Digital Skills for Older Adults

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The Diversity Institute conducts and coordinates multi-disciplinary, multi-stakeholder research to address the needs of diverse Canadians, the changing nature of skills and competencies, and the policies, processes and tools that advance economic inclusion and success. Our action-oriented, evidence-based approach is advancing knowledge of the complex barriers faced by equity-deserving groups, leading practices to effect change, and producing concrete results. The Diversity Institute is a research lead for the Future Skills Centre.

The Future Skills Centre (FSC) is a forward-thinking centre for research and collaboration dedicated to driving innovation in skills development so that everyone in Canada can be prepared for the future of work. We partner with policy makers, researchers, practitioners, employers and labour, and post-secondary institutions to solve pressing labour market challenges and ensure that everyone can benefit from relevant lifelong learning opportunities. We are founded by a consortium whose members are Toronto Metropolitan University, Blueprint, and the Conference Board of Canada, and are funded by the Government of Canada's Future Skills program.

Founded in 2016, the National Institute on Ageing (NIA) is celebrating a decade of impact in our mission to improve the lives of older adults and the systems that support them. Over the past 10 years, the NIA has become Canada's leading voice on ageing policy — convening stakeholders, conducting research, advancing policy solutions and practice innovations, sharing information and shifting attitudes. Our vision remains clear: a Canada where older adults feel valued, included, supported and better prepared to age with confidence.

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Executive Summary

Digital transformation has improved access to services, employment and social connections for some Canadians, but created barriers for others. Canada's "digital divide" stems from gaps in access to infrastructure and tools, lack of affordability, and uneven knowledge and skills.

Although digital adoption is accelerating, generational differences persist, and the gaps are especially wide for older adults, the fastest-growing segment of Canada's population. Efforts to address their needs are fragmented, siloed and simply not enough. For example, training investments have largely focused on pathways to employment and on reskilling or upskilling for the working age population, particularly youth. However, many older adults in Canada are postponing retirement or re-entering the labour force, by choice or necessity, yet their needs and preferences are often overlooked in program design, development and delivery.

Older adults are one of Canada's fastest-growing populations, yet their needs are still overlooked in program design.

Effective digital skills training targeting older adults must meet their wide-ranging needs, and evidence-based practices should form the foundation of inclusive training design, delivery and learning environments. The program design must take into account that older adults face barriers spanning health, perception, affordability, geography, infrastructure, social factors, knowledge gaps, emerging technologies literacy and such as artificial intelligence (AI) and intersecting challenges posed by gender and status in Canada. Also, programs should be guided by clear objectives and address a range of skill levels, from workforce retraining and digital literacy and uptake to improving connectivity for older adults experiencing social isolation and loneliness. Instructional design, a key learner-centred approach for training, can be used to meet the specific needs of older adults.

With a personalized, flexible and continuously adaptable approach grounded in patience, empathy and understanding of aging processes, training can effectively translate course content into real skills that older adults can apply and benefit from.

Recommendations for training design

This analysis of existing digital skills training programs reveals a shared set of core design principles, along with distinctive innovations in how programs combine literacy and mentorship, device access and connectivity, and broader social and economic inclusion goals. The findings are organized into a framework of seven core dimensions: i) objectives, ii) training model and relationship building, iii) access and connectivity, iv) digital literacy and skills curriculum content, v) inclusion and equity, vi) partnerships and reach and vii) outcomes and scalability.

Objectives

Training objectives must be clearly outlined with measurable outcomes linked to real-world applications. They should target specific subgroups within the older adult population, combining social connection and belonging with technical goals. Focusing on the specific needs of each group helps ensure relevance, engagement and stronger outcomes. Objectives typically describe how skills support independent living, access to services and participation in social or economic activities.

Training model and relationship building

Training models that build on existing trust networks or foster new relationships often improve learning outcomes for older adults. An individualized needs assessment during onboarding strengthens trust between learners and staff, while allowing content, pace and delivery to be adapted to each person's goals. Effective models offer one-on-one or small-group mentoring through peer-to-peer, intergenerational, or dedicated "navigator" roles. These approaches help address attitudinal barriers and give older adults approachable ways to get help directly.

Access and connectivity

Access supports must remove structural barriers by providing older adults with appropriate devices set up for ease of use, along with affordable, reliable Internet connectivity. Support should go beyond initial setup to include troubleshooting, help navigating service options, and practical aids such as transportation, accessible locations and flexible scheduling. Reducing these barriers encourages participation and continued learning, making it more likely that older adults will use digital skills in daily life. Practising new skills outside the training setting is essential for reinforcing what has been learned.

Curriculum content

Curriculum design should centre on real-world digital literacy skills and tasks that matter to older adults, such as accessing online services, telehealth, communication, and social or recreational activities and support "ageing in the right place, a term coined by the National Institute on Ageing that recognizes that the process of enabling healthy aging relies on a personalized setting that matches an older adults lifestyle, circumstances, personal preferences, care needs and empowers them to continue living in their homes and communities. Safety, privacy and fraud prevention should be woven throughout, with repeated practice in realistic scenarios and accessible, plain-language materials. A relevant, safety-focused curriculum builds confidence, increases perceived usefulness and supports safe, independent technology use.

Inclusion and equity

Inclusive training recognizes the diversity of older adults and applies an intersectional and equity lens to address specific barriers, promote cultural sensitivity and respect lived experiences. Creating welcoming, non-judgemental spaces and training staff in anti-ageism and anti-oppression helps address stigma, discrimination and unique barriers. Equity-focused design builds trust and improves participation among equity-deserving groups to ensure benefits reach those who face the greatest barriers.

Partnerships and reach

Successful programs are rooted in trusted community networks familiar to older adults, with strong partnerships across health, housing, social services, community organizations and employers. Coordinated outreach and referral pathways are key to reaching isolated or high-risk older adults, including those in remote and rural areas. These networks expand a program's reach, build credibility and connect digital training with a close understanding of local communities. Collaboration among partners improves training design and knowledge sharing, creating a stronger, more coordinated effort.

Outcomes and scalability

Outcome frameworks must define clear indicators that measure skills acquisition, confidence and real-world results based on the benefits older adults experience when they apply their new or improved digital skills. Ongoing data collection and feedback from learners should drive continuous improvement, while standardized curricula, toolkits and resources support replication. A strong monitoring and scalability strategy sustains program quality over time and helps successful models expand to new communities and regions.

Policy recommendations

Effective digital literacy programs require coordinated action from multiple stakeholders, including those who design, fund, deliver and update training. Partnering with communities is key to ensuring that facilities, resources and people work together to improve outreach, access, recruitment and outcomes. Without a coordinated, well-funded, equity-driven approach, the rapid spread of digital technologies and challenges posed by emerging forms such as AI will continue to deepen inequities, put healthy aging and aging in the right place at risk, reduce labour force participation and weaken the social well-being of older Canadians.

The following recommendations draw on the analysis included in this report. They offer evidence-based guidance and a call to action for policy makers, employers and community organizations to strengthen digital inclusion for older adults.

Strategic direction and funding

Canada needs a nationally led digital inclusion strategy for older adults. Building on examples such as the federally established Digital Literacy Exchange Program (DLEP), this strategy would provide funding for programs that recognize that digital literacy, access and skills shape healthy aging, economic resilience and social inclusion. It would signal to industry representatives, health organizations, service providers and other partners that including older adults in Canada's digital society is essential to the country's economic and social well-being. Government funding criteria should require training providers to offer flexible delivery (in-person, hybrid, and online) along with accessible materials and formats such as multilingual support and assistive technology. All funded initiatives should apply an intersectional lens so that program designers and facilitators understand the diverse barriers faced by older adults in equity-deserving groups and create gender-safe, culturally sensitive, and respectful learning environments.

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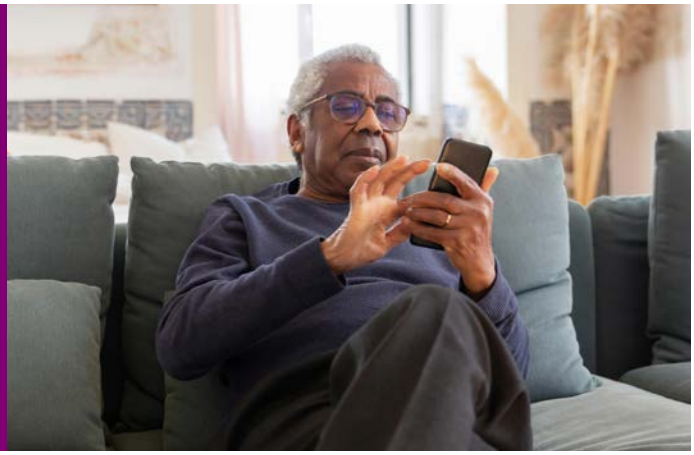


A national strategy and framework should address the following:

Establish a nationally-led digital inclusion strategy for older adults with long-term, consistent core-funding.

Support and scale adult and community-based digital literacy and skills training with dedicated streams for older adults and those belonging to equity-deserving groups.

Accelerate infrastructure development and expand affordable access, ensuring that subsidized services reach marginalized older adults at the peripheries.

Align digital skills training with workforce, health, and aging policies and integrate it as a prerequisite for equitable social and economic inclusion.

Directions for future research and knowledge mobilization

As technology advances and digitalization evolves, the digital divide facing older adults continues to grow. In-depth, longitudinal and intersectional research is essential to track progress on digital inclusion and identify future gaps before they widen. Recognizing the diverse needs of Canada's older adult population means examining age-related barriers faced by equity-deserving groups who remain under-represented in current training approaches and research. A national learning network or knowledge hub connecting organizations, stakeholders, government, industry and older adults themselves would help build effective training curricula, evaluation methods and best practices. Together, these actions can support evidence-based, scalable solutions for digital skills training that is inclusive, responsive and grounded in the lived experiences of older adults.

Introduction

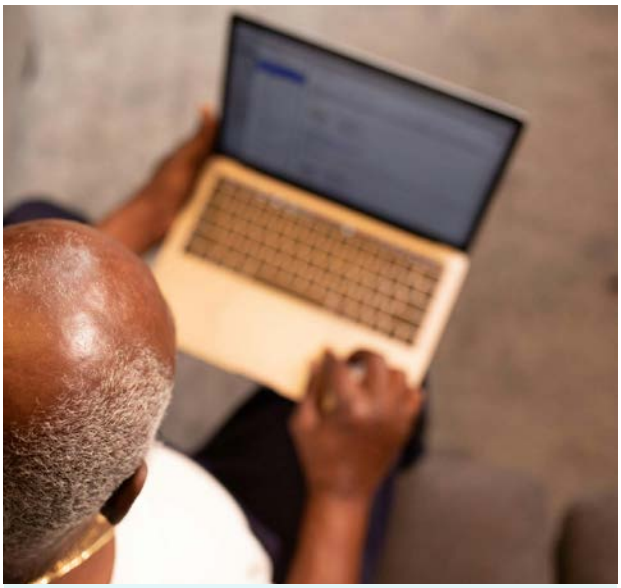
Canada's population is aging steadily, creating new challenges and opportunities across the country's social and economic landscape. A growing share of Canadians are older adults who continue to work, volunteer and care for family members well past traditional retirement age. However, while older adults are the fastest-growing demographic group in the world,[1, 2] they remain among the most excluded from digital society,[3, 4, 5] and face the increasing risk of being cut off from essential services and social events that are gradually moving to digital platforms. For those with lower incomes or from equity-deserving groups, limited access to technology and digital skills training can deepen existing social and economic inequalities.

Digital literacy is now an essential and evolving skill set that underpins access to services, employment, social connection, health care and daily life. Employment and Social Development Canada defines digital literacy as the "ability to use digital technology and tools to find, manage, apply, create and share information and content" and digital skills as the competencies that help individuals keep pace with "changing demands in the modern workplace and … daily life."[6] For older adults, digital literacy is linked to improved quality of life and stronger social connections. It supports independence, better access to health care, health self-management and greater knowledge about their well-being and other topics of interest.[7, 8, 9] Digital literacy also promotes intergenerational equity by helping ensure older adults are not left behind as society moves online. At the same time, addressing external and internal ageist assumptions about older adults' willingness and ability to use technology is important to ensuring they have equitable access to digital supports and opportunities to engage with learning.[10] Digital skills support economic participation as well, since older adults contribute both as consumers and as members of the labour force.[11, 12] While policy makers have generally recognized the importance of digital skills development, older adults have received limited attention in this context. Excluding this large and growing group puts older Canadians at risk and weakens the country's economy, particularly given Canada's serious shortage of skilled workers.[13]

From this frame of reference, digital literacy of older adults becomes a critical public health and workforce imperative, requiring digital

skills training to be designed and delivered to this population to address their needs. Whether returning to work, managing health conditions, accessing daily services or caring for others, older adults need digital tools more than ever. In addition, digital skills training for older Canadians is for more than just technological proficiency; it is also a matter of social participation, economic opportunity and personal empowerment. Since workforce programs and aging programs typically operate in silos that do not place enough emphasis on digital skills, an inclusive approach is needed, one tailored to different age groups, goals and needs. Older adults are a diverse group with a wide range of identities and abilities. Understanding this diversity is key to designing effective digital skills training programs.

Starting with the current state of the digital divide faced by older adults, we examine the barriers to digital adoption, explore training approaches, program and policy design, and strategies for building digital skills that support workforce readiness, lifelong learning, and health management, and offer recommendations to address the barriers based on the program and policy analyses. The academic literature on digital literacy training for older adults remains limited, while even less research focuses on older adults from equity-deserving groups. A recent scoping review of research on aging found that few studies also address race or gender.[14] By generating insights into effective training models, program components, delivery methods and opportunities for partnerships, we aim to support national and local dialogue on digital literacy for older Canadians.



