LIBRARIES ON THE FRONT LINES OF THE DIGITAL DIVIDE:

THE OXFORDSHIRE DIGITAL INCLUSION PROJECT REPORT

Dr Kira Allmann
Dr Grant Blank
Ms Annique Wong

OXFORD INTERNET INSTITUTE

UNIVERSITY OF OXFORD

CENTRE FOR SOCIO-LEGAL STUDIES

UNIVERSITY OF OXFORD

OXFORDSHIRE COUNTY COUNCIL

ACKNOWLEDGEMENTS

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[1] Pseudonym

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EXECUTIVE SUMMARY

This report summarises findings from the 2020 Oxfordshire Digital Inclusion Project, which studied the digital assistance provided in Oxfordshire County Libraries. Public libraries are trusted, accessible community spaces that people rely on to cultivate relationships, exchange ideas, and learn. Today, libraries provide essential access to digital equipment, services, and skills training. They are vital bridges across the digital divide.

The impetus for this project grew out of observing the realities of the day-to-day digital offering in libraries. With more and more essential services going online, many people are turning to libraries to help them access e-government platforms, banking, and employment opportunities, among other daily activities.

This is a critical time to revisit and re-evaluate how to deliver digital inclusion and assess digital skills because we are entering an era of **compulsory computing**.[3] People do not have a choice about whether to "go online" or not. Many employers accept only online job applications, and the government's "digital by default" agenda means government services are increasingly accessible only online. As a result, people are compelled to use digital devices and the internet in order to participate in everyday life. This is a very different environment from the digital world that existed even a decade ago. In this context, governments should be obligated to ensure that citizens can access and understand the digital world while recognising the complexity and challenges of the digital world that people of all levels of digital fluency encounter today.

The UK Government's digital strategies papers have consistently labelled public libraries as primary providers of digital access, training and support for local communities. But despite their prominence in public policy agendas, libraries are chronically under-resourced and under-appreciated sites of stop-gap digital help to people living in digital poverty. Staff reported spending up to 50% to 70% of their time addressing digital help requests. In the 2019-2020 year, digital helper volunteers provided over 800 hours of digital assistance in Oxfordshire Libraries, but library staff reported that this volunteer provision was not at all sufficient to meet the level of need.

In this report, we present findings from our research in the Oxfordshire County Libraries, focused on two themes:

(1) Exploring the day-to-day role libraries are playing in our digital world;

(2) Understanding the lived experience of digital exclusion, through observations and data on library computer users and digital help seekers.

Based on our findings about who uses libraries for digital needs and what libraries are doing to address those needs, we make several recommendations about how to better address digital exclusion and to enable libraries to fulfil the role they are already performing:

(1) There is a need to **improve the digital skills of library staff**, meaning that staff need to be digitally fluent themselves in order to address the high volume of digital help requests from customers;

(2) Government and local councils must **recognise and support what libraries deliver** with funding to hire more staff, acquire more hardware, and support a digital learning volunteer programme that can supplement staff expertise and time;

(3) We need to **shift the focus of digital inclusion agendas from digital skills to digital wellbeing**, meaning that any digital inclusion programme should be embedded in a wider social inclusion agenda because digital marginalisation is often bound up with other forms of social, economic, geographic, and educational marginalisation;

(4) Libraries must work to **increase community outreach and awareness** of the services they offer by reaching out to communities that might not know about their offerings, making libraries true community hubs for a diverse set of users.

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3 https://www.tandfonline.com/doi/full/10.1080/1369118X.2021.1874475

PROLOGUE

A young man approached the front desk hesitantly but with a smile. "Do you have phone chargers?" he asked.

Emilie, the staff member working on the front desk, couldn't catch a break. In the 20 or 30 minutes I had been sitting at the front desk with her, there had been a steady stream of customers queuing with questions about books or printing. It was a weekday evening; people were coming in after work. I had recently switched my normal digital helping shift from afternoons to evenings because library staff had mentioned (on numerous occasions) that they desperately needed digital helpers after 5 PM.

Despite the rush, Emilie was consistently friendly and calm, working quickly and issuing direct instructions to keep the queue moving.

"Phone chargers? For customers? No, no, we don't. There are outlets all over the library, though. You can use those," she said.

"Oh, no," the man said, "The thing is - I don't have a charger. I need to charge my phone. I'm homeless, and I really just need to charge my phone for a bit."

"Oh," Emilie paused. "I see what you mean…"

"Do you have one?" he ventured. "For your phone? That I could borrow?"

This was the kind of front desk request that threw off the whole rhythm, stalling the queue. Over the time I had served as a digital helper, many library staff members had remarked on this: a lot of front desk requests need personalised attention that will take time, more than the minute or two that can usually be spared by staff, who are juggling multiple tasks.

I expected Emilie to shrug, maybe offer some sympathetic apology. But instead, she said, "Well, what kind of phone do you have?"

He showed her. "This kind." He held up the bottom of the phone, exposing the connector.

"Ok, mine's not like that," she said. "But hang on. Can you just wait around here for a minute? I'm going to deal with these customers and then I'll see if someone here has that phone."

The man looked as surprised as I was. "Sure, yeah, no problem," he said, and wandered off for a moment.

Emilie served the now fidgety cluster of customers that had massed around the front desk. When the queue receded, the man reappeared, hovering off to the side. Emilie caught sight of him, and said, "Can you give me your phone for a moment? I'll ask around and come right back. Would that be OK?"

The man agreed without hesitation, and Emilie dashed off to the staff room, leaving the front desk to another staff member, who had just returned from shelving books.

Moments later, she returned. "I found one. Someone else has a phone like yours. I'm going to plug it in here, if that's okay with you, and then when you want it back, you just come back here and ask for it," she told him. "There's always someone at the front desk," she added.

The man was grateful; he thanked her and left the desk.

It was not your typical "digital help" session, I thought, but it was "digital help" nonetheless. How would I describe the service that Emilie just provided? Lending out personal phone chargers? It was not part of the library's standard offering. But then again, it was – kind of.

After two years of volunteering as a digital helper in the Oxfordshire County Library, I had seen firsthand that "digital help" is hard to define, and it certainly is not confined to what we might consider to be "digital." Widescale digitisation across all sectors and facets of everyday life has meant that digital needs are not isolated needs; and they are not merely about computers or internet connections – they are about being able to live an ordinary, well-rounded life.

Understanding digital exclusion in our digital age requires meeting digitally marginalised people where they are and glimpsing what everyday life looks like from their perspective. Libraries are a good (but certainly not the only) place to do this.

I started volunteering as a digital helper in my capacity as a private citizen, not as an academic researcher. I simply wanted to offer some hands-on support in an area that I worked on intellectually in my day job. But it quickly became apparent that digital exclusion didn't look quite like what existing theory or policy on digital inequality or digital skills reflected. And surprisingly little research on digital literacy and skills had taken place in the real-life places, where digital exclusion is most visible and critical.

In a world that is digitising fast, libraries have become crucial bridges across the digital divide, whether or not they are prepared and adequately supported to play that role. From this vantage point, it is clear that dealing with the challenges of a persistent and pernicious digital divide means dealing with people as much as dealing with technology.

So, was Emilie offering digital help? Or just reacting to a personal need, on a human level?

Although this report is about digital inclusion, we would encourage you to resist drawing any strict boundaries around the "digital" as you read.

In what follows, we will demonstrate that the digital world – and therefore digital exclusion – is more complex than we might realise. Rather spuriously, the concept of a divide makes us think about digital versus non-digital, connected versus unconnected, literate versus illiterate, and other de-contextualised dichotomies that would treat digital inclusion as the reconciliation of an either/or. But the reality and the likely solutions really lie in the space between – where the social and technological meet.

Dr Kira Allmann, Postdoctoral Research Fellow in Media Law & Policy, Centre for Socio-Legal Studies, University of Oxford

A CHILD USES A COMPUTER IN THE MAKERSPACE AT THE OXFORDSHIRE COUNTY LIBRARY, SEPTEMBER 2019.

PROJECT OVERVIEW

As more of our everyday lives become digitised, it is increasingly vital to ensure that everyone has access to a digital future. The Oxfordshire Digital Inclusion Project (January 2020 – June 2020)[4] has been a collaboration between the University of Oxford and the Oxfordshire County Council Libraries to produce unique data-driven insights on the digital needs of people who use and rely on public library digital services.

Many people who use public library digital services are under- or unconnected to the internet and other digital technologies. By documenting and evaluating the digital needs of library customers and the experiences of library volunteers and staff who work with them, this project aimed to better understand the role local libraries are playing in an increasingly digitised world and to strengthen the digital assistance programmes available at libraries.

Since 2012, many government services at national and local levels have been gradually digitised as part of a nationwide digital-by-default e-government transformation. This transformation has made digital platforms the first or only port of call for access to some government services, such as Universal Credit. As a result of this digitisation drive, people on the margins increasingly need digital skills to access their basic rights and perform basic life tasks, but they are also the least likely to be online or to be digitally literate. Despite the conversion of many services to digital-by-default, the government has not provided a systematic means to ensure that people who lack digital skills can actually access services. A number of charities and community organisations, including libraries, have stepped up in many localities across the UK to help bridge this digital divide.

