UK Digital Poverty Evidence Interim Review

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Executive Summary

This report is an interim review of the evidence on digital poverty, drawing from a range of source material including reports, articles, books, and statistical datasets published by Government, academia, industry and the third sector. The goal in sharing this interim overview of the forthcoming evidence review report is to invite feedback and input from participants in the Digital Poverty and Inequality Summit (November 2021) and Digital Poverty Alliance community members, including the Community Board and Ambassadors. Please refer to the Call to Action at the end of the document to find out how to contribute. Please submit any contributions by December 6th. These contributions will be collated and considered for inclusion in the final report to be published in early 2022.

Digital poverty is the inability to interact with the online world fully, when, where, and how an individual needs to. It exacerbates and is exacerbated by other socio-economic, educational, racial, linguistic, gender, and health inequalities. It is both the product and the cause of other forms of socio-economic disadvantage. The Digital Poverty Alliance model of digital poverty is based on Dahlgren and Whitehead’s “Determinants of Health,” which aims to identify and tackle systemic causes of inequality rather than treat the symptomatic manifestations of inequality.

We have long described inequalities in access to digital technologies as the “digital divide.” Once conceived as the absolute gap between digital “haves” and “have-nots,” we now better understand digital inequality as a constellation of diverse but intersecting divides, with salient gaps not just in access to connections and devices but also in awareness and motivation, skills, literacies, and meaningful outcomes. Rather than absolute differences, today these gaps are more often relative differences in terms of quality and degree of access, skills, and experiences. In addition, the benchmark of digital literacy is always changing as the digital world evolves. Therefore, digital inclusion is not a tick-box exercise that, once completed, has been achieved for life. Rather, it is a process of lifelong learning and adaptation that can be disrupted by systemic, circumstantial, and individual factors—meaning that people can fall in and out of digital inclusion at various points in their lives.
This evidence review explores the **five determinants of digital poverty**—devices and connectivity, access, capability, motivation, and support and participation—in an effort to capture the complexity of digital exclusion but also to provide useful and contemporary categories for thinking about solutions. The determinant framework draws on the [rainbow model](#) of health inequality and recognises that digital poverty is the result of multiple, compounding forms of inequality. It is as much a social problem as it is a technical one, and it does not exist in isolation.

The aim of the review is to synthesise what we know about digital poverty across a wide range of sources from Government, industry, academia, and the third sector. To date, over 150 sources have contributed to the review, bringing evidence normally siloed in different sectors into conversation in order to:

- Draw out overarching themes and trends
- Spotlight best practices and what works
- Pinpoint outstanding gaps
- Make recommendations about strategies for eradicating digital poverty
Several broad themes have already emerged in the evidence that has been reviewed:

- The vast majority of research on digital poverty uses quantitative (statistical) tools and analysis, such as surveys, where people self-report their experiences and skills.

- Qualitative research that adds descriptive depth and nuance to statistical findings mostly takes the form of focus groups, workshops and interviews, often drawn from survey samples.

- There is a general lack of ethnographic research—meaning research that captures or observes the lived experience of everyday digital exclusion, although there are exceptions. This is an important gap because ethnographic research has very high external validity—it is based in real life. Rather than asking people to self-report their experiences or skills, or testing them on their competencies in an artificial setting, it meets people where they are and helps to highlight points of friction as they are encountered normally in everyday life.

- There is a general lack of comparative research—meaning studies that compare different contexts (such as countries) and studies that compare same groups across time (longitudinal studies). This is an important gap because people’s life circumstances affect whether they are more or less digitally included, and those circumstances change over time (employment, retirement, education, childcare, etc.). We cannot pinpoint the cause/effect of digital exclusion without comparing the same people over time. Comparing different localities or different countries can be useful, too, especially if the same intervention is implemented in different contexts. The outcomes can be compared to see what works, what did not, and why.

Although a growing amount of academic research has explored various aspects of digital poverty, it is under-referenced in other sectors—such as Government, third sector, and industry. This review aims to bridge this disconnect by integrating some of the most important and critical findings from academia into the broader debate on digital poverty. As discussed below, we need to radically update the digital poverty agenda to account for some of the significant changes in digital technology and our understanding of the digital world. Academia has produced powerful critical work pointing to the big picture myths and big picture shifts around digital exclusion that have emerged in recent years, and these findings will guide and provide context for the review.
Over the past year and a half, the COVID-19 pandemic has irrevocably thrust digital poverty into the national spotlight, as many aspects of everyday life moved online in order to mitigate the spread of the coronavirus. But not everyone was able to easily transition to a digital day-to-day existence. The pandemic crisis simultaneously exposed how many of our life realms have already been digitised, how damaging digital poverty can be for individuals and society as a whole, and the need to plan for a future in which digital technology is likely to be a lifeline—or at its most consequential, a determinant of health and wellbeing.