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Age and the Digital Divide

Canada, like many advanced economies, is shifting essential services online. Equitable digital access has become a prerequisite for full participation in modern social and economic life, no longer a luxury but a necessity.[15, 16] Yet despite being a relatively wealthy nation with a national digital charter and connectivity strategy,[17, 18] Canada has large gaps in Internet access, digital readiness and adoption. These gaps accumulate into a digital divide that disproportionately affects older Canadians. This section examines the current landscape of older adults' access to digital technologies and the structural and individual barriers that limit adoption and use.

The digital divide is the gap between people who have the skills and access to participate fully in the digital world and those who do not.[19] The growth of information and communication technology (ICT) has created broad social and economic benefits, but these gains have not been distributed evenly. Greater reliance on technology in everyday life has compounded existing disparities, including historical inequities and systemic exclusion, widening the divide for those with limited access or ability to use digital tools.[20, 21] This section examines the growth of Canada's aging population and the current state of digital skills acquisition as it relates to age, the workforce, and emerging areas such as artificial intelligence (AI), highlighting age-based gaps in digital skills and technology adoption.

Canada has large gaps in Internet access, digital readiness and adoption. These gaps accumulate into a digital divide that disproportionately affects older Canadians.

Aging population

Canada's population is aging. About 7.6 million Canadians are aged 65 and older, accounting for nearly 20% of the total population.[22] The population aged 85 and older is among the fastest-growing age groups, having seen an increase of 12% since 2016, with women outnumbering men. By 2046, this group could triple to nearly 2.5 million people.[23]

As Canada approaches "super-aged" status, this demographic shift presents both opportunities and challenges, highlighting the need for proactive policies and systems that support older adults' continued contributions while addressing pressures on infrastructure and public services that are shaped not only by demographic change but also by the design of existing systems.Already, Canadians aged 65 and older outnumber children under 15, and by 2035, one in four Canadians is projected to be an older adult.[24]

Significantly more older adults are active in the labour market today than in previous decades. About 15% of Canadians aged 65 and older participated in the labour market in 2023, more than double the rate in 1994 (6.6%).[25] Yet even with rising participation among older workers (65+) and mature workers (55+), the increase has not been enough to offset the proportionally fewer young Canadians entering the workforce.[26] Digital skills acquisition remains a critical barrier to sustained labour force participation and full social inclusion in a technology-driven society. Equity-deserving groups, including older adults, with lower levels of digital literacy face a higher risk of being left behind by the digital transformation. At the same time, declining immigration from recent policy shifts, combined with the approaching peak of baby boomer retirements, is creating a structural reduction in Canada's labour supply.[27] Forward-thinking strategies that equip older adults with the skills to remain in or return to work are essential to bridging divides and improving economic opportunities and access to social supports.

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Older Canadians are an important and growing segment of the workforce, particularly as Canada's productivity growth stagnates. Their role has become more significant following the recent federal push to reduce immigration, which has decreased the number of non-permanent residents entering the Canadian labour market.[28] These changes to immigration levels are expected to reverse some of Canada's recent population growth and accelerate the speed at which the population ages.[29] The share of Canadians aged 55 and older in the labour force has more than doubled, from 10.9% in 2011 to 22.4% in 2021, as many choose to stay in or return to paid work.[30] Strengthening digital skills is now both an economic and a labour

market priority, essential for the financial security of older Canadians and for broader economic growth. As an increasing number of older workers postpone their retirement, whether by choice or necessity, employers and policy makers have a responsibility to recognize that these workers' expectations, abilities and training needs differ from those of younger workers more than ever before.

Digital skills acquisition

At the national level, Canada faces a significant digital skills gap. On the Global Digital Skills Index, a research-based measure of national workforce readiness to deploy and use digital technologies, Canada (n = 973) scored 10 points below the global average (23 vs. 33 in 2022).

Four out of five Canadians (81%) reported insufficient access to the tools needed to build digital skills, highlighting the prevalence of digital inequity.[31]

When the data is broken down by age, Canadian respondents from the "baby boomer generation" (representing adults born from 1957 to 1962 in the study) reported lower perceived readiness to acquire and retain digital skills than every younger age group, especially skills needed for the workplace now and in five years. Only 12% of "baby boomer" respondents said they were actively learning or training on digital skills, dropping to 8% for their five-year forecast. Both figures are lower than the global average (15% and 12%, respectively),[32] underscoring the need to understand the factors that hinder digital skills acquisition among older adults in Canada.

New research shows that older Canadians are more actively engaging with digital technology than commonly assumed, challenging perceptions that older adults are reluctant or limited technology users.[33] While existing digital gaps are significant, the baseline for digital engagement among older Canadians shifted considerably during the COVID-19 pandemic. In 2022, 83% of adults aged 65 and over used the internet, as did 72% of those aged 75 and older.[34] There is a spectrum of digital literacy skills among older adults, as it is multi-dimensional (consistent with the Government of Canada's approach that conceptualize digital skills as a continuum of proficiency from foundational to more advanced levels and reflected in frameworks such as the European Commission's DigComp model)[35,36], and varies across individuals, and while basic proficiency exists, the average remains lower than those of younger groups. Basic technology skills serve as an essential foundation for acquiring more advanced digital competencies. As technology advances and its integration into daily life grows more complex, building on the functional skills older adults already possess is critical to preventing them from falling further behind.

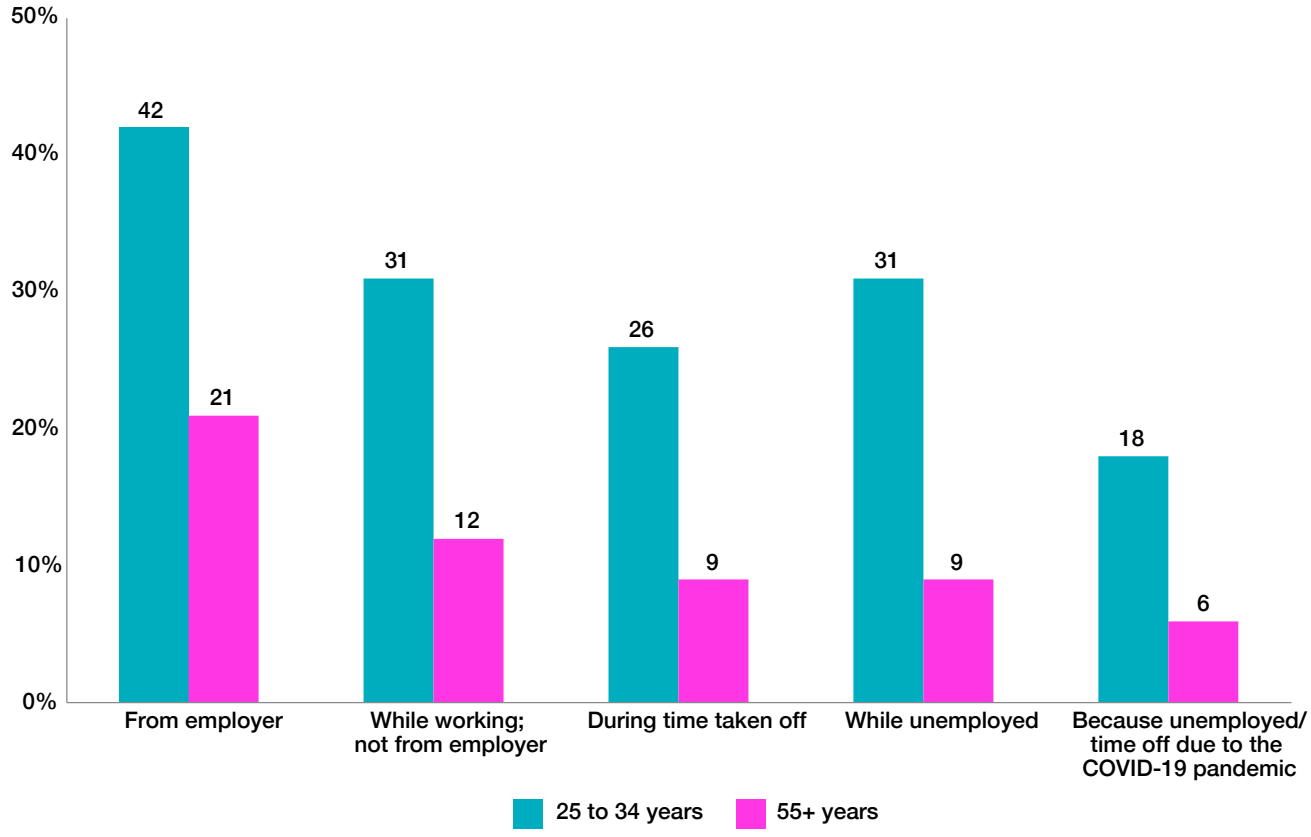
Digital skills training, age and the workforce

For older adults, digital literacy extends beyond technical proficiency to include the ability to understand and adapt to new technologies. This includes skills needed to overcome barriers linked to age-specific physical and cognitive changes, as well as socioeconomic factors that can limit access to digital technology and tools.[37, 38] The COVID-19 pandemic brought the interaction of digital technology and daily life sharply into focus, accelerating adoption while revealing and widening the digital divide. The Survey on Employment and Skills, a national survey

conducted by the Environics Institute for Survey Research in collaboration with the Diversity Institute and the Future Skills Centre in 2025, explored perceptions of job security, the impact of technological change and the value of different forms of training. It shed light on digital skills acquisition among the mature adult population (adults aged 55 to 64 and nearing retirement).

Figure 1

Respondents that reported engaging in training since the COVID-19 pandemic: millennials vs. mature adults



Many older Canadians are online, but recent advances in AI have created a new technological proficiency divide.

Mature adults engaged in training at substantially lower rates than younger adults, regardless of the type of training (Figure 1). Among mature adults who engaged in training, 17% took courses related to digital skills, such as information technology, computer skills, technical skills or graphic design. These findings are consistent with other survey findings and broader workforce data highlighting the growing demand for digital skills.[39] The perception is often that digital skills refer to deep technical abilities such as coding, yet there remains high demand for basic skills like the ability to use office productivity software. Although older adults in Canada are defined as those aged 65 and older, the survey data includes mature adult respondents from the age of 55. Since digital literacy and training levels decrease as age increases, the data reveals a clear age-related trend.

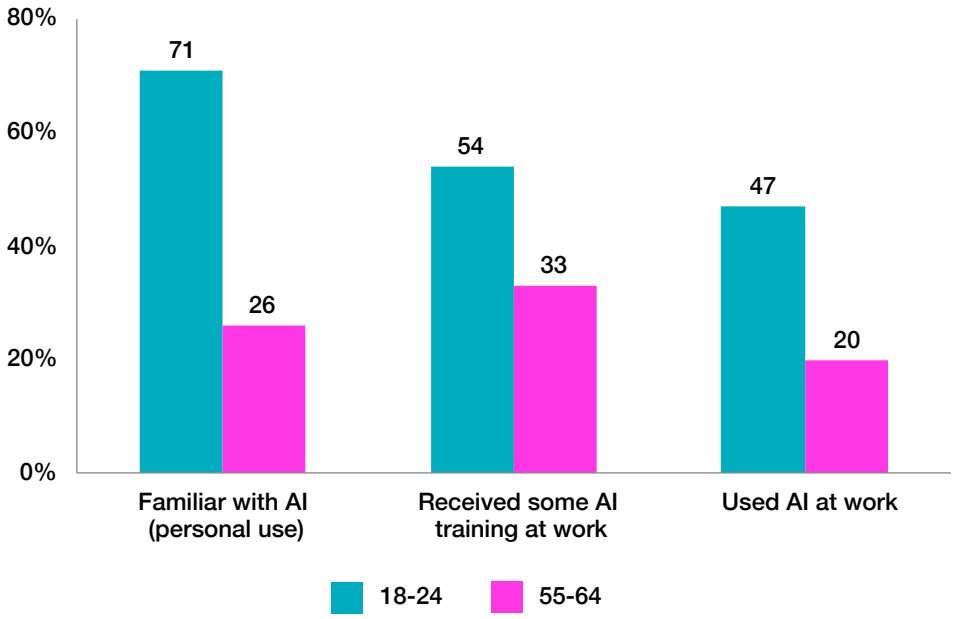
Use of artificial intelligence

Many older Canadians are online, but recent advances in AI have created a new technological proficiency divide. While some older adults are highly capable, those who struggle with basic digital skills face an even greater disadvantage. Community programs such as age-appropriate smartphone and internet training offered by libraries and local organizations may need additional support and informed guidance to integrate AI literacy training into their existing delivery models. Research and efforts on AI literacy education focus predominantly on students and children,[40] continuing a pattern of exclusion that overlooks older adults as a priority demographic for training on new technologies.[41]

An analysis using the Survey on Employment and Skills found that older workers are more likely to be left behind in AI use and report lower rates of familiarity. Younger working Canadians, compared to their older counterparts, were more familiar with AI for personal use (71% vs. 26%), had a higher rate of receiving AI training at work (54% vs. 33%) and were more likely to use AI at work (47% vs. 20%) (see Figure 2). Although the study focused on mature adults aged 55 to 64, a similar pattern could be expected among older adults, given that they would be nearing or passing retirement age and the fact that digital literacy levels decrease as age increases. From an intersectional and gendered perspective, older women respondents were less likely to receive formal training and more likely to have to rely on self-learning.[42]

Figure 2

Age and familiarity of AI for personal use, work and having received training (2024)[43]



Further breaking down the data by age shows a consistent decline in reported familiarity with AI and higher levels of unfamiliarity among mature and older adults (55+) compared to those aged 18 to 54 (Figure 3). This aligns with research indicating that lower levels of digital literacy affect the use and adoption of emerging technologies, of which AI is a clear example, given its rapid growth and widespread diffusion.

