Digital skills for the hardest to reach
Literature review

Laurence Piercy
Tinder Foundation
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Introduction

Reboot UK is an innovative digital inclusion project funded by Big Lottery Fund which aims to rebuild the lives of people in poverty through personalised basic digital skills training and community-based support. The Reboot UK consortium is run by digital inclusion experts Tinder Foundation, alongside Family Fund, Homeless Link and Mind.

Key to Reboot UK is an aim to investigate the transformative health and wellbeing benefits of digital technology for people in poverty. The project follows test-and-learn principles, and will investigate possible models of support, before delivering and evaluating them in community environments, in order to build an effective and evidenced model that can have real impact on both individuals and communities, with the aim of scaling these more widely.

This literature review covers desk research carried out as part of Reboot UK’s investigatory work, identifying and analysing key interventions for testing.

Community-based informal learning is a model that underpins much of Tinder Foundation’s work with UK online centres and other community internet training initiatives and recommendations. The aim of the Reboot UK project is to develop and evaluate innovative methods of engaging and supporting people who do not engage with the current community-based internet skills support on offer in the UK.

The project targets three groups: people with poor mental health, homeless people, and families in poverty. These three target groups were chosen due to their likelihood of being left behind by current digital inclusion initiatives, as well as the significant amount they have to gain from increasing their basic digital skills and the subsequent use (or better use) of the internet derived from gaining these skills.

There are overlaps between some of these groups, for example in the relationship between poverty and homelessness:

Individual vulnerabilities, support needs and ‘risk taking’ behaviours implicated in some people’s homelessness are themselves often, though not always, rooted

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2 Just Economics ‘A Social Return On Investment for Tinder Foundation 2014/15’ (forthcoming)
in the pressures associated with poverty and other forms of structural disadvantage.\(^5\)

This is also notable in the relationship between mental health and homelessness\(^6\), and the link between mental health and poverty\(^8\). It is also the case that lower internet skill level and uptake is evident in these groups. Data from Citizens Advice suggests low use of the internet among clients with mental health problems\(^10\). Although data is limited, there is a strong suggestion that some homeless people are accessing the internet in diverse ways: for social networking and communication\(^11\), searching for health information online\(^12\), job seeking, and searching for accommodation\(^13\). These positive studies of internet use among homeless populations all highlight lack of access to the internet and poverty as barriers to use. The literature is far from conclusive on the relative basic digital skills of the homeless population, and although some studies report both high skill levels and high levels of device ownership in that community, others contradict this\(^14\).

This review is a discussion of this data, but the delivery and evaluation of Reboot UK will produce new data and understanding of the relation between digital skills interventions and each target group. In addition, the project will develop a deeper understanding of the relationship between barriers to digital inclusion for these groups. The project is conducting complex interventions, and the role of the evaluation is to understand the intersection of a number of exclusionary factors. These will include barriers to learning that are specifically related to internet access, skills or motivation, and broader intersecting social factors.

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\(^8\) Poole, R., Higgo, R., Robinson, C.A. Mental Health and Poverty (2013), Cambridge: CUP.


\(^12\) Barman-Adhikari A, Rice E. Sexual health information seeking online. JSSWR. 2011;2(2)


\(^14\) St Mungo’s Broadway reported that 48% of their clients do not have the necessary digital skills to complete an online form, in recent evidence presented to the Work and Pensions Committee: [http://www.publications.parliament.uk/pa/cm201314/cmselect/cmworpen/479/479vw26.htm](http://www.publications.parliament.uk/pa/cm201314/cmselect/cmworpen/479/479vw26.htm), accessed 13.10.15.
Key Points