Today the digital world is ubiquitous, and it is essential. Importantly for understanding the problem of digital poverty, digital technologies and systems are also unavoidable, even for those without the resources and skills to benefit from them. For example, digital systems are embedded in almost every aspect of everyday life from banking to welfare to education.

Most people will need to interact with a digital system, such as an online job application, whether or not they have the skills to do so or the ability to translate a one-off interaction into sustained digital engagement. And beyond that, even people who are limited or non-users of digital technologies are often invisibly affected by them, as data about them is collected and processed in digital systems that increasingly inform decision-making in life realms like healthcare, housing, and credit.
There has never been a more crucial time to set an evidence-based, cross-sector agenda for eradicating digital poverty, and the first step is to update our thinking about digital exclusion in light of the research from Government, industry, academia, and third sector front line services.
This evidence review lays out several big picture myths—meaning entrenched assumptions about digital exclusion that give way to misleading conclusions and solutions—and big picture shifts—meaning changes in digital technologies themselves as well as our understanding of their role in society. It explores the implications of these myths and shifts for the five determinants of digital poverty.

**Big picture myths:**

**Demographic differences are the most important fault lines in the digital divide.**

Large datasets have given rise to the assumption that the digitally disadvantaged are mostly older people (pensioners and those over 75), and young people are “digital natives” with natural skills acquired by exposure to technology from birth.

Mounting evidence tells us the real picture is more complicated than that, with significant digital inequalities among young users and higher levels of digital engagement from older users than such assumptions would suggest. The question for this review is: so, what would be more explanatory factors?

**All access is equal (or: access is access).**

This myth is rooted in the early narratives around the digital divide that focused on the absolute gap between digital technology users and non–users. Digital inclusion is still often treated like a switch that can be flipped from "off" to "on" when people can get online with a connected device.

This report will explore the evidence that digital inclusion is a lifelong process rather than an event. What are the factors that influence whether and how someone is digitally “included” over the course of their lifetime? What motivates people online or nudges them offline? What can we learn about relative differences in access by contextualising digital use in people’s everyday lives, like the difference between public access in a library and private access at home, for instance?

**Big picture myths:**

- Demographic differences are the most important fault lines in the digital divide
- All access is equal (or: access is access)
- A joined-up digital poverty agenda requires top-down solutions
A joined-up digital poverty agenda requires top-down solutions.

The overarching trend in digital inclusion policy is to implement programmes for helping people access the digital world as it already exists, which usually means expanding internet and device access. This is rooted in a "build it and they will come" approach; if they don’t come, find out how to get them to come to what has already been built. But in some cases, even when they do come, they do not stay.

Evidence increasingly points to the fact that community-led digital inclusion strategies and user-driven or co-productive technology design are most effective at getting and keeping marginalised and vulnerable people engaged with the digital world. For this reason the Digital Poverty Alliance community advocates treating digital exclusion as everyone’s problem and everyone’s opportunity, requiring diverse, cross-sector approaches that also meet people where they already are.

This myth leads us to ask: where does responsibility for different aspects of digital inclusion lie—with users themselves (skills) or with technology companies (design) or with government (standards)? How can diverse efforts be coordinated and supported to share best practice?

**Big picture shifts:**

**Digital is not a separate domain, sector, or agenda.**

In an increasingly digitised world, the division between online and offline has become completely blurred. One of the tensions in dealing with digital poverty is keeping the spotlight on digital and its contribution to disadvantage, while also stressing that digital is pervasive and cannot be treated as a separate issue or programme.

For example, core domains of life including healthcare and finance are increasingly digitised, and digital inclusion will be a prerequisite for positive health outcomes and financial wellbeing.
The digitally excluded are still digital citizens.

Everyone is part of a digital society—whether they are online or not. Processes of “datafication” through which information about people is turned into data that can be processed by computers, affect people’s lives even if they are not actively users of digital technologies. This is an issue for digital poverty because people’s life chances may be affected by digital technologies while they lack digital access and skills, and this threatens rights and freedoms.

For example, individuals’ data trails have been used in algorithmic risk scoring for accessing benefits and housing. In addition, some services like Government petitions are available online-first or online-only, putting up a significant barrier for many people to access their right to speak directly to Government.

The digital world can be unfair by design (consciously or unconsciously).