Although the UK is widely considered a well-connected country with a robust digital economy, a number of intractable digital divides still persist – in access, skills, and opportunity. Today around 10 million people in UK are "non-users" of the internet,[5] and around 22% of Britons do not have the basic digital skills for everyday life.[6] And according to research by Yates et al., the scale of digital inclusion may be much greater, if we account for the nuances of limited use – recognising that a binary "use" or "non-use" understanding of inclusion is unhelpful. There are different kinds of usage (and therefore level of skills)

as well as different life stages and socio-economic factors that contribute to digital inequality.[7]

Oxfordshire is a county of over 687,000 people, and although generally fairly affluent, 10 of Oxford's neighbourhood areas are among the 20% most deprived areas in England, and 29% of children in the county live below the poverty line.[8] Although the County library serves a wide range of patrons, as reflected in the data below, our survey of library computer users at the County library revealed that around 31% earned less than £12,500 a year. Particularly notable for this study, 28% did not have the internet at home, compared with under 1% of the population at large.

This project developed out of a desire to better understand the role that libraries are playing in a digital world, where digital access is often taken for granted. What are the digital needs that people bring into the library on a day-to-day basis?

In addition to spotlighting the often-invisible work of local libraries in bridging the digital divide, we also hoped to gain new insights into the *lived experience* of digital exclusion. Most studies of digital skills and the demographics of the digital divide are based on surveys, where people self-report their access and competencies, or on performance testing, where people perform tasks in a laboratory-like environment. Instead, we collected data in a typical local library, where people go to get online simply because computers and internet connectivity are free there. We observed people completing everyday digital tasks and interviewed the staff and volunteers who are often called upon to help them. This method exposes some of the realities of digital exclusion from the ground up.

This report offers an overview of our findings from this study. We hope it will provide useful insights into the role of libraries in this digital-by-default landscape, offer suggestions about how to improve digital assistance offerings in such public access spaces, including in the context of the COVID-19 pandemic, and present novel observations about the lived experience of the digital divide.

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[4] In-person interviews and participant observation were suspended in March 2020 due to COVID-19 restrictions. We continued to collect some surveys and interviews remotely until June. Further details can be found in the Methodology section.

[5] https://www.ofcom.org.uk/__data/assets/pdf_file/0031/196375/adults-media-use-and-attitudes-2020-report.pdf
https://www.ons.gov.uk/peoplepopulationandcommunity/householdcharacteristics/homeinternetandsocialmediausage/articles/exploringtheuksdigitaldivide/2019-03-04

[6] https://www.lloydsbank.com/banking-with-us/whats-happening/consumer-digital-index.html

[7] https://www.goodthingsfoundation.org/news-and-blogs/blog/new-analysis-ofcom-2020-data
https://firstmonday.org/ojs/index.php/fm/article/view/10847

[8] https://www.oxford.gov.uk/info/20131/population/497/poverty_and_deprivation

LIBRARIES ON THE FRONT LINE OF THE DIGITAL DIVIDE

Over the last decade, more and more government and commercial services have been digitised, accelerated by the 2012 rollout of "digital-by-default" e-government platforms. But despite allocating funding to initiatives like The Good Things Foundation's Learn My Way resources, the government has not provided sufficient avenues for people without digital skills to acquire the needed capabilities. As a result, libraries across the UK have seen increased demand for digital access and help.[9] In observations and interviews, staff and volunteers heard that many people had been referred to the library as a digital access and help point by Job Centres, GP surgeries, and even the train station. The last internet café in Oxford also reportedly closed in 2017, putting even more pressure on libraries.

> "If they need to fill out a form to apply for the bus pass or parking permits, or anything that, there isn't public facing staff anymore. It's just us in the library. So, we're the only face-to-face contact that the public have with the council. Most of the services you need to apply for, you have to apply online, which obviously foxes quite a lot of people."
>
> – Emilie, Library Staff Member

The Oxfordshire County libraries began offering day-to-day assistance to library customers with digital needs in 2017, through a digital helper volunteer programme. The digital helper programme was initiated in response to both rising demand for digital help and the priority placed on access to digital services by the County Council. Library users can sign up in person or call to schedule 30-minute digital help sessions with a volunteer. Programmes like the digital helper volunteer scheme have become vital components of a decentralised ecosystem of stop-gap digital assistance services working to close the digital skills gap in a context where "digital" is the default.

In interviews,[10] staff at Oxfordshire Libraries described lacking the capacity to handle the lengthy and complex digital help requests they regularly receive at the front desk. This need, coupled with budget cuts to libraries and limited staff time led to the creation of the volunteer "digital helper" role.

> "I would say the digital helping service is just a lifesaver really." – Tom, Library Staff Member

Before the coronavirus pandemic, around 80 digital helper volunteers provided daily digital assistance across the county's libraries, with most serving the central County Library. Digital helpers offer pre-booked sessions of 30 minutes each. If a library patron brings a request for digital assistance to the front desk that is likely to take more than a few minutes, staff encourage the library patron to book a digital help session, or if a digital helper is available at that moment in time, they are called over to assist right away.

"I think it's always been the case, even before funding was cut, that simply a lot of the help the people require on computers is extremely intensive one-to-one," Graham, a library staff member explained. "It's simply not possible on the whole for a member staff to give that level of support to

FIGURE 8. DIGITAL HELPERS IN THE OXFORDSHIRE LIBRARIES

THE SCALE OF DIGITAL HELP REQUESTS IS SURPRISING. CLASSIC LIBRARY ASSISTANCE REQUESTS LIKE FINDING INFORMATION OR BOOKS HAVE RECEDED IN IMPORTANCE. **STAFF MEMBERS ESTIMATED THAT BETWEEN 50% AND 70% OF THE REQUESTS THEY RECEIVE FROM PATRONS NOW RELATE TO DIGITAL SERVICES AND SKILLS.**

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[9] See, for instance: https://www.informall.org.uk/blog/uc-impact/ & https://www.ohchr.org/Documents/Issues/Poverty/EOM_GB_16Nov2018.pdf & https://www.goodthingsfoundation.org/research-publications/libraries-delivering-digital-inclusion

[10] Real names are used in this report, except where interviewees requested a pseudonym.

IN THE YEAR FROM JANUARY 2019 TO JANUARY 2020, DIGITAL HELPERS PROVIDED OVER 800 RECORDED HOURS OF ONE-TO-ONE DIGITAL ASSISTANCE.

a customer. You can't really take time off from working the library front desk, doing all the other jobs, when you need to sit down for 45 minutes to an hour – and sometimes it really does take that long – and go through something with somebody who has very limited or indeed no digital skills. It just isn't possible."

Importantly, nearly all library staff members and digital helper volunteers see the provision of digital access and assistance as a logical extension of the library's services and role in the community. As information providers, libraries are evolving to provide access to digital information, and with that comes an impetus to offer community support.

"I do think freedom of information – that is the bottom line, really, is that we want to give people free information. That's a human right."

– Meg, Library Staff Member

The Government has recognised this role for libraries as well. Public libraries have long been part of Government policy to provide the country with access to ICTs and digital skills. In 1997, DCMS commissioned the *New Library: The People's Network*, a report by the Library and Information Commission that proposed public libraries form the basis of a national digital network to provide ICT services.[11] More recently, DCMS published *Libraries Deliver: Ambition for Public Libraries in England 2016-2021*, which identified "improved digital access and literacy" as one of the seven outcomes for public libraries.[12] In addition, the UK Government's 2017 Digital Strategy, named libraries as "the 'go-to' provider of digital access, training and support for local communities."[13]

Libraries across the UK, including the Oxfordshire libraries, use a range of helpful resources and strategies developed by government-supported organisations like The Good Things Foundation and Citizens Online, and they also host dedicated digital skills sessions with AgeUK. Digital helpers at the Oxfordshire libraries are encouraged to recommend the online digital skills training courses

Learn My Way[14] and Make It Click[15] (developed by The Good Things Foundation). The County Library is part of the UK Online Centres Network[16] and participates in Get Online Week,[17] a campaign to promote digital inclusion opportunities from digital helper sessions to local college courses.

"Libraries are where people come, and they trust people at libraries. I think people would like coming to me because it's free. And also because I haven't really got any agenda. There's always something behind what people have been told in a [computer/ phone] shop." – Ian, Library Staff Member

All these programmes are very useful, but the reality is that libraries – like other local digital inclusion centres – are cobbling together digital support for their local communities through a combination of volunteer time and a smattering of online resources. Best practices, such as the "digital champion" model of digital inclusion advocated by Citizens Online, have diffused widely, partly because they also seem to evolve naturally from the kind and quantity of demand for digital help on the ground. Digital helpers are one local example.