- Peer mentoring is widespread, and especially well-used in the mental health and prison sectors. As a model, peer mentoring has a strong track-record in the support of individuals with complex needs.
- Peer mentoring is predominantly used for institutional and social support programmes. Reboot UK will use the peer mentoring expertise of specialist services to explore the potential for scalable peer-mentoring education programmes in specialist provision.
- Academic literature and project evaluations support the crucial role that home access has to play in developing meaningful and fluent use of technology. Reboot UK is developing this insight through the testing and evaluation of a number of community-based equipment distribution and lending schemes.
- Non-traditional models, such as alternative device use, mobile internet connections, or device lending, may play a specific role in engaging new or limited internet users.
- A home access scheme has been tried at scale on a single occasion. Other small-scale home access projects have had positive results, but little work has been done to explore ways in which home access schemes can be scaled.
- Computer access, skills and motivation needs interact in complex ways. This complexity is increased in groups that have additional complex support needs. Reboot UK will test and evaluate delivery models as they fit within the wider forms of support that an individual is receiving.
- Basic Digital Skills is an important measure, but it is not a solution. Complex needs require a response to learning that recognises the total needs of an individual, and the role that digital might play in this. Digital can be a goal, but more often it is a tool.
Target audiences

Basic digital skills and fluency come at the intersection of a number of behaviours. There are barriers to acquiring these behaviours, and these are most prevalent for individuals who face multiple disadvantages. By multiple disadvantage, this review refers to those statistical risks which reduce the likelihood of acquiring digital skills. For the purposes of Reboot UK, this includes poverty, homelessness, and poor mental health. The links between these have been developed in recent work\(^\text{15}\). They are also outlined later in this review. It is known that these ‘severe’ disadvantages also overlap with other statistical risks regarding particular areas, such as unemployment\(^\text{16}\). The purpose of this literature review is to outline the current challenges in internet literacy, and to provide evidential support for two ways of approaching these challenges.

The term internet fluency refers to the ability to be able to navigate and utilise the internet for a wide variety of tasks. This is framed as an enhancing capability because the internet is typically seen as an enabling tool which allows individuals to pursue hobbies and interests in more diverse ways, and save time and money by shopping and information seeking online\(^\text{17}\). The internet is used for a huge range of activities and, in part, this accounts for the range of intersecting skills that are needed for fluent use. The internet is a specific ecosystem which requires knowledge and understanding to navigate\(^\text{18}\), and the vocabulary to facilitate this. It is also accessed through a range of devices, which in turn demand certain sets of operational skills. Fluent internet use also requires adequate literacy and information literacy. In addition to these cognitive factors, Eynon and Geniets suggest that there are psychological, socio-cultural, material, and access issues to be taken into account\(^\text{19}\). This is echoed by Selwyn, who suggests that:

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\text{A lack of meaningful use […] is not necessarily due to technological factors […] or even psychological factors […] engagement with ICTs is based around a}
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\(^{19}\) Ibid.
complex mixture of social, psychological, economic and, above all, pragmatic reasons.\textsuperscript{20}

In terms of ‘pragmatic reasons’ for accessing the internet, the UK government currently requires internet access for a number of its services. In addition, there may be reasons of convenience for some individuals to access services online rather than offline. The welfare system is moving towards a ‘digital by default’ model\textsuperscript{21}, which means that those accessing means-tested welfare and benefits - low-income and job-seeking sectors of the population - will face additional pressures to use the internet. A recent Citizens Advice survey highlights several issues that claimants may have with this:

- lack of confidence and increased anxiety when applying for benefits online
- lack of privacy when entering personal data at public internet sites and subsequent security of personal data\textsuperscript{22}

Issues such as low confidence and increased anxiety intersect with skills and access. Low confidence and poor mental health can be compounded by mandated internet use, especially when that use has a direct effect on household and personal income.

Eynon and Helsper point out that non-use of digital tools often comes at ‘the intersection of choice and exclusion’; exclusion interacts with choice, predominantly by putting more barriers in the way of choosing digital inclusion. With this in mind, they suggest that ‘policies designed to support individuals’ everyday interests, as opposed to more formal kinds of learning, are likely to be more effective in increasing people’s productive engagement with online learning opportunities\textsuperscript{23}. This is particularly important in light of data from the 2005 National Household Education Survey which suggests that respondents with the lowest educational attainment level were found to be least likely to participate in informal learning\textsuperscript{24}.