In recent years, evidence has accumulated about the assumptions that get built into digital technologies and systems. These assumptions can replicate and deepen certain exclusions “behind the scenes”, in the design, data, and algorithmic processes that underpin the digital world. Digital poverty is not just about access to connection and devices; it is also about ensuring the digitised, algorithmic systems do not perpetuate, deepen, or create new disadvantages for people.

For example, datasets used in algorithmic assessments in the health sector often undersample minoritised ethnicities, immigrants, and socioeconomically disadvantaged groups, leading to distorted or ineffective predictive analytics. And a ‘patchwork of algorithms developed by the public and private sectors are increasingly used in all sectors from recruitment (employment) to policing to local government.

The review highlights where these myths and shifts are relevant in developing a radically updated understanding of the determinants of digital poverty: devices and connectivity, access, capability, motivation, and support and participation. It argues that rather than depending on fixed definitions and entrenched ways of studying each of these determinants, we need to think more expansively about the entire landscape of digital poverty and its deep roots in both social and technical systems.

In the chapter on each determinant, the report reviews the evidence and highlights a key theme, which offers an update to our knowledge and approach to digital disadvantage and poverty. Within the theme, there are several key questions that aim to unpack the nuanced mechanisms that contribute to this updated understanding. These are the questions that the evidence review is seeking to answer. These themes and supporting evidence point to possible recommendations for decision makers around digital poverty. If the review finds that there are questions that lack evidence based answers, this points to gaps that can and should be filled by further research.
Device and Connectivity

This determinant focuses on having access to a decent internet connection and an adequate device and availability for using it.

The pandemic revealed that many people lacked reliable and affordable internet connections at home, and many did not have a device sufficient for working or schooling from home. A connection and a device together constitute the first gateway online.

Key theme:

Absolute measures of being “on-” or “offline” are increasingly less salient than relative differences in quality and affordability of connections, number and type of devices, and the experiences and outcomes people gain from the digital world. Beyond simple access alone, in the UK digital poverty is determined by a constantly shifting digital landscape, characterised by planned obsolescence (of hardware and software). This rapid, constant change leaves people behind if they have out-of-date technologies and skills.

Snapshot:

1 in 5 did not have access to an appropriate device
Ofcom (2021) reports that 2% of school age children have only a smartphone to get online and one in five children who had been home schooling did not have access to an appropriate device.

Up to 42% of young people are not adequately connected
Nominet Digital Youth Index (2021) reports that up to 42% of young people are not adequately connected, lacking either a home broadband connection or a laptop/desktop computer.

96% of UK properties have access to at least 30 mbps internet connection
Ofcom (2020) reports that 96% of UK properties have access to at least 30 mbps internet connection, but that drops to 81% of rural properties, with differences among the nations -- only 66% of rural properties in Scotland.

53% of those offline cannot afford an average monthly broadband bill
Lloyds Bank (2021) reports that 33% of survey respondents said that lower cost would encourage them to use the internet and up to 53% of those offline cannot afford an average monthly broadband bill.

2.5 million people are behind on their broadband bills
According to Citizens Advice (2021), 2.5 million people are behind on their broadband bills, with 700,000 people falling into the “red” on broadband during COVID.
Key questions:

- What is the state of the absolute digital divide today (e.g. those offline and non-users)?
- How has the COVID-19 pandemic affected the absolute digital divide, if at all?
- What are the salient factors in terms of the availability and speed of internet connectivity that today contribute to digital exclusion?
- Where do the biggest gaps still exist (e.g. between rural and urban communities)?
- What constitutes sufficient hardware (devices) for getting online and participating?
- What are the impacts on skills and literacy of different levels of connectivity and device ownership?
- How is environmental sustainability in the life cycle of devices linked to digital poverty?
- What are the strengths and weaknesses of current policy and research on devices and connectivity?
Access

The evidence review on access will place a focus on creating a user-friendly and user-driven experience of the digital world in order to enable people to get online and stay online.

As highlighted in the determinant on Devices and Connectivity, simply having an available internet connection is not enough to ensure that people are digitally included.

Key theme:

Access is not solely about availability of connections and devices. It is also about ensuring that users with different needs are consulted and accommodated in the design of digital technologies and systems. “Access,” in this updated conceptualisation, involves recognising that people’s experiences of using digital technology can be empowering or disempowering, even once they have overcome the absolute exclusion of being offline.

Snapshot:

2.7 million people can access the Internet but lack the ability to use it
Lloyds Bank (2021) reports that 2.7 million (5%) people can access the Internet but lack the ability to use it to its full advantage and 11.7 million people (22%) lack essential digital skills for everyday life.