These largely one-on-one, time-intensive interventions have immeasurable impact on individual lives. Indeed, the impact is often hard to capture with conventional metrics. The challenge of digital poverty and exclusion exists at scale – at least 10 million people in Britain lack adequate access or skills[18] – but the most widespread and, arguably, effective solutions are small. They are context-specific and operate on an individual level. Studies like this one, on the "front lines" of the digital divide, illustrate why: the digital landscape today is complex, and first-time users or people with limited skills face myriad hurdles unique to their personal situation. This complexity is often taken for granted by technology designers, policymakers and educators, who – like many of you reading this report – are digitally fluent.

[11] Boughey, A. (2000). Implementing the "New Library: The People's Network" and the management of change. Aslib Proceedings, 52(4), 143-149. doi:10.1108/eum0000000007009

[12] https://www.gov.uk/government/publications/libraries-deliver-ambition-for-public-libraries-in- england-2016-to-2021

[13] https://www.gov.uk/government/publications/uk-digital-strategy/uk-digital-strategy

[14] https://www.goodthingsfoundation.org/learn-my-way

[15] https://www.goodthingsfoundation.org/projects/make-it-click-0

[16] https://www.gov.uk/ukonline-centre-internet-access-computer-training

[17] https://uk.getonlineweek.com

[18] https://www.ons.gov.uk/peoplepopulationandcommunity/householdcharacteristics/homeinternetandsocialmediausage/articles/ exploringtheuksdigitaldivide/2019-03-04

To escape the natural limits of our personal experiences, we need to step out of our familiar spaces and worldview to inhabit a different perspective. In addition to gaining understanding about the library's digital help provision, we were interested in the experiences of the digital helpers as window into the digital needs of people who lack digital skills. What are the digital needs that people bring into the library on a day-to-day basis. Our aim in this section of the report is to draw out several thematic insights from our qualitative interviews and observations of Oxfordshire's digital helper programme and, through these findings, to make visible some of the lived experiences of people who fall on the wrong side of the digital divide.

DIGITAL HELPERS – FOCUSING ON PEOPLE, RATHER THAN TECHNOLOGY

CASE STUDY: DIGITAL HELPING

Giles can't remember exactly when he started volunteering as a digital helper, but everyone says he's been involved since "the beginning." He's retired and committed to his two-hour slot every Monday. When we asked why he volunteered in the first place, he emphasised that he's not a technology expert.

Instead, he said, he remembered what it felt like to be in the dark about computers. Reflecting on his career with the BBC, he said, "You rang up the IT department who sent somebody around and looked at you as if you were a complete idiot, and they preceded to do a whole lot of things very quickly on your keyboard. You would have no idea what they'd done or whether you'd done anything wrong or whether you would do it again, because then they rushed off to someone else."

Imagine how off-putting this would be to someone, with no knowledge of computers, he suggested. Like most of the digital helpers we interviewed, Giles wasn't motivated by his ability to show others how to use technology. Instead, he was motivated to make them feel like he was listening to them, like they could even develop the confidence to do things on their own.

Digital helping is less about the "digital" than it is about people. This was the most repeated theme in interviews with digital helpers and library staff by far. Although digital helper volunteers are tasked with assisting with technical enquiries, technical expertise did not often factor among the essential characteristics or qualifications of digital helpers. Most digital helpers explained that their main task is to quickly identify someone's needs and help them in the span of the 30-minute session. Given this time constraint, volunteers are more concerned with helping people achieve their specific goals than with teaching abstract digital skills.

Library staff and volunteers identified the essential qualities of digital helpers to include patience, empathy, listening, and good communication.

"I think you have to be interested in other people and their needs. I think [it's] the ability to talk to all sorts of people." – Giles, Digital Helper Volunteer

Digital help requests are usually highly context-specific, and they often involve getting to know certain non-digital dimensions of a person's situation because digital exclusion intersects with and compounds other forms of social and economic exclusion. Volunteers said that they were sometimes trying to help with an immediate digital issue, like sending an e-mail, but they were also contending with other issues, such as mental health and disability.

"So I see it more as helping people with problems that often involve the computer, although sometimes it might be something completely different and you might actually be showing the person how to find out on the computer how to get help with those problems, be they financial or other sorts of advice they might be seeking."
– Graham, Library Staff Member

As a result, digital helpers generally wanted more information and training regarding pastoral care and social welfare services. The libraries originally envisioned the role to encompass directing people other services, especially Council services and local college courses. But volunteers found that pointing people toward other services was difficult to do in practice, when people have an immediate need. And the volunteers also sometimes lacked confidence and familiarity with the full range of services and resources they might recommend. This points to the need for more coordination among community groups and institutions in providing digital inclusion support.

Digital inclusion cannot be siloed as a technological issue; it implicates a wide range of social, linguistic, economic, geographic, and age factors that require a holistic approach.

> "My strong belief is that we should empower people through information. Empowerment for me means not just giving people information but helping them so that they can get the information in the future themselves – helping build the confidence."
>
> - Julie, Digital Helper Volunteer

Some staff members and volunteers raised concerns about the dependence of the Council and libraries on volunteers to perform these digital inclusion roles. Volunteers choose their own hours and days of commitment, so coverage can be inconsistent at certain times during the week – especially in evenings, when many people come into the library after work to use computers and ask for help. Several interviewees suggested that these roles would be better served by paid staff who could provide more consistent and stable service.

However, interviewees also indicated that there are distinct advantages to using volunteers to provide digital help. They bring outside experience, often from professional careers in technology sectors, and they also bring different life perspectives. Volunteers ranged in age and life stage from young students to retirees, and they approach digital helping in different ways. Library staff commented on how they sometimes learned new strategies and skills by watching volunteers assist people in their own way.

In addition to understanding the role of digital help volunteers, we also explored what digital needs people brought into digital help sessions. There are several key insights from our data about the nature of digital skills and literacy "on the front lines" that offer an updated perspective on digital inclusion.[19]

DIGITAL NEEDS – INSIGHTS FROM THE GROUND UP

(1) THE DIGITAL WORLD IS MUCH MORE COMPLEX FROM THE VERY START THAN DIGITAL SKILLS FRAMEWORKS RECOGNISE

We heard about and observed many people getting online for the first time in a library. In other words, they did not come to the library with an established digital presence or footprint. A digital footprint – starting with a personal e-mail account – is often a pre-requisite for using other digital services. Just to set up an account on an e-government platform, a user will likely need a personal e-mail account, understanding of passwords, and awareness of data privacy (as they will be engaging with both commercial and government platforms), not to mention basic keyboarding and motor skills. Digital gaps are both conceptual and physical from the very start.

CASE STUDY: FIRST THINGS FIRST

A retired man had recently moved into an assisted living facility. He needed to notify the post office that his address had changed and was informed in his local branch that the mail forwarding form can only be completed online. To fill out the form, he needed to register for an online account on the post office website. But he did not have an e-mail address to set up the post office account.

We spent the digital help session setting up an e-mail account and did not have time to submit the mail forwarding form.

– Field notes from a digital help session

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[19] Allmann, K. & Blank, G. (2021). Rethinking digital skills in the era of compulsory computing: methods, measurement, policy and theory. Information, Communication & Society, 24(5), 633-648. DOI: 10.1080/1369118X.2021.1874475

The role of a digital helper is often to help break down an abstract end-goal into steps. Even a simple digital task can require many steps. These steps will not be obvious to people without previous digital experience. Someone without familiarity with computers or the internet might not even know where to begin. In the words of one digital helper: they don't know what they don't know.

> **" It comes as a bit of a shock that there's more to it -- that there's various layers, and it's not hard once you're in it, but it takes more than an hour to pick it up. [...] So that that was interesting to me. The idea that some people don't know stuff, but some people don't yet even know they don't know it."**
>
> – Bela, Digital Helper Volunteer

In other words, the digital world that a novice or limited user encounters today is extremely complex right from the very beginning. In practice, it is almost impossible to build up linearly from basic to advanced skills. Even to complete a single goal-oriented task, users need the full range of skills at once. For instance, to apply to be a barista at a café – as in the case study below – an applicant needs to know not just how to type, manipulate a mouse and access the internet but also how to manage an email account (where they will receive updates about applications they have submitted), how to set up and remember multiple secure passwords (which they will need for each new application), how to create a digital CV, how to submit the CV in the correct format, and how to fill in online forms. The sheer complexity of what appears to be a single task can be off-putting and discourage novice users from developing a broader interest in other digital skills.

(2) MANY LIMITED AND NON-USERS TODAY ARE GOAL-ORIENTED USERS

Some digital help seekers are interested in generally acquiring more digital skills, but many are instead interested in achieving a particular end goal, such as signing up for Universal Credit or applying for a specific job. They come to the library to find help in overcoming a specific digital hurdle in access or skills – and often both.

The end goal might be fairly abstract (like "find Council housing"), but the digitised nature of services today means that people need to use the internet and a connected device to achieve that end goal. This reality compels them to enter the digital world. They are not interested in digital skills broadly. They have an immediate – sometimes urgent – task that happens to require digital technology.