Key interventions

Reboot UK will focus on three key interventions. Each delivery partner will deliver a primary intervention model, locally adapted to fit their service context. The research phase of the project has identified the following interventions:

Peer support
The peer support model will train and support mentors with experience of a particular condition or service to engage fellow service users in informal learning. The programme will focus on the peer-led development of digital skills.

Home Access
The home access model will loan and grant internet-enabled devices to beneficiaries.

Shared Practice
The shared practice strand will focus on the development of cross-organisational working. Primarily, it will develop the provision of digital skills and informal learning within specialist services, such as community mental health services, psychiatric care, and homelessness services.

The following sections provide literature reviews for the Peer Support and Home Access interventions. There is no review for the Share Practice model; because the model is less discrete, finding robust literature to draw on was a challenge. The evaluation of the project will give more detail on this model as findings emerge.

1. Peer Support

Peer support models are deeply embedded in a number of frontline support and institutional services across the UK, America and Australasia. Peer support models are widely used in drug and alcohol services25, prison services26, health services27, educational settings28, and mental health services. Surveys of non-academic literature reveal thousands of peer-led and peer-run mental health services around the world. In the US, peer-run mental health services ‘more than double the traditional, professionally run, mental health organisations’29. The term ‘peer-led’ covers a wide

range of services. As a service description, the prefix ‘peer’ can refer to a huge range of interventions. It only specifies an element of common experience between the tutor or mentor, and the student or mentee. This is usually the shared experience of a service or institutional setting. However, the common experience may also relate to age, economic status, or health status. The variables that are possible within the sphere of peer-led programmes means that there are huge number of different service designs that have included a peer element. However, the broad consensus is that peer-support models usually employ a one-to-one tutoring element. In this respect they are often more intensive, though less formal, than traditional education or support programmes. In line with this, success is often highly contingent on the quality of the peer relationship.

Peer-led service design comes with a number of related assumptions: the ability of peers to connect with beneficiaries, the social influence that peers can have on populations who are resistant to professional advice, the benefits to peers themselves, and wider benefits to services, including increased access, efficient use of resources and number of services available.

In some settings, the benefits to peers are clearly measurable. For example, one study reflects on the educational benefits to peers who are engaged in teaching, and cites improved performance in this group around ‘higher order conceptual understanding’ and better reported outcomes around ‘active and interesting’ learning. Meta-analysis of peer models in educational settings suggests that outcomes are improved for tutees, regardless of variance in dosage (the length of time and intensity dedicated to peer-support), disability, or grade level of participants. In addition to this, the statistical review suggests that students with disabilities gained the most from peer support. This supports evidence that aspects of peer mentoring such as repetition of key concepts and opportunities to respond are particularly beneficial for students in need of additional academic supports.

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33 Devilly, G. J. et al.
38 Ibid. p. 50.
Data and recommendations from the Longitudinal Study of Young People in England and the Avon Longitudinal Study of Parents and Children suggest that multiple disadvantages experienced during adolescence can have harmful outcomes for the young person. In addition to this, evidence suggests that those young people who experience multiple disadvantage often experienced disadvantage as children. This points to intergenerational disadvantage which could be addressed through programmes which support both parents and their children\(^{39}\). Children in poverty are disadvantaged across a range of factors, including cognitive outcomes, educational attainment\(^{40}\), and physical health\(^{41}\), there may be a significant role for peer mentoring in services which target families in poverty.

