'Making the building blocks small' - the participative and capital-enhancing development of digital literacies in older adults

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Abstract

Introduction. Older adults are disproportionately affected by deficits in digital literacy development and by present learning environments which are either difficult to access or not conducive to their specific needs. Participatory research frameworks offer compelling approaches to these convergent issues, and opportunities to build capital-enhancing networks around such skills development could place socially situated learning at the heart of effective provision here.

Method and analysis. Data was collected via structured surveys and in-person workshop sessions from a cohort of self-defined older adults (N=7) active within the Scottish public library network. The data was examined by quantitative methods and thematic analysis using the NVIVO software.

Results. Older adults themselves respond positively to working within a participative ethos, which here allows them to identify, assess and understand their own digital literacy needs and to directly challenge the causes of them. A re-evaluation of both the learning environment and of its consequences on fear and confidence around digital literacies is emergent.

Conclusions. Older adults place high value on the creation of peer-led-and-supported social spaces in which to develop digital literacy skillsets. Utilising participative approaches can positively impact this development and shape future research agendas, whilst also unlocking the ongoing and sustainable social capital benefits to be gained from engagement in this way.

Introduction

Public policy measures centred around the sustainable development of digital literacies continue to occupy much societal discourse, particularly for demographic groups such as older adults who are often most impacted by the negative real-world consequences deficits here can bring (Allman and Wong, 2021; Richardson, 2018). *Digital literacy* has been defined as '*the set of skills, knowledge and attitudes required to access digital information effectively and ethically*' (Julien, 2017, p. 2243), a foundational outline further widened to include '*knowing how to evaluate digital information and how to use it in decision-making*' (Julien, 2017, p. 2243). Extant research on the development of digital literacies in older adults is abundant in the present landscape, yet projects approaching this subject from participatory perspectives remain conspicuously small herein. Recent academic swings towards a *participatory turn* in related contexts (LaMonica et al., 2021) do not address this specific issue in any direct way, despite a range of studies outlining the criticality of fostering technological capabilities to aid even normative functions within contemporary life for those in their third age (Richardson, 2018; OFCOM, 2022). Older adults are disproportionately affected by deficits here in intersectional ways, in both digital skills development (Seifert et al., 2021) and in a present research environment which often does not consider their compound needs or in creating favourable conditions to develop these (Formosa, 2010; Gates and Wilson-Menzfeld, 2022). Alongside this is recognition that the context-specific social nature of learning in participatory situations may offer optimal forms of engagement (Tavares et al., 2011) leading to a convergence of research opportunities which this paper seeks to address. These imperatives are urgent, with much political emphasis currently exerted in setting agendas to redress age-related digital imbalances (European Commission, 2023; UK GOV, 2025), and so it could be time to bring user-centred ways to achieve these goals into focus.

Recent research has demonstrated the value of developing social capital outputs to circumnavigate deficits in digital literacy competencies within under-represented communities (Smit et al., 2024), but there are few comparable studies which approach this issue from generative skills standpoints. This is also a significant deficit, as work elsewhere indicates that nurturing effective socio-relational resources is a contributory factor in developing effective information literacy skillsets, fostering positive later-life well-being and enhancing use of wider social technologies (Lund and Wang, 2022; Wilson et al., 2023). Opportunities exist to explore capital benefits derived from tackling digital literacy deficits in socially situated ways, with participatory frameworks offering avenues to unlock these *hidden* influences and outcomes. Putnam's (2020) conceptual description of social capital theory is illustrative here in that this refers to:

> *features of social organizations, such as networks, norms and trust that facilitate action and cooperation for mutual benefit.* (Putnam, 2020, p. 35)

The data outlined here summatively addresses these emergent issues. It was collected as part of a pilot programme of participatory engagement with a small cohort of self-defined older adults active within the Scottish public library system, in preparation for a larger schedule of longitudinal work building upon these initial findings. Situated within these contexts the paper therefore addresses the following research question:

RQ: *How do older adults assess their own digital literacy needs and what factors influence these?*

Research design

The complex non-uniform process of ageing and an academic environment in which '*the involvement of older adults as partners in the research process is still relatively rare*' (Blair and Minkler, 2009, p. 651) sit alongside a burgeoning older adult population (World Health Organization, 2023) which in large part self-assesses itself to lack the ability to understand and evaluate digital media content to a degree comparable with younger adults (OFCOM, 2022). Studies

have shown that tailored forms of engagement have been proven to work well with this cohort (Elgamal et al., 2024) and that participative research specifically can have *'unique advantages for older people'* (Richardson, 2018, p. 47). Such approaches have already proven to be particularly beneficial within public library environments, where of course holistically '*the promotion of literacy is a raison d'etre*' (McShane, 2011, p. 383). These latent notions come against a backdrop of UK research organisations having strategic commitments to public engagement in its fullest forms (UK Research Integrity Office, 2019), meaning that opportunities for research and educational engagement with this demographic could prove to be optimal particularly when their own specific needs are being addressed.