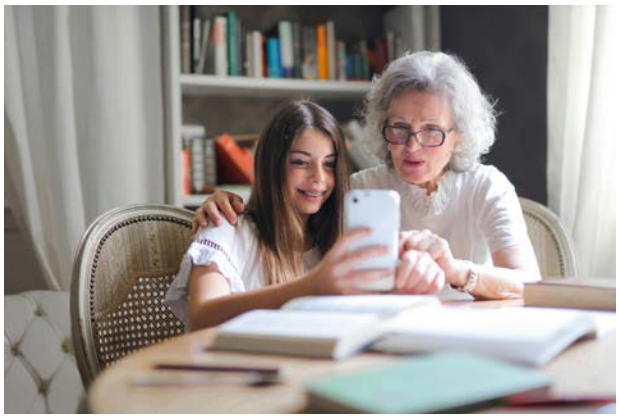
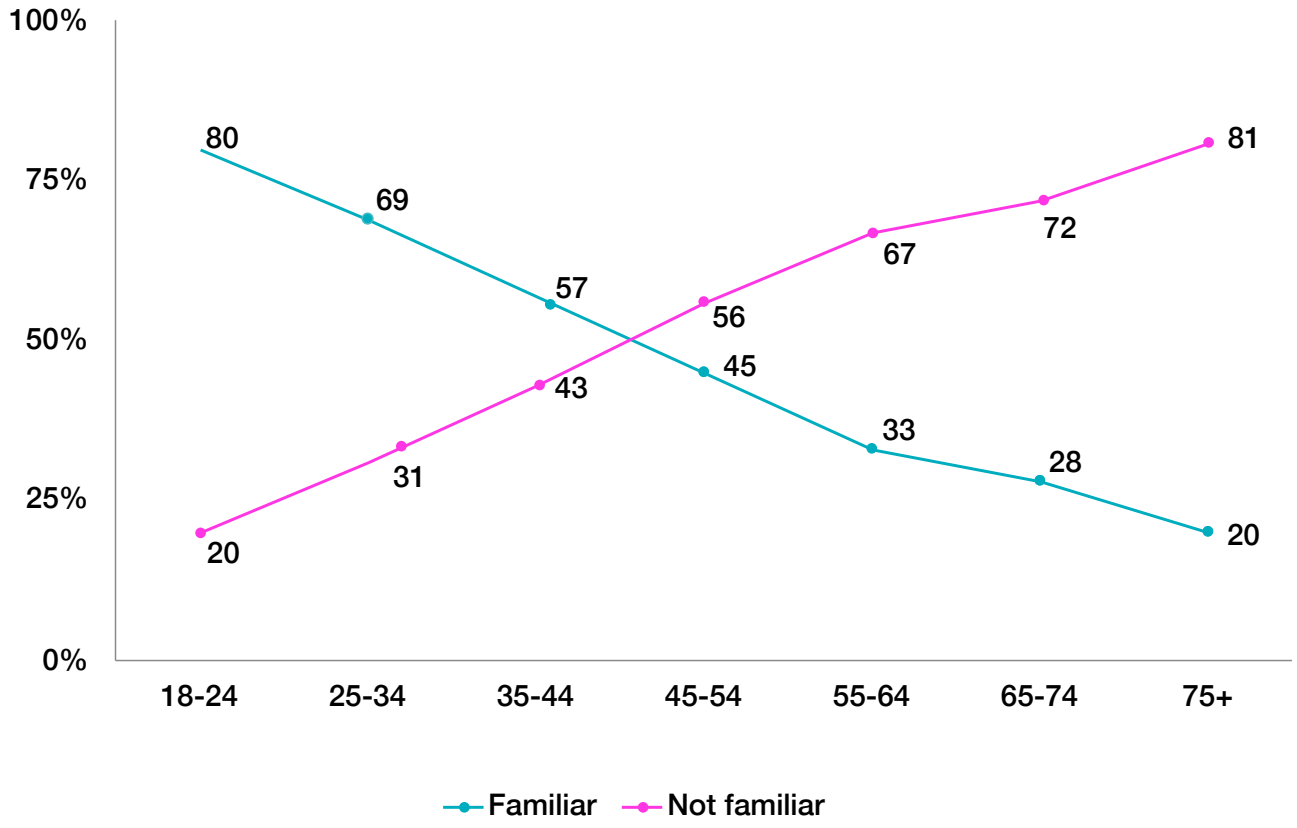


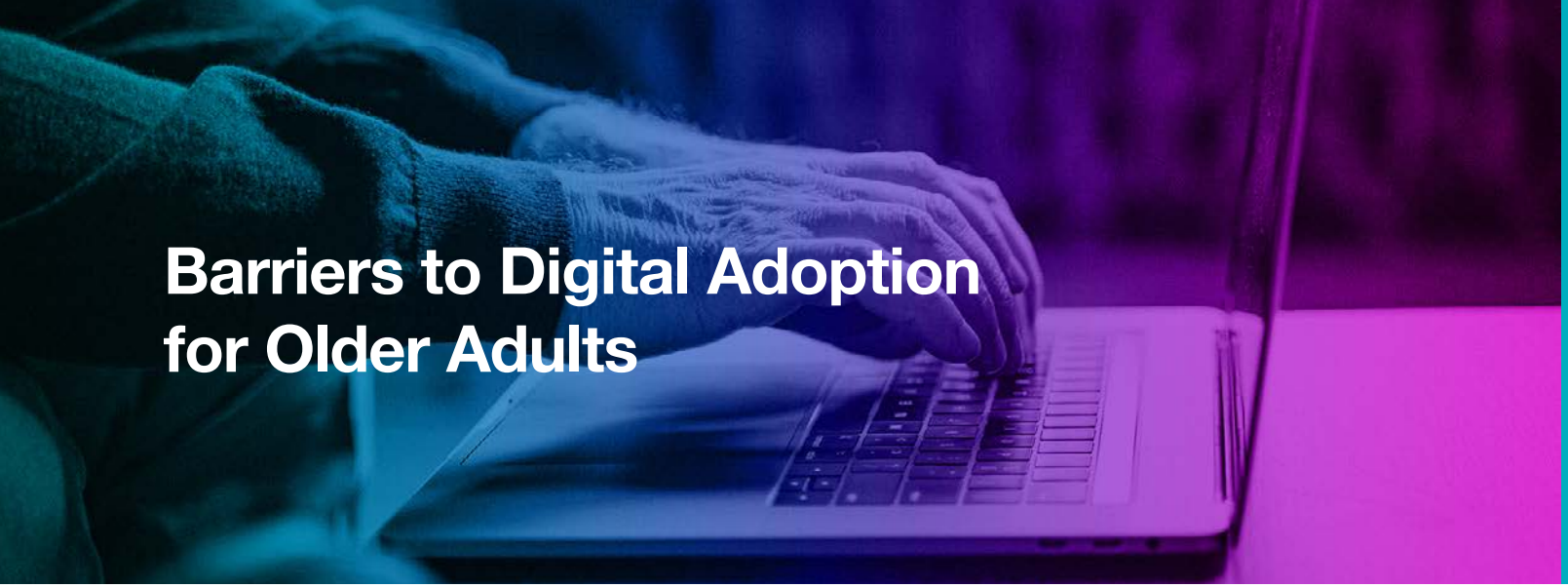
Figure 3

Familiarity with AI tools in the workplace across age groups[44]



The data points to an interplay of factors that help explain the digital divide faced by older adults, resulting in lower levels of digital literacy, familiarity and use.

The following section examines the specific and interconnected barriers to digital adoption among Canada's older adult population, considering the diverse sociodemographic characteristics of this group.



Barriers to Digital Adoption for Older Adults

Despite the overall high digital connectivity across Canada, older adults face a complex, often interconnected set of obstacles to digital adoption. They encounter barriers when trying to access or learn to use new technologies, yet there remains limited understanding of what those barriers are or how to address them.[45, 46] These barriers are shaped by socioeconomic, geographical, and health-related factors, including income, age, education level, location, social connectedness and physical or cognitive ability. This section examines how these factors affect digital access and learning for older adults in Canada, considering the implications of a growing aging population amid the digital economic transformation. There are also gender gaps.

Infrastructure and tools

Reliable and affordable access to digital infrastructure, above all high-speed broadband Internet, has become essential in today's digital era, touching and transforming nearly every aspect of daily life. Internet use has increased over time among older adults in Canada, yet they still lag behind younger age groups in access and online participation.[47]

This gap reflects differences in the availability of high-speed infrastructure and the ability of older adults to subscribe and stay connected, especially those with low incomes or living in rural areas.[48] While Canada's overall Internet penetration stood at 94.3% in 2024, 2.2 million people (roughly 5% of the national population) remained offline, including 16.5% of those aged 65+.[49] Many are located in rural, remote or underserved communities where broadband infrastructure is limited. Quality Internet service depends on sustainable, high-speed connections that keep pace with modern technology. Despite federal programs like the Universal Broadband Fund which aim to improve high-speed Internet access across Canada, many households still lack broadband or have speeds that do not meet the CRTC's recommended 50 Mbps/10 Mbps universal service objective, in place since 2016.[50]

Barriers to technology adoption and digital skills development also include access to quality tools and services such as devices and training. Many older adults lack affordable, appropriate and functional digital devices, which limits their ability to learn and keep pace with technological change. Device costs

and the low availability of affordable options remain key obstacles. Older adults often face higher financial barriers to acquiring up-to-date, user-friendly technologies, compounded by rising Internet, connectivity and device prices in Canada compared to other G7 countries.[51]

Affordability

The cost of appropriate devices, software and reliable high-speed Internet remains a significant structural barrier.

Digital exclusion is closely tied to income: those struggling financially are less likely to have Internet access, own devices or feel confident using technology. The poverty rate among older adults (aged 65 and over) in Canada was 6% in 2022, based on Canada's Official Poverty Line, the Market Basket Measure (MBM), which measures poverty as falling below the cost of a basket of goods and services representing a modest, basic standard of living.[52] However, the true economic reality could be significantly higher according to the Material Deprivation Index, informed by research from the National Institute on Ageing.[53] Those facing financial hardship and poor health are more likely to have weak social networks, a situation that could be further compounded by challenges related to internet access. The high cost of devices and Internet or data plans is repeatedly cited as a primary barrier preventing older adults from acquiring digital skills, with 4.0% of people aged 65+ saying they had no internet because the cost is too high, double the overall population (1.8%).[54, 55]

Lack of affordable access leads to less frequent technology use, which limits exposure, confidence and familiarity with digital tools, making skill development more difficult.[56] Affordability issues often compound other barriers such as lack of confidence, fear of technology and the absence of personal support for digital learning. Even when training is available, transportation costs and device upgrades may pose additional "hidden" barriers for those with limited means.[57]

Access and design barriers

The design and interface of digital applications are particularly important for usability by older adults.[58] For example, standard keyboards are often compact for easier positioning, but the small key size can pose difficulties for those with vision problems or limited finger dexterity.[59] Technology design often excludes the input of older adults and caregivers, resulting in usability issues.[60] Most software and webpage designs fail to account for the physical and cognitive changes that many older adults face.[61] These design flaws make it harder for older adults to navigate digital tools and access digital services effectively.

User interfaces with complex, feature-heavy functions targeting younger users fail to account for the physical and cognitive changes that many older adults experience, making it harder to learn software and hardware.[62] While there is a clear need for devices with simpler functions designed for better accessibility, which is often highly sought among older adults, such products remain rare on the market.[63] Continuous updates and changes in software and hardware create additional hurdles that cause confusion and erode confidence. For example, when older adults receive a new phone or laptop to replace an old one, they often depend on others, such as store staff or family members, to help with the setup.[64]

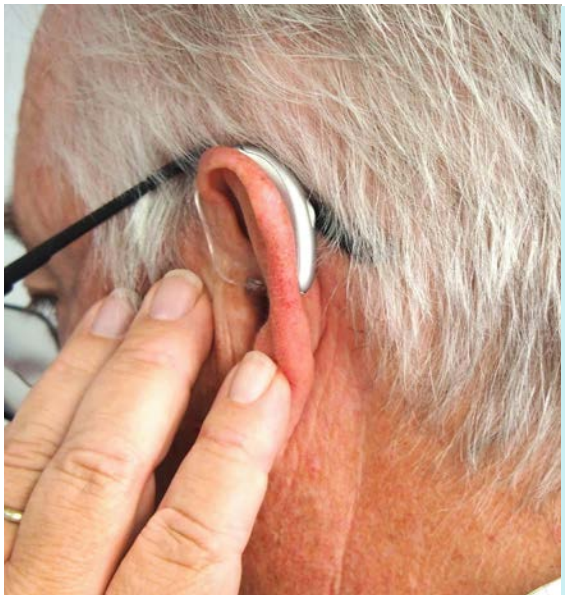
While constant evolution is the nature of technology, without proper training and accessible education for older adults, the process of adoption and ongoing learning becomes overwhelming and reinforces barriers to use.

