to engage with local organisations and/or when family and friends have died or moved away.
- Being able to provide services, through for example Skype language teaching or online voluntary work might provide a sense of fulfilment.

Damodaran and Sandhu, analysing research on effective social contexts for training elderly people in ICT (2016, p. 11) highlight that internet training should be 'embedded in social and purposeful activities'. It would be useful if we could distinguish in the above list between experiences that are passive and those which involve active social engagement or situate the elderly person as a provider and are enabling of independence. However, a single internet function may provide a passive experience for one individual and active engagement for another; for example, a peer-support forum may be used for personal engagement with other individuals, or simply read passively for information. Accessing information about peers' experiences may be a positive spur for action or lead to ongoing friendships, or may feel depressing and isolating, or may not have a significant impact either way. As discussed above, for some elderly people, simply developing a sense of

belonging to the digital age by gaining access to the internet and understanding what it is, may be empowering and lead to positive psychological and social gains as a result.

Activities that are most appealing may not be active but passive pursuits; whether this is true is likely to depend on the individual and their situation and characteristics. For example, accessing old photos of places, reading about people and events, or listening to music familiar from childhood, may seem backward-looking, potentially drawing someone away from social engagement. However, if a younger befriender helps an elderly person in accessing songs or photos from their youth, this may be a productive learning experience for the befriender and the session may be fulfilling for both. Identifying what is 'active' and 'passive' is a context-dependent and continuous process and requires adopting a nuanced approach specific to each individual participant. The relationships and atmosphere generated through training sessions may be worthwhile in their own right as well as potentially influencing the likelihood of the attendee making ongoing future use of computers and the internet (see for example, Damodaran and Sandhu, 2016).

Communication via Skype, email etc. can also have varied effects. It can make for affordable, convenient and enhanced communication with existing friends and family, but Skype may not appeal to all and can be seen as intrusive and stressful. While access to internet communication may be a gain, a greater gain and a more profound empowerment might be achieved by a friendship app or interest-based forum

which enables new relationships to be formed. Such relationships may exist either in the virtual world or, possibly more usefully to isolated older people, in the real world. Examples of the creation of real world relationships via the internet for elderly people are few but an example is provided by the website 50plus.net in the Netherlands, which as well as virtual forums offers the possibility of finding and meeting new people with shared interests in a users' own local area, in a similar way to dating apps or friendship apps more often used by younger people.

Obstacles and challenges for Digital inclusion for elderly people

Functional obstacles to ICT engagement for elderly people include:

- The expense of a computer, tablet or smartphone and internet connection.
- The knowhow and confidence to set up and maintain a computer and internet link at home.
- Unfamiliarity with terminology and ways of thinking specific to computer use which may make computer use difficult, threatening and excluding.
- The need for ongoing maintenance of hardware and software, downloading and updating software, dealing with viruses and antivirus software and malicious emails.
- The difficulty of moving from following instructions about using a computer to having the confidence and understanding to explore and

learn independently.

- The dexterity to use keyboards, a mouse and cursor, a touch-screen; availability of hardware and software to allow for vision and hearing impairments.
- The expense and difficulty of accessing support when hardware or software technologies fail.

Along with these functional obstacles, we can again identify many more potential context-dependent obstacles to internet use. It takes many hours of hands-on practice to develop capability and confidence in computer-use from scratch, and 'relatives and trainers need to structure their help over a period of time teaching one application at a time related to the older user's interests and using repetitive strategies to aid retention' (Minocha et al., 2015a, p. 51). One-off training in computer and internet use needs to be followed up with substantial ongoing support, without which elderly people are very likely to give up soon after training (Damodaran and Sandhu, 2016; Minocha et al., 2015). Minocha et al. however describe how Age UK in Milton Keynes found that funders were only prepared to help with the initial training stage.

Finally, a key problem for the most empowering initiatives which enable active new real-world friendships to be made, is the potential harm that may result to a group of individuals likely to be highly vulnerable. Responsibility must fall on those designing and implementing initiatives with elderly people. While 50plus.net in the Netherlands allows people to meet in the real world, the majority of initiatives focused on vulnerable people in the UK avoid

offering 'real world' engagement with new people for fear of harmful outcomes. Vetting individuals engaging in friendship networks for criminality and other risk categories, might not only be off-putting for potential participants, but would also be highly labour intensive and very often unrealistically expensive as a result. A balance needs to be made that allows the most beneficial kinds of internet use to be introduced, while managing safety concerns.

Conclusion

This briefing draws on theory concerning experiences of befriending, the relationship between internet use and social engagement, Social Innovation for Active Ageing and theory around Human Computer Interaction. It finds that there is a common emphasis across these areas on encouraging active engagement by elderly people in wider society and on developing mutually beneficial relationships between trainers or befrienders and the elderly people.

Research on introducing elderly people to computer use highlights that it is critical to see each elderly person as an individual, as their personal characteristics and situations will influence the potential gains they may have from engaging with the internet in different ways. Digital learning will be more worthwhile if it can take place in a supportive social environment, and training needs to be followed by substantial ongoing support for meaningful digital inclusion.

A key issue that needs to be addressed by providers is how to use the internet to empower elderly people while also ensuring they are not exposed to risk. Internet use that is limited to accessing information and media and communicating with existing friends and family can be positive and valuable, but projects that use the internet to enable elderly people to provide something for others or to form new relationships are those with the greatest potential to combat loneliness and provide people with fulfilment in old age.

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