Understanding this goal-oriented nature of digital upskilling is important because it points to a new way of thinking about how to encourage digital literacy. It is not realistic to teach people digital skills for life by following existing government frameworks without considering the goal-driven nature of digital needs. Instead, the acquisition of digital skills for life needs to start with strategies that allow people to achieve their immediate goals and then encourage them to expand their interests toward greater general digital competence.

If the entry point to the digital world for limited and non-users is goal-specific, successfully encouraging the development of digital skills for life will require employing strategies for building on goal-driven skills, inspiring a broader interest in the digital world from this entry point, and then expanding toward greater general digital competence.

CASE STUDY: APPLYING TO BE A BARISTA

A woman came into the library wanting help applying for barista jobs at cafés in Oxford. She had been told to apply online, and the cafes did not offer any support. "It all came it came down to a number of gaps," Bela, the digital helper assigned to the woman's case, explained. "But the key one that absolutely blocked her was this understanding that she had to create a new account on each of the coffee sites." The woman didn't realise that she needed to set up different login credentials (using her email and a new password) for each café application. She had been trying to use the login details for her personal email account on all of the forms. Bela recounted it as though a lightbulb had gone off for her, as a digital helper. "That's not at all clear. You need to just already know that's how it works." She wouldn't have realised how confusing a prompt as simple as "enter an email and password" might be. Plus, Bela said, "Realistically you don't need to know much about that to work in the coffee shop. It's like a test for youth. And I think that that's really disturbing."

(3) DIGITAL ENGAGEMENT IS A LONG-TERM COMMITMENT THAT MANY USERS DO NOT HAVE THE TECHNOLOGICAL RESOURCES OR CAPABILITIES TO MAINTAIN

Linked to the second point above is the fact that regardless of the task a limited or non-user wants to complete online, engaging with the digital world can almost never be a one-off event. A digital footprint entails a long-term commitment to managing it. Users must be able to return to the accounts they have set up for basic services, like the post office, and they must check their e-mail inboxes for important alerts. Failure to do so can result in greater disadvantage, such as government benefits being reduced or revoked. This is complicated if people don't have Internet access at home or don't have other skills, like being able to type.

(4) DIGITAL LITERACY IS AN ISSUE AT ALL AGES

Most interviewees observed that "everybody and anybody" (in the words of one staff member) comes into the library. There is a misconception that digital exclusion is exclusively an issue for older people. Indeed, retirees make up the largest percentage of "non-users," but gaps in digital literacy exist across all age groups; 12% of non-users are under age 50.[20] But digital exclusion looks different for different types of users.

> **"You have to explode all the myths and the narratives. It was all a bit like, well, older people will need some help from their library, but younger people are digital natives. So, they'll be fine. But that is exploded every day."** – Meg, Library Staff Member

For example, library staff regularly observed students from the local college struggling to use desktop computers, previously having only used the Internet on mobile phones. Many lack keyboarding and file management skills, and they share some of the limitations of older users, who find it challenging to recognise the difference between various platforms, search engines, and operating systems. In other words, "digitally excluded" does not represent a homogeneous category of people. We need to better understand the unique needs of different types of users.

OXFORDSHIRE DIGITAL INCLUSION PROJECT POSTER, ADVERTISING THE PROJECT DURING THE DATA COLLECTION PERIOD IN THE OXFORDSHIRE COUNTY LIBRARY, JANUARY 2020.

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[20] Comparison data is from: https://oxis.oii.ox.ac.uk

CASE STUDY: TWO-FACTOR DISADVANTAGE

Daniel is middle-aged and recently unemployed due to mental health issues. He has booked a 30-minute digital helper session in order to set up an e-mail account. At a computer terminal, he has already signed in with his library PIN and taken out several notebooks and small slips of paper with notes on them, which are scattered around his workstation keyboard. Daniel is anxious and chatty, apologising constantly for having so many questions and thanking the digital helper repeatedly for taking the time to help him. His tone is somehow simultaneously woeful and upbeat. He is determined to get his life back on track, he says, and this involves sorting out several digital issues.

In the past, Daniel had an email account and phone through his job, so he has never had to set up personal accounts or devices on his own. He says it takes him longer to do things these days, due to his mental health. On this day, he simply wants to set up an email address so he can access his GP records online.

Daniel is familiar with using a keyboard, computer, and internet browser and easily navigates to the Gmail sign-up page. He wants to use Gmail because it's the one he's heard of. After choosing a username and password, Daniel is asked for a mobile phone number to facilitate two-factor authentication (a code will be sent to his mobile phone, which he will need to enter on the screen). He does not have a mobile phone. Getting one is on his to-do list, he says. He suddenly looks dejected.

After several minutes of trial and error, and trying to find an alternative email provider that does not require a mobile number, Daniel's 30-minute appointment has nearly run out. The digital helper suggests that Daniel come in another day so they can try again. Will he actually come back? Many people who book digital help sessions do not. Daniel thanks the digital helper profusely for their time, even though they did not accomplish his goal. He shakes the digital helper's hand before she goes to another appointment.

OXFORDSHIRE COUNTY LIBRARY, JULY 2019.

LIBRARY COMPUTER USERS

We conducted a survey of library computer users across all 44 of the Oxfordshire County Libraries to better understand how and why people use the public network computers at the library. Although paper surveys were available, the vast majority of surveys were completed online, on library computers (92%). The survey findings tell us about what computer users are like, but they might not reflect library users in general.[21]

WHO USES LIBRARY COMPUTERS?

AGE

The library computers serve all age groups, but they are disproportionately used by older people between the ages of about 50 and 77. There is a sharp drop off of use in the late 70s.
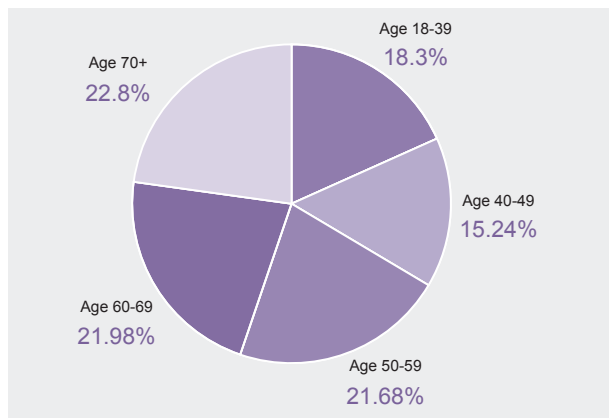
FIGURE 1: AGE OF LIBRARY COMPUTER USERS

HOUSEHOLD INCOME

The library primarily serves low-income people. 31% of computer users have annual household incomes of £12,500 or less and another 27% have incomes between £12,500 and £20,000.
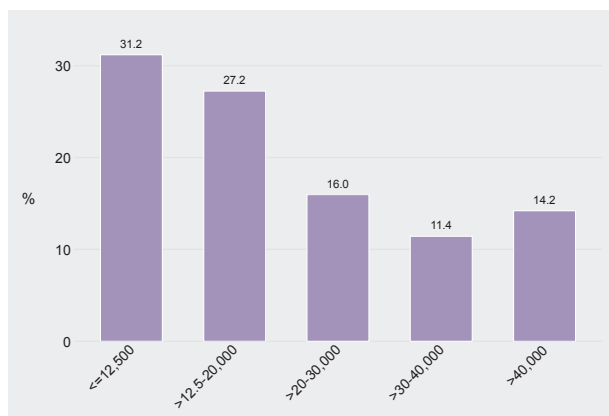
FIGURE 2: HOUSEHOLD INCOME OF LIBRARY COMPUTER USERS

LIFE STAGE

Most library computer users are employed (46%) or retired (30%).

FIGURE 3: LIFE STAGE OF LIBRARY COMPUTER USERS

SELF-REPORTED DIGITAL SKILLS

Most library computers users understand their digital skills to be average or better.

FIGURE 4: DIGITAL SKILLS OF LIBRARY COMPUTER USERS

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[21] We include a note on the strengths and limitations of this survey methodology in Appendix A.

HOW DO LIBRARY COMPUTER USERS COMPARE TO THE BRITISH POPULATION?