Emerging age-related bias in AI

With aging populations growing globally and in Canada, and the rapid spread of AI, there is a need to critically examine age-related differences in AI proficiency and the presence of age-related bias in AI systems. Intersecting pathways of technology development can produce and reinforce digital ageism. Age-related bias can manifest as allocation harms (unequal access to resources) and representation harms (stereotypes embedded in data). Through a series of "cycles of injustice" from early-stage design to implementation, older adults are often left out, which leads to implicit biases built into technology that disproportionately excludes them.[65] The World Health Organization (WHO) points out that datasets used to train many healthcare AI systems frequently leave out older adults, a concerning omission given they represent the major share of those who use health care services,[66] and thus are one of the largest groups who have the most to benefit from AI-driven advancements in healthcare. This risks ageist biases within datasets that represent older adults as a monolithic group who are averse to technology when they are not included explicitly.[67] Combined with the proficiency divide discussed earlier, even among older adults with basic functional digital literacy, this affects their ability to engage with or benefit from AI-powered tools and places them at a further disadvantage in the modern workplace and society.

Social barriers

A lack of familiar social networks and intergenerational support that help share knowledge through trusted channels can create a knowledge gap. Support networks are essential in shaping older adults' ability to engage with digital technologies. However, many older adults lack sufficient social support from family, friends or community services. An estimated 43% are at risk of becoming socially isolated,[68] which compounds their digital literacy challenges. This often contributes to a fear of technology driven by the lack of guidance and reassurance available.[69] Even when family members were available, older adults expressed reservations about reaching out to them for support.[70] Relying on younger family members for passive digital skills uptake is not always effective and can reinforce feelings of inadequacy, discouraging future use.[71] A total absence of support, or active discouragement from family or peers, can shape negative perceptions and hinder adoption of digital tools.[72] Perceptions from family and peers that reflect "benevolent ageism" widen the



Older adults experience a range of age-related physical and cognitive changes that affect their ability to interact with technology. Health barriers are a significant factor that impedes their use of digital technologies.

digital divide through common generalizations that older adults are incapable of learning technology. 24% of older adults who participated in the NIA survey reported that people often or sometimes assume they have difficulty with cell phones and computers.[73] This infantilization undermines age-appropriate learning that respects their autonomy.[74]

Knowledge and information barriers

The ability to use digital technologies effectively depends heavily on the knowledge and information available to older adults. The lack of digital skills among this group is linked to a broader gap in computer proficiency, rooted in limited use throughout their lives, especially during formative years. As a result, difficulties often begin with the basic technical vocabulary needed to understand what digital devices and services involve.[75] Many older adults are unaware of the digital technologies, services and benefits available to them, which further limits their learning and uptake of digital skills.[76] Knowledge and information barriers are not purely based on technical knowledge or skills capacity but also rooted ethical and social concerns such as a lack of trust in technology and privacy concerns that factor into an individual's overall comfort with digital tools and services.

Health and attitudinal related barriers

Older adults experience a range of age-related physical and cognitive changes that affect their ability to interact with technology. Health barriers are a significant factor that impedes their use of digital technologies.[77, 78] Evidence shows considerable differences in digital access among vulnerable older Canadians, such as those who live alone or face health challenges, who reported lower use of digital tools and health applications compared to their younger counterparts.[79] Research shows that older adults encounter more health-related barriers stemming from poor motor skills, visual and hearing difficulties, and physical impairments that make it more challenging to engage with digital devices effectively.[80, 81] This is especially true when

> *For example, one participant noted "I guess I just consider myself too old."*

many digital platforms and services are not designed with these accessibility needs in mind.[82]

Conditions such as arthritis,[83] cataracts[84] and tremors[85] further complicate the use of computers and the Internet. Cognitive impairments from age-related brain changes, including memory loss, sensory decline and motor function limitations, add another layer of difficulty when navigating user interfaces and physical hardware.[86, 87] These conditions can make it hard to interact with technology: reduced vision affects screen visibility, poor dexterity impairs device handling, hearing loss makes virtual communication challenging and slower cognition affects the pace of learning.[88]

Health-related barriers to technology use are of paramount concern as older adults can receive a great deal of benefit from using virtual care. The NIA Ageing in Canada survey found that 93% of respondents indicated that virtual care services fully or mostly met their needs and high levels of satisfaction. More than half (51%) of Canadians over the age of 50 reported using virtual care once or more and that usage increased with age. Conversely, there continues to exist some hesitation and barriers to wider adoption as only 37% of non-user respondents reported being open to trying virtual care services in the future.[89] Despite these challenges, older adults are increasingly embracing digital technologies and recognizing their value in supporting independence and healthy ageing. A national survey by the NIA and TELUS health (n=1,517) found that 79% of Canadians believe wearable technologies can help older adults live safely and independently at home, with confidence becoming stronger with age. Among respondents aged 75 and older, 95% agreed that wearable technologies have the potential to support safe and independent living, highlighting a growing openness to technologies that can enhance quality of life and aging in the right place.[90]

Attitudinal barriers

Societal and individual views of older adults' capacity to keep up with technology shape how they perceive their own abilities around digital adoption. When ageism is internalized and mixed with a lack of understanding, it can produce feelings ranging from uncertainty to outright discouragement that act as personal barriers. Internalized ageism, expressed as a diminished belief in their ability to learn new information and master new skills, can surface when older adults compare themselves to younger generations, who are often described as "intuitively" able to use digital technology.[91]

In a cross-sectional survey of older adults aged 65 and older in British Columbia and Saskatchewan, a lack of interest was a barrier to technology use for social interaction in both provinces. In Saskatchewan specifically, perceived low self-efficacy, which participants linked to their age, confidence or proficiency, also affected technology use. For example,

one participant noted "I guess I just consider myself too old."[92] Similarly, the Older Adults Centres' Association of Ontario researched reasons seniors might resist virtual programs; many cited a lack of interest (52%) or discomfort with technology (32%).[93] When these perceptions go unaddressed, they can lead to greater anxiety and fear of technology, fuelled by limited prior exposure and ever-evolving technologies that require constant upskilling.[94, 95] Frequent updates to devices and platforms reinforce the perception that users are always falling behind.[96]

Mistrust of data privacy, concerns about online security and identity theft, and the fear of scams are additional barriers that hinder the use of digital technologies.[97, 98, 99] For example, according to a 2019 survey by the Financial Consumer Agency of Canada, seniors aged 75 and older were the least likely of all age groups to use online banking, with the top barrier being safety or security concerns (32%).[100]

Barriers for older adults belong to equity-deserving groups

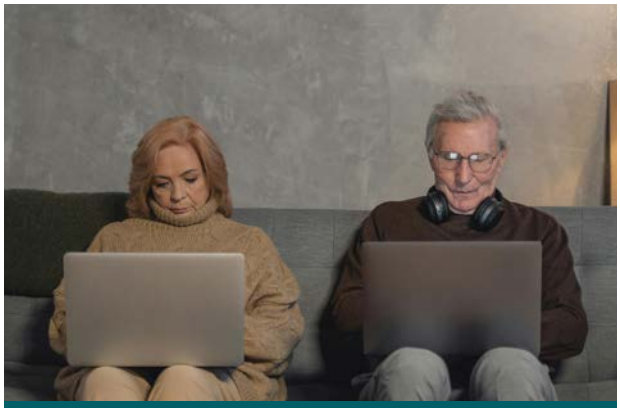
Older adults who belong to equity-deserving groups face multiple and intersecting barriers to developing digital skills.[101] A scoping review of studies shows that women, Indigenous Peoples, 2SLGBTQ+ individuals, racialized communities, persons living with disabilities and low-income populations reported increased barriers related to digital literacy, affordability, lack of culturally sensitive content design and limited access to infrastructure.[102] We also examined the digital literacy barriers older women face, given the persistent gender difference in digital access and skills

as well as their representation in the national population. An intersectional lens is applied to the context of digital skills for immigrant and migrant women, who often face compounded barriers as a result of their status.

Understanding the unique needs of the diverse demographic groups that make up Canada's older population is necessary to address digital training and literacy gaps among those who are often underserved and not reached by mainstream digital initiatives.

Women

Older women face unique and intersecting barriers in digital access and skills development. This is increasingly important because women make up a larger share of the older adult population due to longer life expectancy compared to older men,[103] which makes the effects of digital exclusion disproportionate. In 2022, about 20.2% of women were aged 65 and over, compared to 17.5% of men.[104] The gender age gap grows wider in the oldest segments: there were close



31% vs. 39%

A smaller proportion of older women than older men have basic or above-basic digital skills

to 1.7 women for every man aged 85 and older in 2021, and in 2019, women accounted for 82% of centenarians. Research has also found that women aged 65 and older are more likely to spend their senior years in an unhealthy state (30.9%) compared to men (27.7%).[105] Women face heightened challenges shaped by their gender and require special consideration when addressing digital skills gaps.

Beyond age, gendered social norms and traditional stereotypes, such as viewing technology as a male-dominated domain, shape expectations of older women and affect perceived and actual gender differences in technology use and ability.[106] Older women tend to feel less confident using technology, leading to lower use and engagement.[107] A lack of confidence can generate a fear of technology, create difficulty asking for help, and foster a self-perception that they lack the fundamental knowledge to use technology.[108, 109] A study found that during the first year of the COVID-19 pandemic, older adults aged 55 and older frequently experienced feelings of isolation, with women reporting higher rates (60%) compared to men (46%). This suggests that older women may have fewer social supports available to assist them with technology when needed.[110] Social isolation combined with difficulty accessing essential services places older women at heightened risk. In communities where older women are often viewed as vulnerable, dependent, or a burden on community resources, these shared beliefs can lead to technological paternalism and further hinder their digital literacy development.[111]

AI is the latest technology driving transformational societal and economic shifts globally, and it represents another area where women need special consideration and support. Women are more likely to be exposed to AI-related job changes compared to men, widening the gender skills gap.[112] This may result from lower levels of AI training received by older women. Randstad's recent study revealed that while 75% of companies are expecting to adopt AI, only 38% of men and 33% of women had received AI training from their employer in the last year, however 71% of men reported having AI skills, while only 29% of women did so.[113]

Intersectional factors, including socioeconomic dimensions, compound

gendered differences in barriers to digital access and learning. For example, women who are both older and have lower educational backgrounds are uniquely disadvantaged. A lack of training at work has made it difficult for this group to transition into full digital adoption, as they often start with less exposure to digital tools and fewer informal learning opportunities. Their roles are highly affected by task automation and job restructuring.[114] Age-related stereotypes (such as tech-aversion) and gender biases create a double bind that leaves older women more vulnerable to disparities related to technology shifts.[115] Older women are particularly at risk of being left behind in the digital transformation. This is not solely a domestic phenomenon; similar outcomes have been observed in European countries. Older women in the United Nations Economic Commission for Europe (UNECE) region, encompassing 56 countries, are disproportionately affected by the digital divide: only 67% of those aged 55 to 74 use the Internet weekly, significantly lower than the 90% of younger age groups who do the same. Within this older age group, women are even less likely than men to go online. A smaller proportion of older women than older men have basic or above basic digital skills (31% women vs. 39% men). As in Canada,[116] women in the UNECE region face a higher risk of poverty and social exclusion than men, and the gender gap is among the largest for older persons,[117] making this group less likely to access technology and opportunities to develop digital skills.[118] These gendered social and economic inequalities create greater disadvantages for racialized immigrant women, who face higher unemployment rates and lower incomes than their counterparts who are men and than the non-racialized population, regardless of whether the latter are immigrants or Canadian-born.[119]

Immigrant and migrant women

Data on the intersectional barriers faced by older immigrant and migrant women in acquiring and updating digital skills remains relatively limited. Beyond their gendered experience, they may face multiple intersecting barriers rooted in their cultural backgrounds that limit digital inclusion. Racialized immigrant women in particular have been, and will likely continue to be, disproportionately affected by structural changes caused by the digital transformation.[120] Cultural factors including language, customs, and previous exposure to digital technologies, as well as socioeconomic status in Canada, shape their access.

Newcomers who are not fluent in English or French face language and literacy challenges when navigating digital platforms and using new technology without effective built-in translation. The majority of online content and interfaces are simply not available in other languages, which hinders digital literacy since it requires both technical and language proficiency. For instance, research on immigrant mothers in Quebec has shown how low levels of digital literacy combined with limited understanding of French create greater difficulty when interacting with digital health services, leading to confusion and exclusion from potentially beneficial resources.[121] Studies on digital engagement with government services across Canada also highlight that women who lack adequate proficiency in English or French and belong to low-income households were less likely to use online government services.[122]

Service providers consistently reported that low levels of digital literacy and inability to access devices among newcomers formed one of the strongest barriers to effective digital engagement.

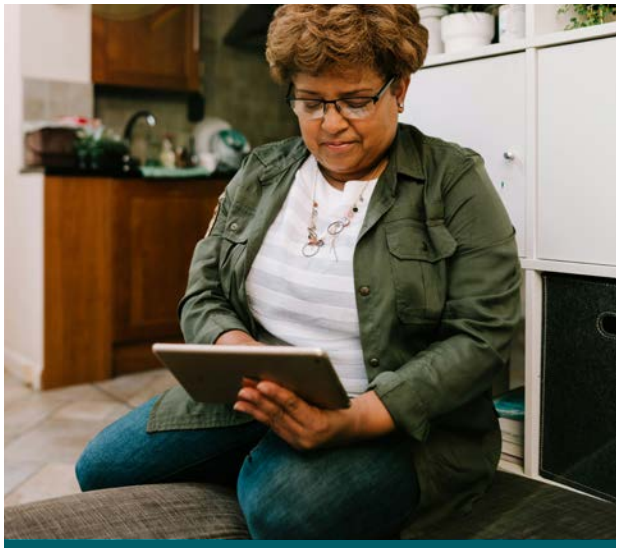
Experience in the settlement and integration sector shows that many immigrant women lack the financial means to invest in personal computers or cellular devices, often relying on shared family devices for work, study and social connectivity. Migrant women engaging with settlement service providers in British Columbia expressed a reluctance to have their own devices. A review of provisioning efforts by a few settlement organizations in Vancouver revealed that despite efforts, resources are simply not enough to meet the level of demand. The gender divide reflects broader socioeconomic inequalities tied to uneven access and attitudes shaped by gendered expectations around household roles and resource allocation.[123]

Socioeconomic status further intersects with the digital exclusion they face. Research into digital equity in Peel Region, part of the Greater Toronto Area, showed that non-native English speakers, including many immigrant women, represented the largest group who lacked access to digital settlement services. There was considerable overlap between digital literacy and gender, income level, age and disability. Service providers consistently reported that low levels of digital literacy and inability to access devices among newcomers formed one of the strongest barriers to effective digital engagement, revealing structural gaps in both service delivery and support capacity.[124] These gaps carry real consequences for newcomers who need access to support services to integrate into Canadian society and secure employment.