This paper employs a participatory action research (PAR) methodology to engage with a group of self-defined older adults and to empower them to assess their own needs in terms of developing effective digital literacies. PAR is defined as a process of:

> *systematic enquiry, with the participation of those affected by the problem being studied, for the purposes of education and action or affecting social change.* (Green et al., 1995, p. 2)

PAR approaches foster, develop and proliferate formative agency in research participants and centrally involve them at all stages of this process, from conception and development through to outcome implementation and impact assessment.

To participate in this project, participants must be a) self-defined as *older adults* and b) regular users of library services within Scotland. This self-definition of age is important as it can be a critical inflection point in the '*socio-ecological, lifestyle and lifecourse aspects of digital learning and participation*' (McCosker et al., 2021, p. 17).

Demographic Information	N	%
Age (years): 65 – 70 71 - upwards	 2 5	 30 70
Gender: Female Male	 5 2	 70 30
Self-description of age: Of working age Recently retired Comfortably retired Longer-term retired	 1 0 3 3	 14 0 43 43

Table 1: Participant demographics.

Participants were recruited through existing networks within the Scottish public library sector. Each participant completed an initial survey designed to provide self-assessed foundational data on existing digital skillsets. This survey was based around the UK Government's National Standards for Essential Digital Skills (2019) framework. Two in-person group workshop sessions were scheduled centring on the central research question at hand.

A follow-up final survey was collectively compiled and completed based on the qualitative issues arising from the workshop sessions. All cumulative qualitative data was transcribed, anonymised and thematically analysed in line with the assertions of Clarke and Braun (2017) using the NVIVO 20 software.

Results and analysis

The initial self-assessment survey outlined that all participants (N=7) generally considered '*my skills are currently adequate to do the things I need to do*', with a majority professing confidence specifically in skills such as accessing the Internet (N=4), using email (N=5) and keeping in touch with friends and family (N=4). More nuanced hesitancy in skills such as using social media (N=4) and taking and sharing digital photographs (N=4) was also outlined alongside significant feelings of '*no confidence at all*' in skills such as accessing health information (N=5) and financial services (N=5). A variety of ongoing developmental needs were identified, summed up by participant P106 thus:

> *I would like to become more familiar with a fuller range of potential actions in the digital world and to understanding the possibilities that go along with these.*

The conceptual foundations of these skills needs were explored in more detail during the in-person sessions. Qualitative data generated here outlined four main themes of interest with two further sub-themes:

Themes	Sub-themes
Effective support for skills development	The learning environment
Issues of fear & confidence	The ageing process
Understanding terminologies	
The motivation to learn	

Table 2: Themes and subthemes.

From the number of codes resultant in these themes the most significant areas of interest lay in having effective support for skills development and its associated learning environment (N=61) and issues of fear and confidence alongside the ageing process itself (N=40), and consequently these focuses will form the basis of the following discussion. These central themes and sub-themes assessed not only developmental needs but also the participants' perceived causes of these.

Effective support for skills development and the learning environment

Within the workshop sessions, much discussion and emphasis were placed on a desire both to access digital support appropriate to need and to develop skills individually in line with this. Participant P104 considered that effective support:

> *Is a bit of a comfort blanket ...which in turns gives me confidence to try new things. Support should help and explain but also be understandable.*

P105 expanded these notions further:

> *There is a huge difference in having support and in having someone do it for you. I have to stop my family for example saying 'alright – do this and this' by saying 'slow down – show me how to do it myself'.*

A desire for this kind of practical, hands-on learning was also expressed quantitively in the initial survey with a majority of participants stating: '*I would like to develop my skills and learn new things*' (N=6) and '*having someone to help me really boosts my confidence*' (N=6).