2. Home Access

Internet use at home is recognised as a catalyst for internet skills and a necessary tool for connecting with contemporary social demands. Research suggests that home access improves both computer fluency and self-reported confidence in computer use\(^{42}\), and that home access to a computer has positive cognitive benefits\(^{43}\). This was recognised in policy, when in 2008, the Labour Party instigated a £300m home computer access programme, which targeted low-income families\(^{44}\). However, there are still an estimated 300,000 families in the UK without access to a computer, and the evidence suggests that this lack of access hampers learning\(^{45}\). There is growing social consensus that those without home internet access are missing out; in the most recent PSE Necessities Survey, the main consensual poverty measures survey in the UK, 66% of people thought that it was necessary for a child to have access to a computer and the internet for homework\(^{46}\) and 41% of people thought that it was necessary for an adult to have internet access at home\(^{47}\).


\(^{46}\) PSE, UK 2012: Attitudes to child necessities. [http://www.poverty.ac.uk/pse-research/uk-2012-attitudes-child-necessities](http://www.poverty.ac.uk/pse-research/uk-2012-attitudes-child-necessities), accessed 12.11.15.

\(^{47}\) PSE, UK 2012: Attitudes to adult necessities. [http://www.poverty.ac.uk/pse-research/uk-2012-attitudes-adult-necessities](http://www.poverty.ac.uk/pse-research/uk-2012-attitudes-adult-necessities), accessed 12.11.15.
Computer access cuts across two related fields. Access at home facilitates the development of digital skills. It also broadens internet use by giving more time to explore and access a variety of digital opportunities: informal, exploratory use of the internet feeds other types of more formal use, even if the exact relationship between these usages is too dynamic to accurately trace[48]. This is echoed by Furlong and Davies, who observe that home access to a computer does not only facilitate computer skills, but also wider learning outcomes and behaviours[49].

Clear evidence for the benefits of home access comes from Helsper and Livingstone, who find that, among young people, those who have ‘home access tend to have spent more years online, to use the internet more often, to spend more time online per day and to have higher levels of online skills and self-efficacy’[50]. Highly relevant to this is the fact that:

- children from lower SES [socioeconomic status] homes who have home internet access use it just as much as those from higher SES homes: it seems that providing home internet access in low SES households helps to close the gap in use, potentially reducing disadvantage[51].

Livingstone and Helsper suggest that home access closes the gap both in activities and skills across SES. If home access improves skills and length of period of home access correlates with skill level, and if this remains true across socio-economic status, then home access itself is a strong determining factor for the rate of learning and eventual skill level that an individual will reach. Tinder Foundation research reaches the same conclusion, finding through two recent personal access pilots that both speed of learning and eventual level of digital skill was improved through a personal internet connection[52]. Mobile access, through a smartphone or tablet, was particularly successful in a 2015 project run by Tinder Foundation and Vodafone, with the majority of beneficiaries reporting ease of use and cost benefits in relation to mobile internet access.

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[51] Ibid
For those without the internet, a smartphone or tablet can be a crucial point of access. However, although the term ‘home access’ can refer to the use of any internet-enabled device, there is a substantive difference between the kinds of activities that can take place on different devices. Ofcom data suggests that use of smartphones and tablets (‘alternative devices’) usually supplements, rather than substitutes, use of laptops, desktops, or notebooks. This may indicate that alternative devices are being used for different activities to those undertaken on a laptop, desktop, or notebook computer. For those who only access the internet through smartphones or tablets, limited internet use is an issue. Becky Faith notes this point in her qualitative data, which recorded a number of respondents for whom ‘Facebook and WhatsApp were the main uses they made of their phones’. Ofcom report that only 6% of internet-users only access the internet through alternative devices. However, 10% for members of social groups D and E.

The argument for personal access to a computer is compounded for certain types of internet use. For those accessing welfare and benefits through the internet, there is a higher skill demand because the online welfare system is unfamiliar and hard to navigate. When the internet is being used functionally, personal access gives the most flexible, non-constrained, connection to the internet. For the majority of people, personal access would encompass access to the internet in their own home. For mandated internet activities, such as jobseeking, individuals with home access have a significant advantage over those without.

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56 Ofcom, Adult Media use and attitudes. p.9.