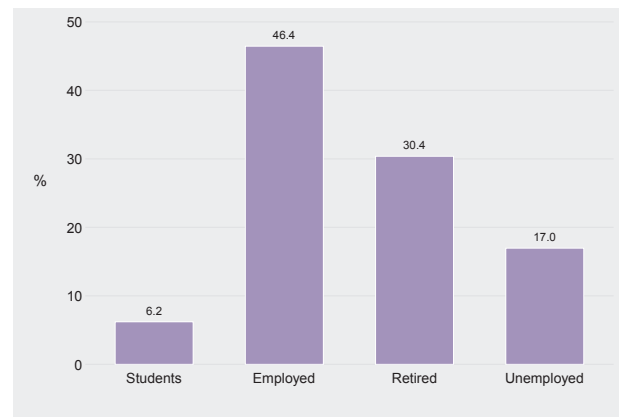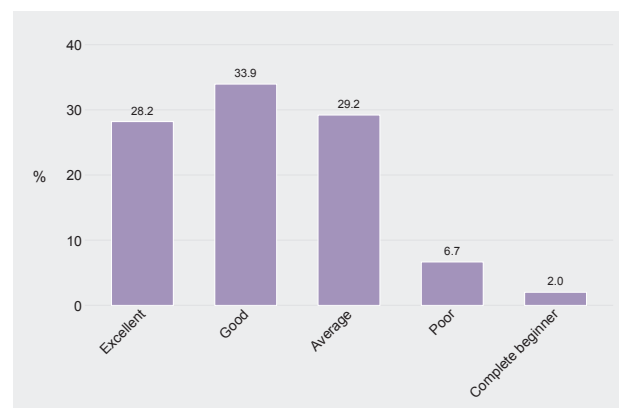**We compare our data on library computer users to the 2019 wave of the Oxford Internet Survey (OxIS), which captured a representative sample of the British population (England, Wales and Scotland; not including Northern Ireland). A full comparison of the data is available in Appendix B.**

KEY TAKEAWAYS

- Library computer users are much more likely to have lower incomes: for the library, 58.4% have incomes of £20,000 or less, compared to 40.9% of the British population;
- Compared to the British population, the library has more retired and unemployed people;
- There are more people without a mobile phone using library computers (11.6%) than in the British population on the whole (7.6%);
- Among library computer users who do have mobile phones, more of them do not have a smart phone (31.3%) than the British population (20.8%);
- When it comes to self-reporting digital skills, more library users say they are skilled (29.2%), compared to the British population (18.9%), but more library computer users also say they have poor skills (6.7%) compared to the population (2.4%);
- Finally, library users are slightly older with an average age of 55 compared to 49 for the population.

WHY DO PEOPLE USE LIBRARY COMPUTERS?

We asked library computer users why they choose to use the library computers.[22] Respondents could select more than one answer. We found that the library computers are serving very large numbers of people with real needs, including lack of access and skills.

KEY TAKEAWAYS

- 51% said the computers are convenient;
- 31% said the library is safe;
- 30% said they had no computer at home;
- 22% said they could get help at the library.
- 19% said they had no Internet at home;

"It's probably the only place left in Oxford where you can get on a computer. I don't think there's many internet cafés left. And it's the only place you can get on them for free and obviously there's large groups of people, whether it's through age or they can't afford a computer or they don't have a house, because a lot of the people who use it are homeless people that, you know, [live] in an increasingly digital world and they need like to get online to do stuff. This is the place they can come."

– Jess, Library Staff Member
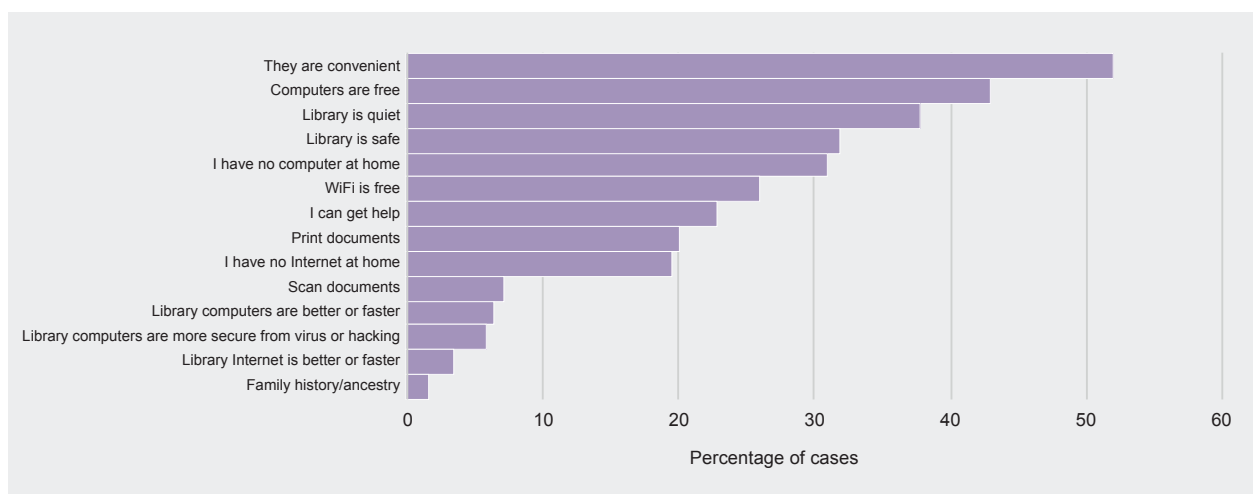

FIGURE 5: WHY DO PEOPLE USE LIBRARY COMPUTERS?   Respondants could select multiple responses

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[22] Note that since respondents could do more than one thing the total is greater than the total number of respondents.

HOW DO PEOPLE USE LIBRARY COMPUTERS?

We asked respondents what they did on the library computers. Respondents could choose more than one activity, as people often do more than one thing during a single computer session.

KEY TAKEAWAYS

- People undertake a lot of different activities on library computers: we offered a list of 18 options, and respondents wrote in an additional 90 activities that were not on our list;
- The most common activities were e-mail and printing (about 35% in both cases);
- The next most common activities were online news, using the library catalog, studying, research, and accessing digital library resources (14-15%)
- Few respondents reported using e-government services, such as paying government or council tax, fines or fees (1%).

HOW DO PEOPLE WHO ASK FOR HELP AT THE LIBRARY COMPARE TO OTHER LIBRARY COMPUTER USERS AND TO THE BRITISH POPULATION?[23]

We broke down our survey respondents into two groups: those who reportedly did not ask for help during their computer session and those that reported asking for help.

KEY TAKEAWAYS

- There is no difference between men and women asking for help in the library;
- The biggest gap is in income: 35.5% of people asking for help are in the lowest income category compared to 30.4% in the library overall and to 17.4% in the British population. In other words, people who ask for help are about 18 percentage points more likely to be in the lowest income category;
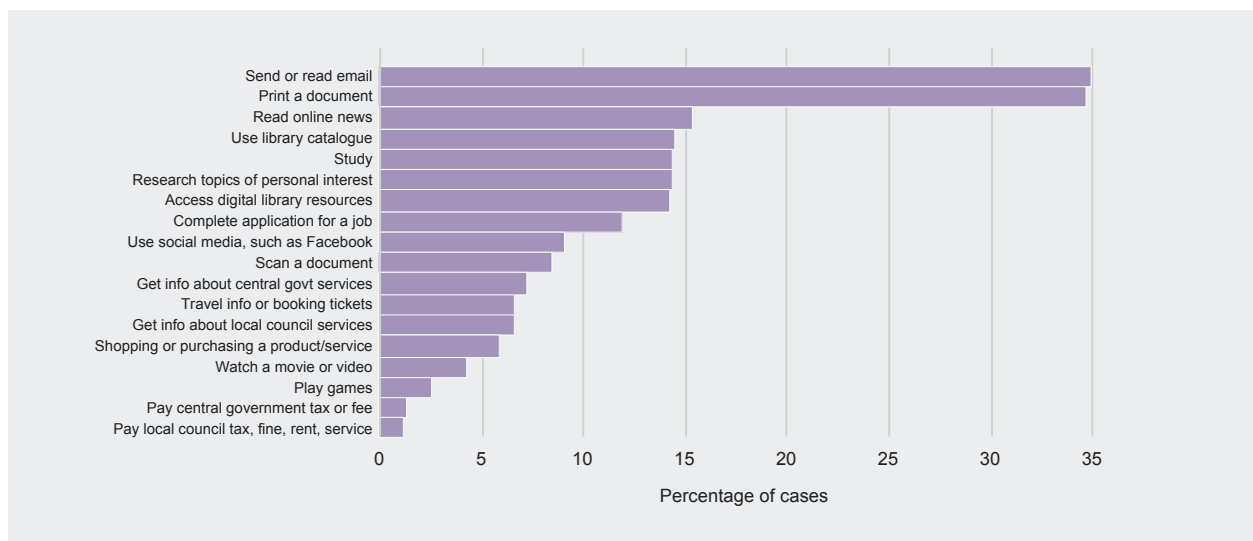

FIGURE 6: ACTIVITIES ON LIBRARY COMPUTERS

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[23] A full breakdown of the comparison data is available in Appendix C.

- People who reported asking for help at the library are less likely to own a mobile phone compared either to library computer users in general or to the British population; however, about the same proportion have a smartphone;

- Perhaps unsurprisingly, survey respondents who reported asking for help are more likely to rate their skills as "good" rather than "excellent," and they are more likely to say they have "poor" skills or are "complete beginners";

- Finally, people who reported seeking help are slightly older on average than library computer users in general and almost six years older on average than the British population.

WHAT DO PEOPLE ASK FOR HELP WITH?

Twenty-five percent of respondents said they asked for help while using a library computer. Due to the high volume of digital help requests, the library makes digital helper volunteers available to assist with more time-consuming tasks either by walk-in or pre-booked appointments.