An environmental understanding of how skills are developed in the first instance helps to centralise these critical notions of support, with P101 stating:

> *If I go back to my schooldays we were supported to learn maths and English. As an adult I never received any schooling in IT – I was basically shown how to do things at work and left to it.*

The inadequacy of earlier formal learning experiences was also highlighted by P102:

> *I was never exposed to digital skills – they were essentially a work-related thing that someone else devised and we were simply expected to learn and follow.*

P107 however offered an alternative view, considering:

> *I have always thought it is important to learn socially – to create the right environment in which to learn with a range of abilities but where everyone is more or less on the same level.*

Issues of fear and confidence and the ageing process

This deficit of organised and specialised digital learning opportunities also fed directly into notions of fear and a lack of confidence when faced with an increasingly digital world. P107 here stated:

> *Fear and a lack of confidence is my biggest challenge with all of this – quite often I feel like a rabbit in the headlights.*

P103 expanded on this theme by explaining:

> *For me a lack of formal training means a lack of basic understanding – what training I did have was very specific to work, and so I have a fear of trying things outwith this.*

P101 suggested that the ageing process itself plays a key part in these feelings of fear and of lacking in confidence, outlining:

> *I also think our brains obviously decline as we get older – I can be told something and not actually retain it and therefore my confidence dips. If I did things myself with help I probably could though.*

A route to tackling these latent issues was forwarded by P105, positing:

> *I think that trying to build confidence has a social aspect to it? Having a social group that did active sessions would be good because creating a sense of achievement builds confidence.*

Discussion

The participatory methodology employed here is critical to the findings outlined above. Through this the participant group themselves established the key deficits and causes in their own digital literacy needs as they directly assessed them, the first steps towards what Grigorovich et al. term '*structural transformation and empowerment for older adults*' (Grigorovich et al., 2022, p. 328). Having a lack of suitable – and relatable – support is a principal challenge here; while all participants initially professed feelings of adequacy with their current skillsets these quickly changed when tasks outwith their *normal* digital routines were assessed. Support in developing more unfamiliar skills therefore is of paramount importance to an older cohort, but this support must be clear, demonstrable and supplemented by practical learning opportunities wherever possible. Such an environment acts in contrast to the piecemeal, often workplace-based digital training the participants largely encountered in the past, which in line with Formosa's (2010, p. 201) suggestion could be seen to be one which '*prioritised the adjustment of older adults to the shifting social order*', rather than one which favoured moulding the conditions of learning to the needs of

the learners themselves. Providing opportunities to develop and access this support is therefore key – P105 stated this clearly in the follow-up survey:

> *I appreciate I now need to motivate myself to find & ask for help when I need this.*

Equally issues of fear and confidence when assessing digital skills development are brought to the fore using this participatory methodological approach. Here participants posited that such issues were prohibitive to successful learning, outlining that a fear of making irretrievable errors for example was tied to a lack of specific and targeted training opportunities in line with their own peculiar needs. Most formal training they had previously experienced was task-specific and non-contemporaneous – the majority (N=6) of participants considered themselves '*comfortably*' or '*longer-term*' retirees – and as such felt real reticence and a lack of overall confidence when approaching their present digital needs. Ideas around age exacerbated these notions, echoing the theories of Mannheim et al. (2023) and Gates et al. (2022) that perceptions of ageing can have an influential impact on the development of digital literacies within this particular cohort.

The participants considered these issues could be challenged by the creation and employment of socialised networks of learners like themselves – with comparable skills and levels of knowledge – to assist each other and to create functional learning environments where each can prosper and all can address the issues they collectively face. They suggested socialised environments could address issues of concern by not only providing applicable support and learning activities conducive to need, but also by building confidence through holistic peer supported-and-led interactions where achievement is relatable and obtainable. Here social capital outcomes become key, recognising not only that socialisation components and active learning opportunities play a crucial role with such digital skills development (Elgamal et al., 2024) but also that this social capital can be viewed as a general overall *good* and a collective trait available to all within the network to utilise (Putnam, 2020).

Conclusion

This study details that older adults themselves have very clear and objective ideas about their specific developmental needs in terms of the skills attributes required to navigate an increasingly digital-by-default society, ideas which find some resonance in existing academic discourse but which in turn also deepen and enhance it. For a demographic cohort who often find themselves at the sharp end of what Selwyn and Facer called '*the inequalities and injustices associated with the use of technology today*' (2014, p. 489), the employment of participative methodologies here not only encourages challenging these hegemonies but actively empowers its participants to do so. A critical self-evaluation of skills foregrounds the need for different approaches to developing these, placing socialisation and capital network-building at the centre of desirable digital skills provision for an older adult cohort. In doing so, this work also calibrates positionality for further research along similarly participatory lines.

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