Concerns with the dangers of the Internet
The Oxford Internet Survey (2019) reports that non-users are 20 percentage points more concerned with the dangers of the Internet than users.

Disabled people are more than 10 percentage points more likely to be non-users
The ONS (2019) reports that disabled people are more than 10 percentage points more likely to be non-users of the Internet than non-disabled people.
Key questions:

- What does thinking about access in terms of “accessibility” (e.g. for disability) offer in terms of inclusion and equity for all users?
- What other standards of access, beyond availability, need to be met in order for all people to participate fully in the digital world (e.g. safety and privacy)?
- Who designs the digital technologies and systems we use, and for whom are these technologies and systems designed?
- Are there perspectives and experiences missing in the design of the technologies that underpin our digital futures, which could help more people get online and get the most out of it?
- Does it matter where an individual can access a device and connection —a public library versus the home, for instance?
- What are the strengths and weaknesses of current policy and research on access?
Capability

Along with access to devices and connectivity, people need digital skills to engage with the digital world. □□□□□

The Essential Digital Skills framework and learning platforms, like Learn My Way, have been influential in rightly putting skills at the centre of digital inclusion strategies. But still today, many people, by some estimates even half of the UK population, including those online, lack even the basic skills for navigating the digital world. This lack of capability is and will continue to be a major determinant of digital poverty.

Key theme:

In general, research and policy on digital skills have not adequately accounted for the ways that other inequalities—such as race, language, gender, disability, life stage, socio-economic status, etc.—intersect with digital ability, opportunity, and outcomes. Although skills frameworks offer helpful benchmarks to ensure people can perform certain tasks, the strong focus on individuals’ skills runs the risk of ignoring systemic inequalities, which can impact people’s lives so that they (1) cannot acquire or do not see the value of digital skills; or, (2) cannot translate digital skills into meaningful outcomes in their lives.

The digital world is increasingly complicated and always changing, which means that the discrete capabilities people need in order to overcome digital poverty will need constant updating. The most important skills in the digital society of the future will involve critical thinking and abstract problem-solving.

Snapshot:

11 million people still lack essential digital skills for life
Lloyds Bank (2021) reports that 11 million people (22%) still lack essential digital skills for life, with lack of education, lower incomes, and older age all contributing to lower levels of digital skills.

Only 62% of search engine users could identify paid-for listings
Ofcom (2020/21) finds that many adults in the UK lack key abilities for navigating the contemporary digital world -- 24% do not think about whether the information they find online is truthful or not and only 62% of search engine users could identify paid-for listings in search results.
Key questions:

- How do digital skills contribute to digital inclusion and overcoming digital poverty?

- What circumstantial/life/identity factors impact whether people can acquire and apply digital skills, and what digital skills impact whether people can overcome other social, economic, and personal disadvantages?

- Why might people with similar social or economic circumstances have different levels of skills?

- What are the strengths and weaknesses of current policy and research on digital skills?

- What digital skills are needed but often missing among digital users, in skills frameworks, and in education?
Motivation

As the absolute divide narrows between people online and those offline, motivation has emerged as a major determinant of digital exclusion.

It is also among the most difficult determinants to understand empirically and tackle in terms of policy because it is rooted in personal opinions, lived experience, and social context (including community norms, public messaging, education). Despite the rapid and ever-expanding digitisation of many everyday life realms, many people still express a lack of interest in the digital world and a feeling that it is “not for me.”

Key theme:

A lack of motivation to get online, acquire digital skills, and participate in the digital world is often underpinned by important push and pull factors linked to other forms of disadvantage. For example, pensioners may express a lack of interest in getting online, but underlying this lack of interest is the cost of broadband. The evidence review will explore what the evidence can tell us about what lies behind the determinant of motivation and how addressing many of the inequalities contributing to the other determinants can have a downstream impact on motivation.

Snapshot:

42% of offline users said “it’s not for people like me”
Ofcom (2020/21) reports that among offline users, 42% said “it’s not for people like me, I don’t see the need or I’m not interested”.

“Doesn’t interest them”
Lloyds Bank (2021) reports that 33% of offline users say the internet “doesn’t interest them”

Social grades D & E are 3.2x more likely to be non-users
Research by The Good Things Foundation and Prof Simeon Yates (2021) finds that those in NRS social grades D & E are 3.2x more likely to be non-users saying “it’s not for me” than those in social grades A & B and those who left education at or under 16 years are 2.8 times more likely to say “it’s not for me” than those who left at 21.
Key questions:

- How important is motivation in terms of getting and keeping people engaged with digital technologies and the internet?