KEY TAKEAWAYS

- By far the most common reason for asking for help is to print a document (58%). This is partly because printing in the library requires a staff member to release the print job at the front desk. The process for printing also

requires clicking through several dialogue boxes on the screen, which confuses many people;

- Other common help requests involve accessing digital library resources (13.4%), scanning (12.2%), and sending or reading e-mail (11.4%).

WHAT DID PEOPLE HAVE TO SAY?

At the end of the survey, respondents were invited to offer additional comments. This was an open-ended question. In general, respondents offer very strong support for the libraries. People like them and appreciate the services they provide. "Keep on doing the excellent job that you are now doing!!" wrote one respondent. "I love the free wifi access, it is so useful to be able to do research on the internet and then turn around and research using the books on the shelves as well," wrote another.

KEY TAKEAWAYS

- People would like some improvements to their access: this usually means longer opening hours for the library, or more time for a single session computer session (the limit on County Library computers is 2 hours per session);

- People would like the County Library to be open on Sundays;
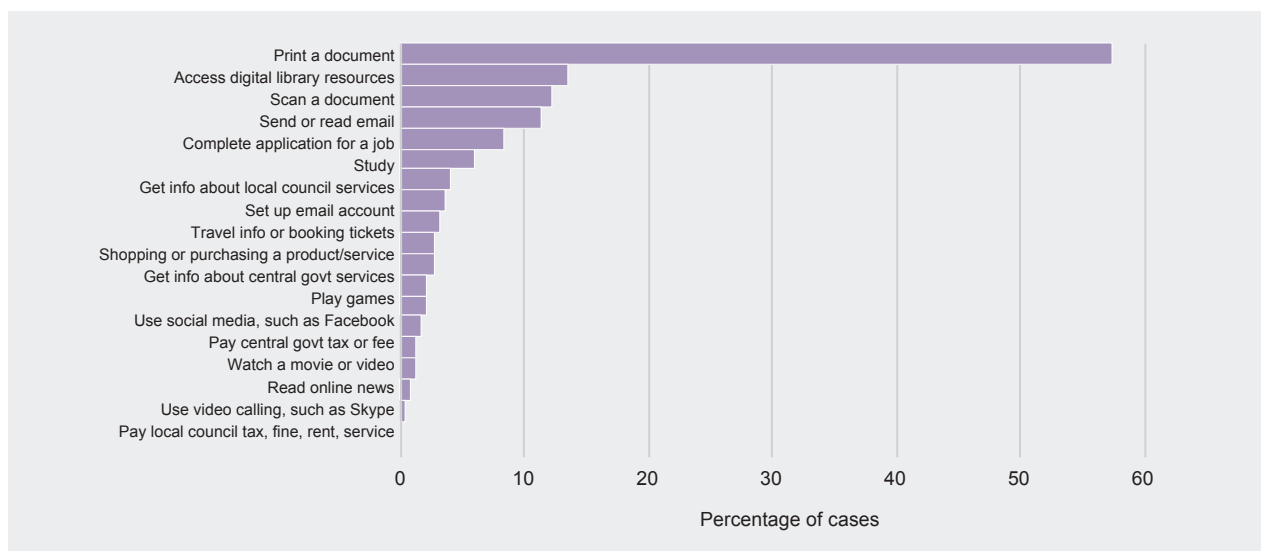
- People would like the computers to be faster.

FIGURE 7: WHAT DO PEOPLE ASK FOR HELP WITH?

POLICY CHALLENGES & OPPORTUNITIES

Taken together, our findings point toward several clear policy suggestions for a stronger and more effective digital inclusion strategy. As the UK aspires to "build back better" after the COVID-19 pandemic, which has starkly exposed the inequities of digital poverty, it is more important than ever to develop a digital inclusion agenda driven by empirical data on limited and non-users in context and informed by the lived experience of the digital divide.

RECOMMENDATION #1:
ENHANCE DIGITAL SKILLS OF LIBRARY STAFF

Digital inclusion strategies are likely best delivered through a combination of paid staff and volunteers, but staff reported needing more digital skills and training than they currently have. Most front-of-house staff began their library careers with a focus on books and customer relations and have found themselves mostly dealing with computer and Internet issues.

> "You're guiding so many people up onto the first rung of the ladder. That's the main thing is getting onto the ladder in the first place, onto the first rung, and then they can fly, and then they can climb at the pace they want. So I don't feel that that's a disadvantage [that] I'm only on, like, rung two and I'm not really going much higher, but that's fine because I'm pulling people up with me."
>
> – Meg, Library Staff Member

Library staff need digital skills and familiarity with the entire digital offering of their libraries in order to deal with the help requests they receive and to help fulfill the agenda outlined for libraries in *Libraries Deliver*. Knowledge exchange between digital help volunteers and staff could be one way of facilitating this upskilling and confidence, as library staff reported having insecurities about their own digital literacy, but digital helpers often lack adequate familiarity with the library's unique software capabilities or hardware.

RECOMMENDATION #2:
RECOGNISE AND SUPPORT WHAT LIBRARIES DELIVER

Despite the frequent mention of libraries in government policy documents on digital inclusion, there is a lack of evidence-based awareness of the crucial day-to-day role libraries play in helping underserved populations access digital-by-default services.

As a result, not enough attention or resources (from funding to technical hardware) are being directed toward public spaces that provide both free access (to the internet and devices), knowledge (of digital skills), and interpersonal support (to facilitate confidence in learners).

In practice, digital inclusion often does not happen in specialised, dedicated spaces or with the abstract goal of acquiring general digital skills. It is happening – and necessary – across all sectors and in ordinary places that people typically go for information, resources, and requests for help in other life domains. Libraries are just one such place where digital inclusion happens by necessity; many people find them a natural place to go.

Digital inclusion strategies need to find people where they are and intervene there. They also need to meet their immediate needs first, as the "digital-by-default" environment demands engagement with digital services that people sometimes desperately need access to. Often people with urgent digital needs have not considered the potential value of digital skills in the abstract or in general.

Based on our data, we can recommend several areas of potential resource investment in libraries that would help to meet needs:

- Allocation of funding to support a paid digital helper coordinator based at libraries whose role is to facilitate training and recruit more volunteers.
  - Many more volunteers are needed, as this role is time-intensive and one-on-one. The training should also be more comprehensive, encompassing both signposting to other services and also social care skills.
- Dedicated training for staff on digital skills and inclusion strategies.
- Making available low-cost, library-owned mobile devices for digital helper volunteers to use with library patrons who need to make phone calls or receive verification messages by mobile.
  - Many online services require two-factor authentication, but often people asking for help at the library do not own a personal mobile phone to receive the verification codes.
- Offering a VPN service for patrons who are using the public wifi or public computers to conduct sensitive personal business, such as applying for a visa, submitting medical information, conducting online banking, etc.
- Streamlining printing services to make the process more straightforward and less burdensome on staff time.

- Better coordination with government services that require digital access, like Job Centres, and Council services, such as Council housing.
- Making clear how secure the library network is for everyday tasks like online banking or shopping.

RECOMMENDATION #3:
SHIFT THE FOCUS FROM DIGITAL SKILLS TO DIGITAL WELLBEING

We discussed above how digital helpers and library staff reported dealing not just with digital issues but with a person's whole context. In other words, digital inclusion is not simply about technical competence; it is also about social inclusion. Digital needs are almost always embedded in social circumstances and needs.

This leads to two related recommendations with policy implications at local and national levels. First, digital helpers (or volunteer digital champions) need at least basic training in social care issues (such as talking to people with mental health difficulties, dementia, or other problems such as homelessness) that might come up during a digital help session. People are regularly referred to the library from Job Centres, GP surgeries, and the county courts for access to and advice on digital services. They bring a range of personal issues with them, of which a digital issue might be only one, especially now that many essential services are being digitised.

> **"You know, we're doing our best. But digital helpers on their own can't just solve this problem. We've got to be connected more to other departments like – there's a lot of people coming in for digital help, so-called. It's not. It's – they've got dementia or they want someone to talk to, or you know, you do your best. But that's not digital help."**
>
> – Jeremy, Digital Helper Volunteer

Second, digital inclusion needs to take into account the long-term well-being of digital users, especially new ones (novices) and those with limited digital literacy. Due to the complexity of the digital world, novice users are vulnerable. There are many ways in which novice users could be exploited online, develop addictive relationships to technology, expose their personal data to possible theft, and so on.

Digital inclusion must look beyond the digital to account for the whole person who is joining the digital world.

Thus, the role of digital helpers or champions should go beyond technical troubleshooting to facilitate more balanced living with technology, including strategies for raising important considerations and risks with users who are otherwise simply goal-oriented.

And because engaging with digitised government services is often not a choice for users (they are required to do so), the government should do everything possible to minimise the complexity of users' online experiences. This could include imposing new standards, like always striving to require the "minimum necessary digital footprint" or "smallest sequence of digital skills" for engaging with government platforms.