Barriers to digital skills among older immigrant and migrant women in Canada are multifaceted. They are shaped by affordability, exposure to and use of digital devices and online services, linguistic barriers that impede access, and insufficient outreach and support for digital skills development. Addressing these barriers requires programming tailored to gender, age and cultural needs, supported by coordinated policy and action to ensure that diverse older women can equitably navigate the ongoing digital transformation in Canada.

Digital Skills Training Approaches

Closing Canada's digital divide for older adults requires training approaches that combine inclusive and instructional design, as well as community-based delivery. As digital technologies continue to shape nearly every aspect of daily life, older adults face a growing need for flexible, accessible learning opportunities that meet them where they are. Targeted digital literacy programs that bundle device access, affordable connectivity and ongoing personalized support can strengthen engagement among low-income and older adult learners. Recognizing the concept of "ageing in the right place",[125] digital literacy and skills training initiatives should be embedded within trusted community settings and tailored to the diverse needs, abilities and circumstances of older adults, aiding them to continue living in their homes and communities. By supporting older adults to confidently access digital training, tools, and services locally, this approach can promote their independence, preserve social connectedness, and empower equitable participation in an increasingly digital society.



As digital technologies continue to shape nearly every aspect of daily life, older adults face a growing need for flexible, accessible learning opportunities that meet them where they are.

Heterogeneity among older adults

Effective training must use inclusive design that accounts for the diversity within the older adult population. Older adults vary widely in their abilities, motivations and digital experience. They differ in labour market participation, age-related barriers and training needs shaped by factors such as gender, sector of work, employment history, education level and socioeconomic status. Depending on their age and work context, they face both distinct and overlapping challenges with digital and technological change. For example, workers between the ages of 50 and 65 tend to be more comfortable with computers and technology than older age groups, especially when they work in highly skilled occupations.[126]

Among the factors that shape digital literacy, age is only one piece. Other forms of disadvantage, including low levels of education, lower socioeconomic status and limited professional exposure such as working in blue-collar jobs that may not involve daily computer use, reduce daily learning opportunities.[127, 128] Differences in exposure to ICT, motivation, educational background and age-related health issues create shifting barriers that, combined with employment contexts, continually reshape the needs of older workers.[129] The rapid digitization of work is raising baseline skill requirements across nearly every sector, creating a need for support among those who learned before these changes and have struggled to upskill and reskill. This matters not only for the employment, financial well-being and quality of life of older adults, but also for Canada's labour force as a whole. The country increasingly relies on productivity growth and higher workforce participation to maintain its standard of living.[130]

Older workers remaining in or re-entering Canada's workforce

Developed economies around the world are shifting toward technology-driven growth. Canada is following a similar path and urgently needs a future-ready workforce with the skills to respond to emerging challenges, or it risks falling behind allied and peer economies.[131] Labour market participation rates have been rising for mature and older Canadians, including those aged 55 and older,[132] reflecting a growing trend of working later in life or returning to the workforce after retirement, whether by choice or out of financial

The rapid digitization of work is raising baseline skill requirements across nearly every sector.

necessity. Older workers who lack regular access to technology, both at work and in their personal lives, face a greater risk of being excluded from employment opportunities due to digital challenges in their workplace.[133]

While low levels of digital literacy are a pressing concern for certain groups of older workers, it does not mean that most lack digital skills. The majority of older workers have at least basic digital literacy, and a significant share show moderate to high proficiency on par with younger workers. Differences in digital skills among older working adults reveal that literacy levels are shaped more by sociodemographic factors, including education, income, occupation, immigrant status and regular technology use, than by age alone. This calls for targeted digital upskilling strategies for older adult groups who may struggle more than their younger or digitally skilled peers to adapt to changing job requirements driven by business digitalization and emerging technologies like AI. These dynamics interact with gendered economic inequalities later in life. Women are more likely to have interrupted work histories, part-time or precarious employment due to gender roles and family responsibilities, and lower lifetime earnings.[134] They also face a gender pension gap. In 2021, the gender pension gap was 17%, meaning that women received 83 cents for every dollar of retirement income received by men.[135] For older women, continued participation in the labour force can be an important way to improve income security.

Recognizing differences in skill levels and identifying the digital skills workers need based on how technology affects their specific job is essential for developing effective workplace training. Equipping older workers with adaptable, future-ready digital skills tailored to their sociodemographic needs and career is important for both their personal success and Canada's economic future.

Instructional digital skills training design

Instructional design is at the core of effective digital literacy and skills training. Studies show that older adults need and benefit from flexible curriculum design that systematically adapts content and delivery to their individual cognitive, physical and experiential needs.[136] Learner-centred approaches improve accessibility and can boost engagement for older adults, who often face various cognitive and physical changes. Since many training programs for older adults are delivered at the local level, training designers and facilitators can draw on their close understanding of learners when assessing needs and developing materials. This enables those in charge of programming to strengthen training by evaluating learning outcomes and planning future programs that help older adults build and maintain digital skills more easily.

Person-centred training design has proven successful for teaching older adults. Older adults learn best in welcoming, supportive settings that move at their pace, giving them the flexibility to ask questions and build confidence. Programs that combine structured classes with one-on-one coaching offer a mix of formats. This allows educators and mentors to adjust to different learning preferences and lets participants control the nature of their involvement.[137] Flexible learning models that build on older adults' own goals and needs, such as staying competitive as the job market

evolves, learning to use digital tools for daily life, returning to work, or maintaining mental sharpness, help learners engage with content relevant to the specific impact that technology has had on their life.[138]

The most effective way to deliver digital skills training depends on available resources and learner needs. Various delivery modes exist, shaped by learners' and educators' access to infrastructure, Internet connectivity, devices and financial support. These include in-person instruction with hands-on technology use, blended learning, supported online courses and fully independent online programs. No single approach works for everyone. A 55-year-old woman with caregiving responsibilities and basic computer skills may benefit from a hybrid approach that combines the flexibility of virtual learning with opportunities for hands-on, in-person sessions. Hybrid approaches let learners continue learning beyond the classroom when they have reliable home access, which is especially useful for adults facing caregiving, transportation or distance barriers. In contrast, a 70-year-old woman with vision impairment and little-to-no prior digital literacy will need specialized training support and device provision tailored to her condition in a one-on-one or small-group setting.

In-person support remains essential for learning digital skills, especially for older adults who are new to digital learning.

The hands-on help available through in-person instruction assists older adults who struggle with navigating platforms, managing their learning pace and building routines. These activities can be difficult for those with little experience using technology. Connected Canadians, for example, works with organizations to offer customized, person-centred learning for older adults through hybrid and one-on-one delivery. They provide free training across many areas of digital literacy that are especially useful for older adults. Training is tailored through an initial needs assessment conducted by volunteers who are highly comfortable with technology.[139] Delivering training in familiar, trusted settings and tapping into older learners' existing social and community networks can greatly improve outreach, awareness and program effectiveness.

Social support, especially from a person's close network, strongly shapes learning outcomes. Encouragement from family members and the broader community to learn digital skills helps raise awareness among older adults about the potential benefits and uses of digital technologies.[140, 141] Programs like Ontario's Cyber-Seniors use an intergenerational model, training youth mentors to deliver one-on-one virtual technology mentorship. Participants found that the tailored, personalized approach helped meet their needs, and a majority said the youth mentor component was a major factor. Cyber-Seniors also offers specialized programming for 2SLGBTQ+ seniors and individuals with specific impairments (such as vision loss and dementia).[142] Community-led programs such as Digital Skills for Seniors, Connected Canadians, Toronto Public Library's Seniors e-Connect and Dig-IT have shown that one-on-one and small class delivery models run at the local level improve digital literacy uptake and retention for older learners.[143, 144, 145]

Affordability barriers related to digital infrastructure and hardware (such as devices) are closely tied to access to effective digital skills training and should be addressed at the same time. People who cannot afford appropriate hardware and reliable connectivity face an increased disadvantage, often unable to fully take part in training or practise newly learned skills. This weakens, and in some cases reverses, the effectiveness and sustainability of training, since digital skills cannot be meaningfully developed or maintained without consistent, hands-on use of technology. Training programs must account for cost, as low-income older adults tend to have lower digital skills and a greater need for training. Building affordability measures into programs, such as providing devices, subsidized connectivity and access to open technology-enabled learning spaces, helps ensure training reaches people equitably, prevents participants from dropping out and enables them to turn new skills into real social and economic outcomes. Targeted digital literacy programs that bundle device access, affordable connectivity and ongoing tailored support have proven highly effective for low-income older adults.[146, 147]

Program analysis

Digital skills training programs for older adults in Canada share a core set of person-centred, relationship-based, and barrier-reduction design principles. They also show distinctive innovations in how they combine mentorship, device access and connectivity, and broader social and economic inclusion goals. Canadian programs and organizations targeting older adults use training design principles that recognize that digital exclusion cannot be explained by skill level alone. Training approaches reflect the interplay of various barriers, including the relevance of training to specific needs, affordability tied to access to devices and connectivity, the confidence and familiarity of participants, and ongoing support. Addressing these factors together in training design can improve uptake, retention and outcomes for participants. This section analyzes effective approaches and key design components to inform future digital skills training programs for older adults.

Among training offerings, there are four common core objectives: i) digital inclusion, ii) online safety, iii) access to services and iv) social connection. Most programs aim to combat social isolation by helping people communicate with family, community and peer groups; examples of these programs include Connected Canadians, Cyber-Seniors, Student–Senior Isolation Prevention Project (SSIPP), Tech Savvy Empowered Older Women, and TELUS Wise. Digital safety and scam protection are key learning objectives in nearly all models analyzed, with a focus on financial elder abuse and privacy protection. Nearly all training programs stress the link between digital skills development and access to basic yet essential online services, such as online banking, health care, government services and online programming, and position digital literacy as a tool for independent living. Several programs have also reported improved

quality of life, confidence and attitudes toward technology among older adult participants.

Objectives

The impact of effective digital skills training is tied to meaningful, real-world outcomes. How digital skills are framed and taught matters for communicating their value across various uses. Training that presents digital skills as a tool to achieve specific goals, such as reducing social isolation, improving access to economic opportunities, using digital health care and government services, increasing awareness of cyber threats, and maintaining independence, helps learners understand how these tools apply in their everyday life. This approach is more effective than treating digital skills as an abstract, general set of competencies.

Behind the success of training initiatives is continued support and program longevity, not one-time training sessions. The Digital Navigator program shows the importance of ongoing, problem-solving support that evolves with the participant's needs. Digital skills and training goals are not confined to a single program session or one-off lesson. Instead, this model frames digital literacy as a continuous process of lifelong learning that evolves alongside changing technology and learner needs.

Training objectives follow a similar design across the programs analyzed:

- Several programs (such as Connected Canadians, Cyber-Seniors, Let's Connect and Tech Savvy Empowered Older Women) frame digital skills as a bridge to community rather than a purely technical skill. These programs reduce loneliness and promote social connection with community, family and services. Similarly, SSIPP uses technology to combat social exclusion and loneliness among older adults.

- Closely linked to safety and well-being is the critical objective of improving digital security. Connected Canadians, for example, focuses on fraud and scam prevention, while Dig-IT specifically teaches about online dating scams, phishing and financial elder abuse.

- A common aim is helping seniors access essential services to support practical independence. Connected Canadians works to improve access for older adults to services such as banking and health care portals, while Dig-IT supports the use of technology for grocery delivery and virtual health care appointments.

- Recognizing foundational barriers, programs like Dig-IT, which aims to provide low-income seniors with hardware and data connectivity, and HelpAge Canada's Let's Connect, which focuses on reaching older adults in rural, remote and Northern communities, seek to provide the basis for access by securing the necessary hardware and affordable connectivity options.

Personalized and relationship-based training models

Person-centred and relationship-based training approaches are a vital part of successful digital skills training delivery. Programs listed in Table A2 in the appendix (such as Connected Canadians, Cyber-Seniors, Dig-IT and the Digital Navigator model) use initial person-centred needs assessments to identify what learners need and shape training accordingly. These assessments, delivered through individualized sessions or ongoing "navigation" support, improve training by building in continuous adaptability. They are often conducted in smaller groups or one-on-one settings, rather than in large classes with a one-size-fits-all approach that lacks personalized and flexible training.

Cyber-Seniors, TELUS Wise, ABC Connect for Learning and Tech Savvy Empowered Older Women adapt training to suit the learner's pace based on their digital skill level and comfort. They include accessibility features such as simple language, large fonts and high-contrast videos that commonly benefit older adult learners. Connected Canadians and Dig-IT combine ongoing needs assessment, delivered by technology-skilled mentors (who are often newcomers in the case of Connected Canadians), with tailored sessions that are continuously adapted to the learner's specific goals.