- How is motivation measured, and what are these measurements capturing or missing?

- How have digital inclusion strategies (including messaging and learning programmes) tried to increase motivation? What has and has not worked?

- What role can or should behavioural science insights play in helping to tackle motivation?

- What can comparative studies of different countries’ digital inclusion strategies contribute to our understanding of motivation and policy interventions?

- What other factors lie behind a lack of motivation?

- How can better understanding motivation influence strategies related to the other determinants of digital poverty?

- What are the strengths and weaknesses of current policy and research on motivation?
Support and Participation

Most interventions around digital poverty involve intensive, in-person support.

The Digital Champion model has been adopted across many sectors, largely led by charities and industry, with Government support. The pandemic has illustrated the centrality of personal support to digital inclusion quite clearly; not only were many people suddenly cut off without digital connectivity or skills, but helping them get online was an even greater challenge in the absence of face-to-face contact.

While digitisation is touted as a pathway to greater efficiency and cost savings, tackling digital exclusion in this personalised way is conversely time-, energy-, and often cost-intensive, which makes it difficult to scale. Moreover, many training and access interventions do not accommodate long-term support, which is crucial to addressing digital inclusion as a lifelong process. Looking ahead, understanding the role of this vital personal support in facilitating greater digital participation will help decision-makers strike a better balance in terms of digitisation and meeting people’s needs in the long run.

Key theme:

This chapter of the evidence review focuses on what the evidence says about the role of front line supporters—technical, educational, and multichannel support—including local online centres, libraries, workplace schemes, and self-directed help. As one third sector researcher put it in an interview for this review, “One of the things that has become a sort of aphorism in digital inclusion land is that people prefer to get support or are best reached through trusted networks that they’re already a part of.” The review will explore how trust needs to extend beyond personal (offline) networks into the online world for people to feel comfortable participating fully in a digital future.

Snapshot:

63% received support from a friend, family or neighbour
The Centre for Ageing Better (2021) reports that of low-income 50–70 year-olds who asked for help using digital technology or the internet during the pandemic, 63% received support from a friend, family member or neighbour.

66% of people prefer to learn from friends, family, or work colleagues
Lloyds Bank (2021) reports that when learning digital skills, 66% of people prefer to learn from friends, family, or work colleagues and 65% would prefer face-to-face; in addition, only 64% of those who live alone have fundamental skills versus 87% of those who live in a household of two or more people.
Key questions:

- Where do people go for help with digital technologies when they need it? And if they avoid getting help, what are their avoidance/coping strategies?

- Why is it that despite the availability of ever-growing digital champion programmes and other digital support initiatives, many people remain offline and disengaged?

- How has policy and research accommodated or captured the role of informal networks of support for overcoming digital poverty? How could we better recognise these networks?

- How do people themselves define support, and what do they see as key motivators for participating in the digital world?

- How participatory are the design and delivery of digital technologies and systems?

- What are the connections or disconnections between participation (meaning taking part in the design, delivery, and creation of the digital world) and inclusion (meaning having adequate devices and connections, sufficient digital skills, and being able to translate them into meaningful outcomes)?

- What are the strengths and weaknesses of current policy and research on support and participation?
Call to Action

We welcome contributions to the evidence review, which will be considered in compiling the findings and recommendations.

If you would like to contribute, please suggest sources of evidence or policy recommendations that speak to any of the key questions for each determinant. Sources may come from government, industry, academia, or the third sector.

How you can get involved:

- Join the DPA Community Hub, where you can share your contributions in the Evidence Review room. The deadline for contributions is 6th December 2021.

- When you share a source or recommendation, please highlight which determinant the source is most relevant to and what, if any, of the key questions you think the source or recommendation specifically addresses.

- Spread the word about the forthcoming evidence review in your networks!

About the Author

Dr Kira Allmann is a Public Engagement Researcher at the Ada Lovelace Institute and an Associate of the Centre for Socio-Legal Studies at the University of Oxford. She is also a Digital Poverty Alliance Ambassador. Her research focuses on the lived experience of digital inequality, and she is a strong advocate for grassroots, community embedded and driven solutions to addressing digital poverty. Prior to joining the Ada Lovelace Institute, Kira held a Postdoctoral Research Fellowship in Media Law and Policy in the Center for Socio-Legal Studies at the University of Oxford and served as the Communications Director for the Oxford Human Rights Hub. Kira holds a BA in Government and Linguistics at the College of William and Mary and completed an MPhil and DPhil in Modern Middle Eastern Studies as a Rhodes Scholar at the University of Oxford.