RECOMMENDATION #4:
INCREASE COMMUNITY OUTREACH AND AWARENESS

There is a tension here in that both library staff and volunteers commented on how they did not think that enough people were aware of the library's digital help services, but at the same time the libraries would need even greater capacity through staff, volunteers, and possibly hardware to support a higher volume of demand.

> **I think [people hear about us] by word of mouth. Because I think that when they go to certain places in the city, they say a lot of people direct people to the library. They say, I've been told to come in and you can help me.**
>
> – Sarah, Library Staff Member

However, the fact is that libraries could be more visible and active digital inclusion hubs than they already are. More could be done to reach marginalised communities, which could most benefit from the free digital services offered at libraries, rather than relying on people walking into libraries for other reasons in the first place.

Partnerships with local schools, community centres, GP surgeries, and local charities could help raise awareness of the libraries' offering and also open up further opportunities for knowledge exchange, as these partner organisations can share their insights on digital hurdles and successful inclusion strategies as well. Such partnerships usually require dedicated coordination and regular meetings and planning. This cross-sector collaboration would integrate digital inclusion interventions into all service sectors as an issue of social equality, rather than treating digital inclusion as an isolated issue.

DIGITAL ASSISTANCE AND COVID-19

Covid-19 has forced many more government and private services to go online-only or online-first. For people with low digital skills, this has made their lives more difficult. Providing hardware has helped, but it hasn't equipped recipients with the ability to use the hardware effectively. Nor has it prepared them for a lifetime of engagement with the digital world. In a further cruel twist of fate, COVID-19 also made impossible the one-to-one assistance offered by digital helpers. It is more important than ever to evaluate the role public spaces and digital helpers play in bridging the digital divide and more difficult than ever to continue providing stop-gap assistance.

The pandemic has also revealed many areas of weakness in the provision of public services and government aid, including those of public libraries. Library staff and digital help volunteers were not classed as essential or key workers, leaving no room to offer any in-person assistance or programming related to digital access and skills. With libraries closed, many people would have been left suddenly without access to any digital services. The Oxfordshire County Libraries aspired to provide some kind of digital assistance during the pandemic but faced numerous logistical challenges, stemming from lack of clear government guidance and contingency planning. As libraries reopen after lockdown, it will be crucial to consider how to provide digital help in a socially distanced and COVID compliant manner.

If there were ever a time to return to the ambitions of *Libraries Deliver* and dedicate more national and local resources to the public institutions that have found themselves unavoidably on the front lines of the digital divide, it is now.

In addition, rethinking how to provide intensive one-to-one assistance with digital access and skills will require collating best practices across sectors, with a strong recognition of the importance of human-centered, personalised learning support. Citizens Online offers a free helpline, for instance.[24] And The Good Things Foundation has spearheaded a device donation and distribution programme, DevicesDotNow.[25] Leeds and Croydon Councils have worked together, with support from the Ministry of Housing, Communities, and Local Government, to launch a crowd-sourced Digital Inclusion Toolkit,[26] which is open to submissions from across the country.

Libraries are important public community spaces that can enhance and strengthen the emergency digital inclusion initiatives that were spurred by the pandemic. Our data indicate that libraries continue to be trusted and safe spaces, and they can become the digital inclusion hubs of the future, bringing together social support and technological access under one roof.

IDENTIFYING NEED

Device donation and redistribution projects have been critical during the pandemic, and these initiatives have relied successfully on local organisations, from schools to housing associations, to identify need and deliver devices. However, some people in need of devices have fallen through the cracks because they are not known by these local partners. Libraries can help to identify more individuals in need of devices, to collect donated devices, and to redistribute refurbished hardware on a much larger scale. They would need more staff and volunteer support to do this.

PROVIDING LEARNING OPPORTUNITIES

Recipients of donated devices need the support of a digital helper in order to make the most use of the hardware. As we have indicated above in this report, most limited or non-users coming into libraries are goal-oriented users, meaning that the most impactful learning opportunities for them will involve solving real-life problems on a case-by-case basis, such as applying for a bus pass or setting up an online banking account. Libraries are often a convenient and safe place for people to obtain personalised assistance with using devices, and device distribution programmes could partner with libraries to provide this in-person learning in local areas.

MIXED ON- AND OFFLINE ONE-TO-ONE ASSISTANCE

The COVID-19 pandemic has highlighted the need to plan for both distance and in-person digital help. In preparing for the future, libraries offering digital assistance should consider how to offer virtual help sessions over the internet and by telephone, while protecting the safety of both volunteers and digital help seekers. One hybrid approach might involve designating a digital assistance area in the library computer terminal space, where customers can sit at least two meters apart on computer terminals and engage with a digital helper live onscreen via a video conferencing or remote desktop application.

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[24] https://www.citizensonline.org.uk
[25] https://www.goodthingsfoundation.org/devicesdotnow
[26] https://digitalinclusionkit.org

CONCLUSION

The public constantly call upon libraries to provide digital assistance and access, especially as more services have gone "digital-by-default." That demand will only increase after the COVID-19 pandemic. For years, the government has referred to libraries as key digital inclusion providers, but this recognition has not accompanied more funding or resources for libraries.

A 2020 report on lessons learned from COVID-19, published by the All-Party Parliamentary Group on Digital Skills, highlights the fact that although digital divide policy tends to still focus primarily on extending access, we cannot consider access in the absence of skills. Furthermore, the report argues it will be vital to support local community groups providing digital skills and inclusion opportunities and to create "lifelong learning hubs."[27] Although the report surprisingly does not mention them, libraries offer ready-made community spaces for these kinds of essential services. As longstanding hubs for literacy, they are logical places to promote digital literacy and to signpost customers to other social services.

What many policy papers on the digital divide and digital inclusion fail to adequately acknowledge, however, is the central role of social, interpersonal support in getting and staying online. Our findings from the Oxfordshire Digital Inclusion Project indicate that digital inclusion is only about the "digital" insofar as that is where everyday life takes place, so it has become an essential domain of engagement. Inclusion is about the entire social context in which people lacking digital access and skills live, work, and play. Therefore, funding and resources for digital inclusion are best invested in people and the institutions that strive to provide digital skills assistance for all: public libraries.

A BANNER ADVERTISING DIGITAL HELPERS AT THE ENTRANCE TO THE OXFORDSHIRE COUNTY LIBRARY, OCTOBER 2019.

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27 https://connectpa.co.uk/wp-content/uploads/2020/07/Digital-Skills-APPG-report-2020.pdf

METHODOLOGY

We collected data for this report between January 27, 2020 and June 5, 2020. In March we stopped in-person observations and interviews due to government restrictions for mitigating the COVID-19 pandemic, and we conducted several interviews online. Our findings and observations are therefore based primarily on the digital helper programme before the onset of the coronavirus crisis. Much will change as a result of the pandemic, and public institutions offering digital assistance are having to re-evaluate their in-person provision of services. We collected data in four components.

- Surveys:
  - 1273 valid surveys collected between January 27, 2020, and April 9, 2020
  - Available in paper format and on library computers across all 44 library branches
  - 1174 (92%) of surveys were completed on computers and 99 (8%) on paper

- Semi-structured interviews:
  - 19 interviews with library staff and volunteers, ranging from 26 minutes to 1 hr and 15 minutes long
  - Interviews were hand-coded for themes, based on repetitions of words and concepts

- Digital help log:
  - We invited staff and volunteers to record any digital assistance they provided to library customers throughout the day
  - We also consolidated digital helper records held by the library on how many volunteers, volunteer hours, and digital help bookings were made between Jan 2019 and Feb 2020

- Participant observation of digital help sessions:
  - Dr Kira Allmann had served as a digital helper volunteer for over a year when the project started and continued to provide digital assistance throughout the data collection period
  - Ms Annique Wong trained as a digital helper during the data collection period

PEOPLE

DR KIRA ALLMANN

Dr Kira Allmann is a Postdoctoral Research Fellow in Media Law & Policy in the Centre for Socio-Legal Studies at the University of Oxford. Her research explores how people on the margins of internet access and skills claim their basic rights in an increasingly digitised world. She focuses on bottom-up, grassroots solutions to the digital divide – from community-owned internet networks to local public internet access points. Kira completed her DPhil in Oriental Studies (Islamic World) at the University of Oxford on a Rhodes Scholarship. She holds an MPhil in Modern Middle Eastern Studies (University of Oxford) and a B.A. in Government and Linguistics (The College of William and Mary). Follow her on Twitter @KiraAllmann, and she can be reached by e-mail at kira.allmann@csls. ox.ac.uk. More information at kiraallmann.com.

DR GRANT BLANK

Dr Grant Blank (Ph.D. University of Chicago) is the Survey Research Fellow at the Oxford Internet Institute and Senior Research Fellow of Harris Manchester College, both part of the University of Oxford, United Kingdom. He is a sociologist specialising in the social and cultural impact of the Internet, the digital divide, statistical and qualitative methods, and cultural sociology. He is currently working on analyses of British Internet use based on the 2019 wave of the Oxford Internet Survey (OxIS), see https://oxis.oii.ox.ac.uk/. Author or co-author of about 50 papers and six books, in 2015 he was awarded the Lifetime Achievement Award from the Communication, Information Technology and Media Sociology section of the American Sociological Association. He can be reached at grant.blank@gmail. com; see https://www.linkedin.com/in/grantblank/.