Programs frequently highlight the importance of patient, empathetic communication training for mentors (such as Cyber-Seniors' structured mentor training and the North York Women's Centre's non-judgemental environment). The Dig-IT initiative, for example, found that older participants with lower digital literacy preferred being taught by peers of a similar age. Dig-IT and ABC Connect for Learning pair peer-to-peer learning with individuals of a similar age who act as relatable role models, helping counter internalized ageism and boost confidence, especially for those with little experience or self-doubt. These findings reinforce that building trust, relatability and shared lived experiences into training delivery can improve engagement and learning outcomes.

Cyber-Seniors uses an intergenerational, youth-led mentorship model with structured mentor training, and has been recognized for this model by the OECD.[148] This training emphasizes patience, empathy, communication and understanding of the aging process to ensure that mentorship is appropriate for older adults facing age-related challenges. Intergenerational approaches, as seen in Cyber-Seniors and SSIPP, show that mentorship teaching models can improve both digital skills and confidence through direct social interaction and connection, creating more positive shifts in attitudes among participants. Extending personalized support to provide ongoing guidance, as seen in the Digital Navigator model, allows learners to

engage in one-on-one problem solving and follow-up beyond a single workshop or lesson. This helps address persistent barriers or issues that arise once participants begin the trial-and-error process of applying their new skills in practice.

Access and connectivity

Programs and organizations listed in Table A2 tackle structural barriers related to affordability and inclusive access. Addressing affordability and access is essential in designing digital skills training, given the significant impact financial barriers have on participation, continued learning and everyday technology use for many older adults. Programs that provide subsidized devices and Internet or telecommunications services show strong engagement rates among low-income older adults, who are often more underserved and marginalized than other equity-deserving groups due to insufficient financial resources.

Dig-IT, HelpAge Canada's Let's Connect and the Digital Navigator model demonstrate that the cost of devices and Internet access is a significant barrier affecting willingness and opportunities to use digital technology. Dig-IT offers loans of pre-configured tablets with a six-month cellular data plan and a one-year Geek Squad subscription for ongoing technical support, targeting low-income and marginalized older adults. Let's Connect and Tech Savvy Empowered Older Women include hardware provisions for older adults, including

those in rural, remote or homebound settings, along with tailored training and local technical support. Digital Navigator and TELUS Wise take a different approach, pairing digital skills training with help enrolling in affordable or low-cost Internet services for low-income older adults. The TELUS Mobility and Internet for Good program, designed for low-income older adults who are recipients of the Guaranteed Income Supplement (GIS),[149] provided access to a refurbished smartphone with data and low-cost mobility rate plan through Mobility for Good and discounted internet plans through Internet for Good.[150] Both included no contract and cancellation fees as well as digital literacy, safety workshops, and resources through TELUS Wise. Connecting the program to older adults receiving GIS enabled access for 2.5 million individuals, allowing them to stay connected and access the internet, especially for low-income at-risk older adults during the COVID-19 pandemic.

Beyond providing subsidized hardware and connectivity services, some programs address mobility and transportation cost barriers by offering free transit and lunches for in-person

sessions (such as Tech Savvy Empowered Older Women) or by using virtual delivery formats, which expanded significantly during and after the COVID-19 pandemic.

Inclusion and equity

Recognizing intersectionality and the unique barriers faced by diverse older adults can improve inclusion and participation among those who need digital skills training the most. Digital literacy gaps among older adults are not uniform. They are linked to sociodemographic factors, including income and education levels, gender, immigrant status and past familiarity with technology.

Several programs and organizations outlined in Table A2 (such as DLEP, North York Women's Centre's Tech Savvy Empowered Older Women, Ontario Digital Literacy and Access Network (ODLAN) and Let's Connect) have adopted targeted, equity-based approaches to serve different groups of older adults, including low-income seniors, older women, older adults in 2SLGBTQ+ communities, newcomers, and those in rural settings. ODLAN focuses on inclusive, safe digital participation for 2SLGBTQ+ communities and addresses online hate and harm reduction through programming like Digital Resilience, which targets transphobic online hate and promotes inclusive digital practices. Let's Connect applies an equity lens by prioritizing social connection and improved access to services for older adults in rural, remote and Northern communities.

Programs like SSIPP require that all mentors and teachers complete mandatory coursework in anti-ageism and anti-oppression to ensure culturally sensitive and respectful interactions with older adults and those with diverse, intersecting identities. Tech Savvy Empowered Older Women uses a "by older women, for older women" model that combines practical digital skills with empowerment and safety framing, while providing additional support to reach isolated older women. These design choices reflect an understanding that digital literacy is intertwined with intersectional barriers related to identity for equity-deserving subgroups of older adults who lack specialized training and support while facing compounded challenges.

Outcomes and scalability

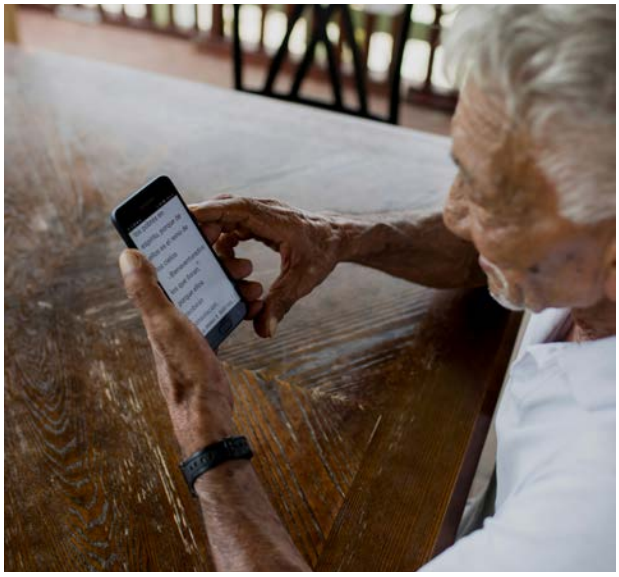
Programs and training organizations report direct, measurable outcomes by tracking successful digital skills acquisition and uptake, along with confidence levels related to access, safety and social connection after training. DLEP, the largest program in terms of scale and reach, demonstrated high-level outcomes by delivering training to over 650,000 Canadians through 36 funded projects, with 7,657 program staff trained. Evaluation measures assessed improvements in access through increased digital literacy levels, newly acquired or upgraded skills and improved confidence levels for older adults and learners from equity-deserving groups. ABC Connect for Learning, which received funding through DLEP, shows the importance of adequate funding and partnerships for delivering digital skills training at scale and tailoring skills

relevant to the partner and funder (such as increased access to vital health care and government information for seniors).

TELUS Wise demonstrated strong outcomes, with 96% of learners reporting feeling more connected to family and social networks and 87% indicating a strong sense of community belonging after completing the training program. Older adults reported lower levels of "tech anxiety" and showed improved abilities in online safety awareness. The Dig-IT program delivered training across Canada to more than 8,500 underserved older adults, showing the direct effect of device and connectivity subsidies in removing persistent affordability barriers and the effectiveness of peer-to-peer learning models in building confidence and boosting engagement. Cyber-Seniors reported measurable improvements in older adults' digital skills, social engagement, quality of life and attitudes toward technology, using a replicable model for widespread implementation across schools, libraries, community centres and senior living facilities.

Table A2, located in the appendix, outlines the training programs and organizations analyzed, showing how training model components are designed to meet learning objectives and deliver real outcomes for older adults. Table B1, also found in the appendix, presents a framework that brings together strong training design components drawn from the analysis of programs and organizations in Table A2. The framework is organized around seven core dimensions: i) objectives; ii) training model and relationships; iii) access and connectivity; iv) curriculum content; v) inclusion and equity; vi) partnerships and reach; and vii) outcomes and scalability. Each dimension reflects the strengths and evidence identified across training strategies. The framework can serve as a guide for creating inclusive digital skills training models for older adults and as a reference to improve existing programming.

The assessment of programs and organizations delivering digital skills training for older adults reveals components and provisions that require a certain level of funding and collaboration. This funding supports the flexibility, adaptability and range of delivery modes needed to meet older adult learners where they are in terms of access, skill level and wraparound support. Scalability and system-wide impact are directly tied to adequate, stable funding that supports partnerships, expansion of the training ecosystem, sustained delivery and equity-focused outreach reaching underserved older adult populations at scale. This underscores the need to examine strategic policy and funding mechanisms for effective digital skills training. The following section provides a brief, high-level look at the role of government support, direction and policy in creating a stable and sustainable funding environment that enables improved program design and delivery.



Policy and Program Support

Effective digital literacy programs for older adults depend on coordinated action across multiple stakeholders. Governments, service providers, community organizations and training bodies must work together to design, fund, deliver and update these programs. Partnering with communities to deliver training helps bring together the facilities, resources and personnel needed to strengthen outreach, access, recruitment and outcomes.[151]

The federal government has already signalled interest in investing in digital literacy for equity-deserving groups, including older adults.[152] A nationally coordinated strategic framework, backed by federal funding, could bring together community service and employment providers, workforce development organizations, non-profits and other partners to advance digital inclusion for older adults. Such a framework would aim to improve digital literacy, access to affordable devices and Internet connectivity, education, support and resources to help seniors use the Internet and other technology tools effectively. The digital inclusion strategy should be guided by ethical frameworks that address digital literacy, affordability, privacy and security, inclusivity and accessibility, social connection, well-being, and unique sociocultural context.[153]

Partnerships, collaboration and funding

A digital inclusion strategy for older adults requires strong partnerships across governments, industry, civil society and community organizations. Stronger federal investments can sustain and expand digital literacy initiatives for older adults while increasing resources for programs that serve those in equity-deserving groups, such as older women. Canada's adult education programs are well positioned to deliver digital learning, yet they remain largely excluded from the digital learning conversation. This limits their potential contribution to coordinated training efforts. Federal agencies responsible for national training and development, such as Employment and Social Development Canada (ESDC) and Innovation, Science and Economic Development (ISED), can coordinate with provincial and territorial governments to provide sustained core funding for adult education programs and connect community-level initiatives with broader digital literacy efforts.[154]

Cross-sector collaboration, involving joint efforts between public, private, and non-profit sectors, telecom providers, and community

organizations, has proven effective in strengthening well-funded training delivery. These partnerships have produced more responsive and well-resourced delivery models for training programs.[155] The federal Digital Literacy Exchange Program (DLEP), for example, used collaboration between public libraries, seniors' homes and community centres to increase accessibility among equity-deserving groups, including older adults. Participants from equity-deserving groups showed increased knowledge, skills, confidence and use of technology through DLEP. This collaborative approach allows programs to build on existing trust networks and local community expertise to improve adaptability and cultural relevance.[156]

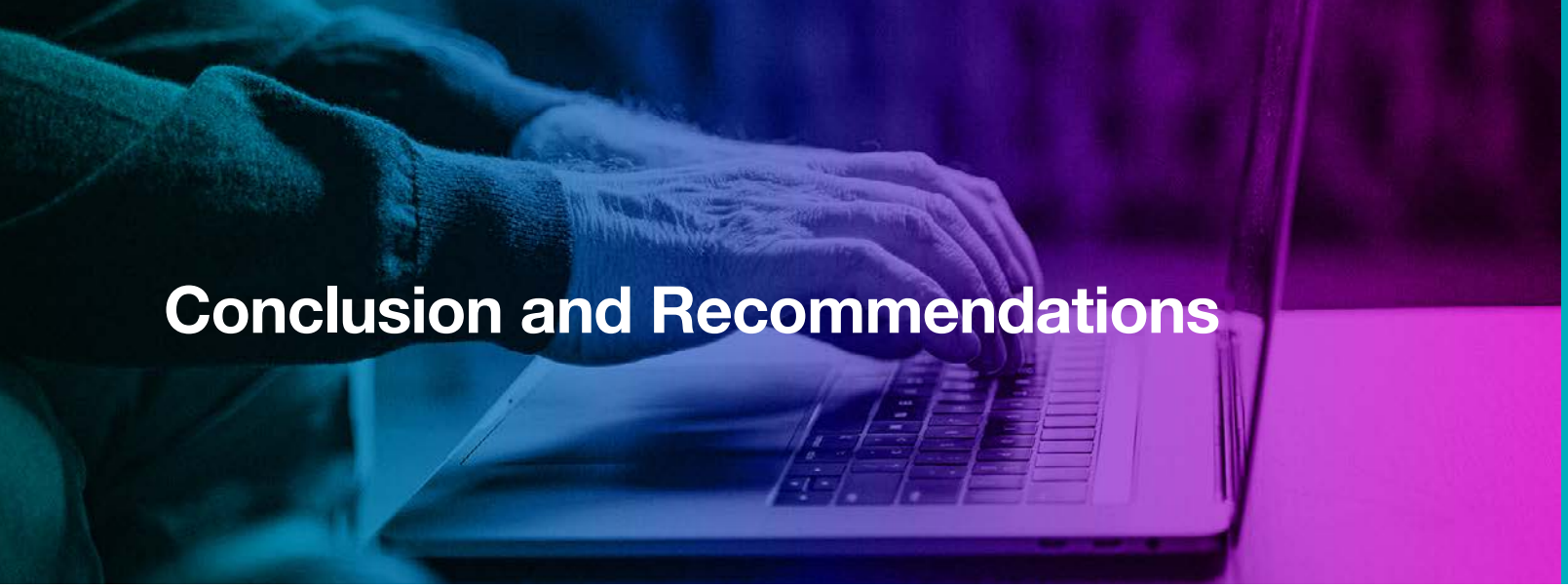
Building on these collaborative approaches, emerging federal priorities around AI present an opportunity to further strengthen digital inclusion efforts for older adults. Canada's AI strategy includes an emphasis on the importance of developing AI literacy training programs and equipping Canadians with the skills needed to participate in an increasingly AI-enabled economy and society.[157] Investments could be leveraged in tandem to expand foundational AI literacy training and skills for older adults, creating targeted program streams that improve their understanding and safe navigation of emerging AI tools and services. Incorporating tailored training for older adults across digital skills strategies and partnerships will expand reach and help prevent new forms of digital exclusion, thus proactively supporting them in maintaining social, economic and civic participation.