MS ANNIQUE WONG

Ms Annique Wong is a strategy consultant who works at the intersection of education, artificial intelligence, and public policy. Her research focuses on creating accessible and equitable learning products to promote critically informed, environmentally conscious technology use. Annique received her MSc in the Social Science of the Internet at the University of Oxford and holds a BA in Anthropology, Statistics, and Data Science from Yale University. She can be reached at wong.annique@gmail.com.
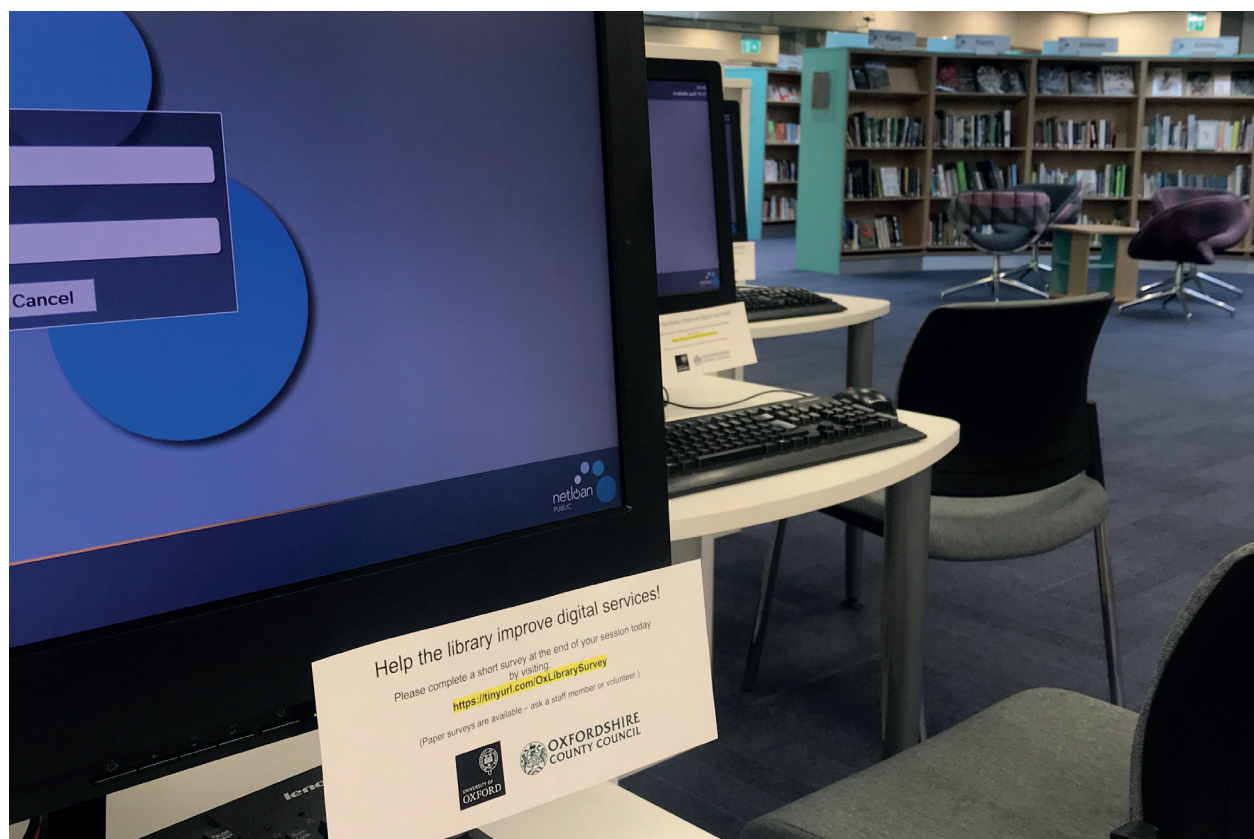
A PAPER NOTICE POSTED ON LIBRARY DESKTOP COMPUTERS ENCOURAGING USERS TO PARTICIPATE IN THE COMPUTER USER SURVEY DURING THE DATA COLLECTION PERIOD, JANUARY 2020.

APPENDICES

APPENDIX A: A note on survey methodology

Several considerations are important to put the survey results into context. First, surveys were primarily completed online, meaning that computer users were already using a computer when they began completing the survey. As a result, we might assume that computer users who took the survey on a computer have generally higher levels of familiarity/skill with computers than infrequent or non-users (who would be in the most need of one-to-one digital help – the category of users who often take advantage of the digital helper programme discussed in the next section).

In addition, survey respondents needed to opt-in to take the survey, so there is the possibility for some selection bias: people taking the online survey needed to be able to navigate a simple online survey platform (which appeared automatically when the browser window opened on library computers), and they needed to have an interest in participating. Paper surveys were available next to the computers, but they were far less popular, and a researcher could not be available every day, all day to encourage people to complete paper surveys. Moreover, people could take the survey multiple times, at different computer sessions. However, we attempted to take advantage of this possibility by asking in the survey about what users were doing on the computers that day. So, multiple submissions by the same user would still yield useful insights on how computers are being used.

In light of these considerations, it is important to understand that these survey results reflect what computer users (and not library customers in general) are like and what they do on computers in the library, according to their self-reports. These results yield very useful insights into how computers in the library are used and who uses them.

A BOX FOR COLLECTING PAPER SURVEYS FROM COMPUTER USERS, SITTING ON ONE OF THE LIBRARY FRONT DESKS, JANUARY 2020.

APPENDIX B: Comparison of library computer users to the British population (OxIS 2019)[28]

	LIBRARY	OXIS
	N=1273	N=1818
GENDER		
Male	50.1%	49.4%
Female	48.5	50.6
Non-binary	1.4	n.a.
INCOME		
<=12,500	31.2	17.4
>12.5-20,000	27.2	23.5
>20-30,000	16.0	26.2
>30-40,000	11.4	16.1
>40-50,000	4.0	5.6
>50-60,000	3.7	3.1
>60-70,000	1.3	1.7
>70-80,000	1.2	1.2
>80,000	4.1	5.2
LIFESTAGE		
Students	6.2	4.5
Employed	46.4	56.0
Retired	30.4	27.3
Unemployed	17.0	12.2
MOBILE PHONE		
No	11.9	7.6
Yes	88.1	92.4
SMART PHONE		
No	31.3	20.8
Yes	68.7	79.2
SKILL		
Excellent	28.2	18.9
Good	33.9	52.0
Average	29.2	26.5
Poor	6.7	2.4
Complete beginner	2.0	0.2
AGE IN YEARS (STANDARD DEV.)	55.1 (16.2)	49.2 (19.4)

[28] Blank, Grant and Dutton, William H. and Lefkowitz, Julia, Perceived Threats to Privacy Online: The Internet in Britain, the Oxford Internet Survey, 2019 (September 6, 2019). Available at SSRN: https://ssrn.com/abstract=3522106 or http://dx.doi.org/10.2139/ssrn.3522106

APPENDIX C: Comparison of library users who ask for help

	LIBRARY NO HELP	LIBRARY HELP	OXIS
	N=1070	N=204	N=1818
GENDER			
Male	49.8%	51.7	49.4
Female	48.6	47.8	50.6
Non-binary	1.6	0.6	n.a.
INCOME			
<=12,500	30.4	35.5	17.4
>12.5-20,000	27.8	24.3	23.5
>20-30,000	14.8	22.4	26.2
>30-40,000	12.5	5.6	16.1
>40-50,000	4.2	2.8	5.6
>50-60,000	3.6	3.7	3.1
>60-70,000	1.2	1.9	1.7
>70-80,000	1.2	0.9	1.2
>80,000	4.3	2.8	5.2
LIFESTAGE			
Students	6.4	5.2	4.5
Employed	46.1	48.0	56.0
Retired	30.4	30.1	27.3
Unemployed	17.0	16.8	12.2
MOBILE PHONE			
No	11.6	13.3	7.6
Yes	88.4	86.7	92.4
SMART PHONE			
No	33.6	20.0	20.8
Yes	66.4	80.0	79.2
SKILL			
Excellent	29.0	24.2	18.9
Good	34.3	32.1	52.0
Average	29.5	27.9	26.5
Poor	5.8	10.5	2.4
Complete beginner	1.3	5.3	0.2
AGE IN YEARS, MEAN (STD. DEV.)	54.9 (16.5)	55.7 (15.0)	49.2 (19.4)

LIBRARIES ON THE FRONT LINES OF THE DIGITAL DIVIDE:
THE OXFORDSHIRE DIGITAL INCLUSION PROJECT REPORT

Dr Kira Allmann • Dr Grant Blank • Ms Annique Wong

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