Without stable, long-term partnerships and federally led strategies, targeted outreach and program sustainability suffer. Older adults most in need, such as those facing greater isolation due to low digital literacy, are left at higher risk of digital exclusion. Public libraries, school boards, social services, health care providers and community organizations are well suited as delivery partners because they are physically close to and trusted by their local older adult populations. However, these organizations need sustained government funding if their capacity for outreach and program delivery is to be fully realized.

Funding

Federal funding for adult digital literacy, including targeted support for equity-deserving groups, is ad hoc, short-term and limited in scope. This holds back deep and sustained program development.[158] Without consistent core funding, providers have little incentive to invest in training curricula, integrate emerging technologies into lessons or build the capacity needed to serve older adults across diverse contexts. Non-recurring grants and narrow funding cycles fragment services, making it difficult to align local digital literacy initiatives with broader provincial and national goals. In Ontario, for example, literacy programs must reapply for funding every year, putting long-term planning at risk.[159] Governments and funders should prioritize multi-year, equity-focused funding models that support long-term infrastructure, staffing and evaluation to protect program continuity.

Fragmented funding structures create a patchwork of siloed programs that make it harder for older adults to navigate and continue their education beyond short-term learning. To build digital skills training programs that offer older adults meaningful, lifelong learning opportunities as technology evolves, adequate funding is needed to pay staff, cover training costs and provide devices.



Conclusion and Recommendations

Canada's growing aging population is steadily transforming the social and economic landscape, making digital inclusion for older adults a core public policy and workforce issue that can no longer be treated as secondary. While many older Canadians have basic digital skills and express strong interest in using technology, persistent gaps in access, training and confidence leave those facing compounded and intersecting barriers at heightened risk of exclusion. A lack of comprehensive policy direction, combined with fragmented program funding, underpins these persistent access issues. Strong national leadership and a clear "tone from the top" are needed to signal the importance of this issue to employers, the private sector and other key partners whose active participation in delivering training remains essential but largely untapped.

Existing programs across Canada have demonstrated effective delivery despite current funding and resource constraints. Proven practices and training delivery models that combine personalized, relationship-based instruction with affordability measures, accessibility and adaptability can improve outcomes for older adults across social, economic and health-related areas. Scaling these models requires expanding their reach, distributing initiatives evenly and empowering local and community-based organizations to deliver inclusive training to those most affected by the digital divide.

Without a coordinated, well-funded, equity-driven approach, the rapid adoption of digital technologies and challenges posed by emerging forms such as AI will continue to deepen inequities, put healthy aging at risk, reduce labour force participation and weaken the social well-being of older Canadians.

Recommendations

The following recommendations are based on the analysis in this report. They provide evidence-based guidance and a call to action for policy makers, employers and community organizations to strengthen digital inclusion for older adults.

Strategic direction and funding

A nationally led digital inclusion strategy for older adults

> The federal government should lead by setting the tone from the top, establishing and directing funding for a national digital inclusion strategy for older adults that recognizes digital literacy, access and skills as factors that shape healthy aging, economic resilience and social inclusion.

> Set specific national targets across social and economic areas, such as workforce initiatives targeting sectors facing labour shortages and improved access to digital health services for at-risk populations. Require detailed reporting broken down by age, gender, income, region, disability and equity-deserving identity to track progress and inform future strategic direction.

Support and scale funding for adult and community-based learning

> Federal and provincial/territorial governments should shift from short-term, project-based grants to multi-year core funding for adult education providers, libraries, senior support organizations and settlement agencies delivering digital skills training to older adults.

> Reinvest in and expand initiatives like DLEP, which has demonstrated success, impact and dedicated streams for older adults and equity-deserving groups. This would enable organizations delivering digital skills training to plan and sustain services over time.

Accelerate infrastructure development and expand affordable access

> Increase investment in critical infrastructure and subsidize affordable access to universal high-speed broadband and device programs. This would ensure that older adults at greatest risk, such as those with low incomes or living in rural, remote and Northern communities, have the basic connectivity needed for digital services and skills training.

Align digital skills with workforce, health and aging policies

> Labour and skills ministries, economic development agencies and employers should co-design targeted digital upskilling and reskilling programs for older workers, including those in precarious or part-time employment, to support continued labour market participation and improve economic security in later life.

> Health and aging policy makers should build digital literacy supports into age-friendly community plans, home-care and chronic-disease management programs, and virtual-care strategies so that digital skills are treated as a requirement for equitable access, not an optional add-on.

> Embed the concept of “ageing in the right place” and refer to the NIA framework to guide digital inclusion strategies for older adults that integrate digital literacy and skills training, device access, and connectivity supports into age-friendly community plans, home and community care programs, and virtual care-strategies, recognizing that technology proficiency and use is an essential component to successfully supporting older adults independence and community engagement.

Artificial intelligence safety, inclusion, and training

> Implement measures to ensure AI-systems undergo performance evaluation that assess the representativeness of various demographic groups and identify biases related to age and intersectionality.

> Build a coordinated AI-training stream within the National Artificial Intelligence Strategy designed specifically for older adults, focused on accessible learning, ongoing support, and applications specific to their needs.

Training design

Use instructional, personalized and accessible delivery models

> Ground training models in learner-centred instructional design that adapts content to the pace and needs of older adult participants. Small class sizes and one-on-one training support help align program objectives with learners' personal goals, health conditions and digital literacy levels.

> Government funding criteria should require flexible delivery (in-person, hybrid and online) combined with accessible materials and formats (such as multilingual support where applicable based on community demographics and assistive technology) as a condition of funding eligibility. This would make programs more accessible and boost participation for older adults facing diverse barriers.

Subsidize or provide devices, connectivity services and technical support

> Policy makers and funders must treat affordability and access to infrastructure as core to inclusion.

> Bundle device and hardware provisioning with subsidized connectivity services and ongoing technical support to provide affordable or free access for digital skills training programs serving low-income and marginalized older adults.

> Create a dedicated "digital navigator" role within or as an extension of program delivery, based at the local level (such as libraries, senior centres and support organizations) to help older adults enrol in low-cost broadband Internet and/or cellular plans, set up and use devices, troubleshoot issues and learn about safe online practices.

> Develop regulatory safeguards to tackle digital fraud and prevent predatory tactics by service providers.

Apply an equity, gender and intersectional lens to initiatives

> Ensure program designers and facilitators understand the diverse barriers faced by older adults in equity-deserving groups by applying an intersectional lens, with special consideration and tailored programming to create gender-safe, culturally sensitive and respectful learning environments that promote inclusion.

> Use "by-and-for" models (such as women-led programs) and require all staff to complete anti-ageism and anti-oppression training. This builds patience, empathy and understanding while preventing internalized ageism and stereotypes that hold back learning.

Use social support, intergenerational and peer training models and trusted community spaces

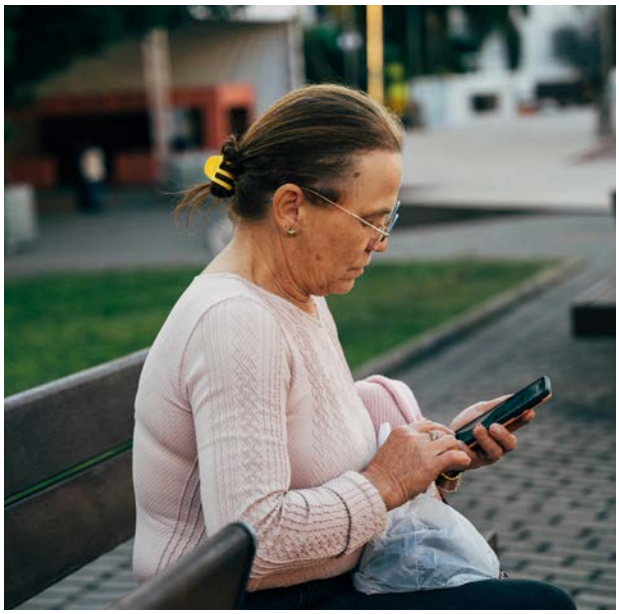
> Strengthen digital skills uptake through relatability and address attitudinal barriers by expanding proven intergenerational and peer-to-peer mentoring models that foster effective engagement and learning.

> Position local community service providers, such as libraries, senior and health centres, settlement agencies and adult training providers, as neighbourhood digital hubs that offer walk-in support, workshops and referral pathways to more advanced digital skills training based on social, economic or health needs.

Promote age-inclusive design in device, software and AI development

> Create and incorporate age-inclusive design standards into devices, software, applications and online services. Use co-design methods to gather usability feedback from diverse older adults. Building usability testing into training programs can provide valuable input and help identify and address age-related barriers that arise during training.

> The rapid growth of AI demands attention to AI literacy among older adults, who have low levels of familiarity and use despite AI's widespread reach. Training should focus on the practical application of AI as a tool to support learning and reduce social isolation, while equipping older adults to spot AI-enabled online threats and scams as they become more common.



Directions for future research and knowledge mobilization

The digital divide experienced by many Canadians, including older adults, is dynamic and continually evolving, demanding sustained, coordinated efforts to address persistent and widening gaps. In-depth research is needed to identify gaps, measure outcomes, and develop evidence-based approaches to social and economic needs that are changing because of digitalization. Funders should prioritize long-term, intersectional research to track progress and digital equity for those at the highest risk of exclusion.

Recognizing the diverse needs of Canada's older adult population means examining and identifying barriers faced by equity-deserving groups who remain under-represented in current digital skills training approaches and research.

A national learning network or knowledge hub connecting partners and organizations committed to promoting the social and economic participation of older adults would enable government, community, industry, and older adults themselves to work together on effective training curricula, evaluation methods, and best practices. Together, these actions can build a foundation of evidence-based, coordinated, and scalable solutions that shape equitable digital skills training initiatives: inclusive, responsive, and grounded

Appendix A: Training Programs

in the lived experiences of older adults.

Table A1

Selected Canadian programs and organizations delivering digital skills training for older adults

Organization/Program	Description
Connected Canadians	Connected Canadians is a national leader in digital inclusion, providing services specifically designed to reduce isolation through a customized, human-centred approach. It has established critical partnerships with organizations like the Municipal Retirees Organization Ontario (MROO) and the Toronto Council on Aging to deliver hybrid workshops and one-on-one sessions. The program's impact is evidenced by its ability to help seniors safely navigate government websites, manage online baking and secure digital legacies. Its structure is particularly effective due to its use of certified trainers and "tech mentors" who conduct initial needs assessments to tailor training to each individual's specific goals, ensuring the learning is relevant and immediate.
Dig-IT	The Dig-IT initiative, managed by HelpAge Canada, addresses the "two-tiered digital divide" by providing both hardware and training to low-income seniors. Evaluation data indicated that this program successfully reaches under-represented groups, having supported underserved older Canadians across numerous provinces and territories. The program's effectiveness stems from a peer-to-peer teaching model, as research within the program shows that older adults with lower digital literacy skills prefer learning from peers of a similar age. Additionally, the inclusion of a six-month cellular data plan and a tablet for participants removes the critical barrier of affordability, which is frequently cited as a primary deterrent for this demographic.

Organization/Program	Description
Cyber-Seniors	Cyber-Seniors utilizes an intergenerational model that has demonstrated high satisfaction and measurable skill improvement. Internal survey data reported as recently as 2025 indicates that 98% of participants found the instruction met their needs, with 86% highlighting personalized mentoring from youth volunteers as the most integral component. The program has trained over 4,200 youth mentors and reached more than 25,000 seniors, providing them with the skill to use video calls, online shopping and digital security tools. The structured training for youth mentors ensures they are equipped with specialized communication strategies for older learners, which is a key factor in the program's success.
Digital Literacy Exchange Program (DLEP)	Federal oversight through the Digital Literacy Exchange Program (DLEP), managed by Innovation, Science and Economic Development Canada (ISED), provided a foundational framework for these digital skills training initiatives until its second phase concluded in early 2025. The program's impact was broad, training over 650,000 participants across two phases by finding local non-profits and libraries that could pivot to meet the unique linguistic and geographic needs of their specific communities.[160]
Ontario Digital Literacy and Access Network (ODLAN)	Ontario Digital Literacy and Access Network (ODLAN) is a non-profit that aims to remove access barriers and address digital divides in 2SLGBTQ+ communities. It connects 2SLGBTQ+ older adults with services and tech-focused organizations whose mandate is to support digital literacy and device lending.
Student–Senior Isolation Prevention Project (SSIPP)	The Student–Senior Isolation Prevention Project (SSIPP) is a student-led community initiative that pairs student volunteers with seniors for technology training, social connection and comfort, health literacy, connection to community resources and grocery services. Isolated seniors are referred to the program by health care providers or coordinators. The program at the University of Toronto has over 270 volunteers and has now expanded to 12 university campuses.
HelpAge Canada's Let's Connect	HelpAge Canada's Let's Connect program provides digital education, learning resources, technological devices, data plans and support to community-based seniors' services organizations to improve older Canadians' ability to navigate our ever-changing, connected world. To date, the program has resulted in over 800 older Canadians with digital access and technical support, virtual programming in 29 British Columbia communities, reaching thousands of older adults, and 390 Elders in eight Nunavut communities building digital skills by connecting with local youth.[161]
North York Women's Centre's Tech Savvy Empowered Older Women	North York Women's Centre's Tech Savvy Empowered Older Women program provided tablets and computer training to 53 older women who live alone so they could access virtual programs. Individualized in-home training was provided until the women became comfortable using the tablets. The Centre also paid for data for those who did not have Internet plans (60% of participants). A virtual drop-in activity session was held every Friday on Zoom that about half of the women participated in.[162]

Organization/Program	Description
The Digital Navigator Model (National Digital Inclusion Alliance)	The primary objective of the Digital Navigator model is to provide a single, trusted point of contact for older adults to overcome adoption barriers related to connectivity, devices and skills. This training model utilizes "Digital Navigators," trained mentors who provide one-on-one, on-demand support tailored to an individual's specific needs. Impact data for 2026 indicates that this model is highly effective, with 86% of participants strengthening their digital skills and 80% reporting increased confidence and safety when using technology. By embedding these navigators into existing community agencies, the program ensures that digital support is accessible and integrated into broader social services.
Connected Canadians & Toronto Council on Aging (NORC Partnership)	Connected Canadians focuses on reducing social isolation by providing personalized, human-centred technology training for seniors. Their partnership with the Toronto Council on Aging (TCA) specifically targets Naturally Occurring Retirement Communities (NORCs) through a peer-led model that trains on-site mentors to provide sustainable, long-term support to their neighbours. As of early 2026, the program features specialized workshops such as "Cyber Incident First Aid," which teaches seniors real-time strategies to manage digital security threats and recover from potential scams. This approach has proven highly successful, with localized help ensuring that assistance is always available within the residents' own living environments.
TELUS Wise	TELUS Wise is a national digital citizenship program that offers specialized resources for seniors to help them participate in the digital world safely. Their "Online Basics" series, developed in partnership with MediaSmarts, is tailored for seniors and newcomers, focusing on high-utility tasks like video chatting and navigating government portals. Beyond education, TELUS also provides financial support through its "Internet for Good for Seniors" program, ensuring that low-income older adults have the physical connection needed to apply their new digital skills.
ABC Life Literacy Canada (ABC Connect for Learning)	ABC Life Literacy Canada focuses on adult learners who may face literacy or language barriers. Their Connect for Learning program is specifically designed to be accessible, using "clear language" principles to de-mystify the web. A standout feature of their work with seniors is the creation of the "Digital Literacy Dictionary," which translates technical jargon into everyday terms, helping seniors feel included in a modern, tech-centric society.

Table A2

Examples of programs, initiatives and organizations targeting digital skills training for older adults in Canada

Program/ Organization	Objective(s)	Training Model	Outcomes/Impact
Connected Canadians[163]	> Promote digital inclusion for older adults by providing free technology training and support to improve their quality of life > Use technology as a tool to reduce loneliness by connecting seniors with loved ones and community resources > Equip older adults with the knowledge to navigate the Internet safely, specifically focusing on fraud and scam prevention > Enable seniors to access essential online services, such as banking, health care portals and government resources	> Pair seniors with tech-savvy volunteers—often newcomers to Canada—for customized, 60-minute sessions tailored to the senior's specific goals > Volunteers must complete a proprietary Digital Mentorship Certification, which includes security assessments and practical evaluations > Delivered 2026 workshop series (e.g., in partnership with MROO) on advanced topics like "Cyber Incident First Aid" and "Digital Life for End of Life" > Offers unique initiatives such as Social Gaming for Seniors to foster engagement through play and Support for Families of Hospital Patients to maintain connections during illness > Provides technology mentorship training to staff and volunteers at other senior-serving organizations to scale support nationally	> Operates as Canada's largest digital inclusion charity with a goal of providing free tech support to all Canadian seniors by 2030 > Hundreds of seniors trained to recognize phishing and online scams, significantly reducing their vulnerability to financial elder abuse > Over 450 Technology Mentors onboarded, facilitating mutual cultural exchange between newcomers and older Canadians > Hosts interactive Zoom webinars and in-person workshops, reaching thousands of members through key provincial partnerships > Introduced Alexa Smart Properties for senior living in Canada to streamline resident communication and care team productivity

Program/ Organization	Objective(s)	Training Model	Outcomes/Impact
Dig-IT[164]	> Provide low-income or under-represented seniors with the hardware and data connectivity required to access the digital world > Enable seniors to master essential "life skills" such as navigating tablets, using email and connecting to Wi-Fi > Educate older adults on identifying cyber-risks, including online dating scams, phishing and financial elder abuse > Support independent living by training seniors to use technology for grocery delivery, banking and virtual health care appointments	> Participants are provided with a tablet on loan for a six-month period, pre-configured for ease of use and including a cellular data plan > Seniors are paired with volunteer digital coaches for customized, one-on-one sessions that move at the learner's own pace to reduce "tech anxiety" > Incorporates a model where seniors can learn alongside their peers, which research shows is more effective for building long-term confidence in older populations > Includes a year-long subscription to Best Buy's Geek Squad, providing 24/7 technical support so seniors do not feel "stranded" by technical glitches > Participants are referred through trusted local partners (senior centres, non-profit housing), ensuring the program reaches the most isolated individuals	> Supported 8500+ underserved older Canadians across provinces and territories > Research within the program shows that older adults with lower digital literacy skills prefer learning from peers of a similar age (peer-to-peer) > Subsidized service and device provision removed affordability barrier, a primary deterrent for this demographic

Program/ Organization	Objective(s)	Training Model	Outcomes/Impact
Cyber-Seniors[165]	> Bridge the digital divide for older adults by reducing social isolation through increased social and digital engagement > Improve digital competence, confidence and attitudes toward technology among seniors	> Intergenerational, youth-led mentorship model > Structured mentor training emphasizing practice, empathy, communication and understanding the aging process > One-on-one and small-group training sessions > Flexible delivery formats (e.g., structured classes, drop-in sessions, community-based programs)	> Program evaluation measures show improvements in senior' digital competence, social engagement, quality of life and attitudes toward technology > Positive intergenerational outcomes, including improved age perspectives, empathy and attitudes toward aging among youth mentors > Scalable and replicable model adopted by schools, community centres, libraries and senior residences, supported by standardized tools for impact measurement and reporting
Digital Literacy Exchange Program (DLEP)[166]	> Improve foundational digital skills among Canadians facing barriers to access > Support inclusion in the digital economy for under-represented groups, including seniors, low-income individuals, persons with disabilities, newcomers, Indigenous Peoples, rural and remote residents, and language minorities	> Funded third-party initiatives delivered by non-profit organizations and community groups > Flexible delivery tailored to community needs: group workshops, on-on-one training, drop-in sessions and train-the-trainer formats	> Over 650,000 Canadians trained in digital literacy skills through two funding phases, surpassing initial reach targets > 36 funded projects delivered training, with funding amounts ranging from $19,000 to over $3 million > 7,657 trainers trained through funded projects, supporting sustained local delivery capacity > Evaluation found the program increased access to digital literacy training for under-represented groups and supported improved confidence and skills in using digital technologies

Program/ Organization	Objective(s)	Training Model	Outcomes/Impact
Ontario Digital Literacy and Access Network (ODLAN)[167]	> Reduce digital literacy and access barriers affecting 2SLGBTQ+ communities in Ontario and Canada by promoting inclusive, safe and equitable digital participation	> Acts as a resource hub connecting individuals and organizations with tools, training and consulting to build digital inclusion strategies > Provides educational materials, training packages and webinars on digital literacy, online safety and inclusive digital practices > Supports community partners to design and deliver inclusive digital programming and resources tailored to the needs of 2SLGBTQ+ individuals and service organizations	> Compiled and curated a resource portal of hundreds of digital literacy and access resources, including materials relevant for older adults and marginalized communities > Supported outreach, training and awareness through webinars, guides and online safety modules addressing inclusive digital practices and harm reduction for 2SLGBTQ+ > Delivered community-based initiatives such as Digital Resilience: Addressing the Rise of Transphobic Online Hate, aimed at reducing online harms and improving digital safety for 2SLGBTQ+ communities through nationally funded programming

Program/ Organization	Objective(s)	Training Model	Outcomes/Impact
Student–Senior Isolation Prevention Project (SSIPP)[168, 169]	> Primary goal of reducing social exclusion and loneliness among older adults, especially those homebound or at high risk > Create meaningful social connections between health professional students and seniors, focusing on companionship rather than clinical care > Provide seniors with accurate, up-to-date health information and help them navigate essential community resources > Offer medical and health professional students early experiential learning opportunities in geriatrics to improve attitudes toward adult care	> Standardized introductory modules for student volunteers focusing on effective communication strategies specifically for older adults > Comprehensive training in identifying and responding to mental health crises, elder abuse and dementia > Required coursework in anti-ageism and anti-oppression to ensure culturally sensitive and respectful interactions > Monthly geriatric health lectures and established national protocols to guide students in providing high-quality support > A health-care-led referral process ensures students are properly matched with seniors who have been identified as high-risk by their medical teams	> Significant qualitative improvements in older adults' demeanour, with participants reporting feelings of "awakened hope" and value > Enhanced system navigation, helping seniors secure necessary food, supplies and medical services during periods of isolation > Significant increase in the likelihood of student volunteers pursuing specialties focusing on older adults > Successful national expansion to over 10 Canadian medical schools, delivering hundreds of hours of social support to hundreds of seniors annually > Established a consistent "tele-intervention" support network that serves as a proactive monitoring mechanism for seniors living alone

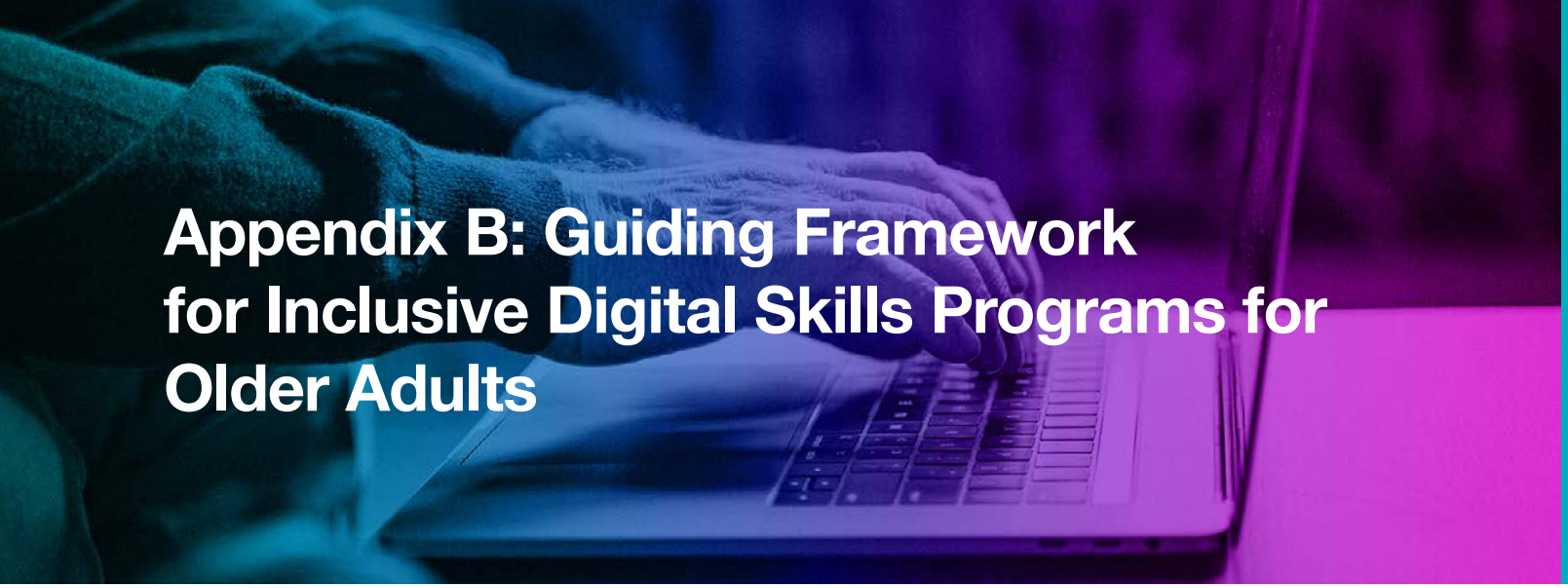
Program/ Organization	Objective(s)	Training Model	Outcomes/Impact
HelpAge Canada's Let's Connect[170]	> Reduce digital exclusion among older Canadians by addressing both access to technology and necessary skills > Support older adults to use digital technology for communication, essential services and social participation, contributing to reduced isolation and improved well-being > Focus on equity by reaching older adults in rural, remote and Northern communities who face significant barriers to connectivity	> Provides digital education, resources and technical support through community-based seniors services organization > Supplies technology and training support tailored to local community needs > Flexible delivery across regions with virtual and in-person options facilitated by partner organization	> Over 800 older Canadians received devices, digital skills training and technical support through funded delivery partners demonstrating direct reach to older adults who often experience limited access > The program expanded beyond its initial pilot to over 40 community partners nationwide, indicating scalability and uptake by local organizations committed to digital inclusion > In BC alone, Let's Connect supported virtual programming in 29 communities, connecting thousands of older adults with training opportunities that were previously unavailable locally > The program addressed connectivity gaps in Canada's North by supporting 390 elders across eight Nunavut communities to build digital skills, contribute to online communication and engage in virtual programming

Program/ Organization	Objective(s)	Training Model	Outcomes/Impact
North York Women's Centre's Tech Savvy Empowered Older Women[171]	> Reduce isolation by providing older women with the hardware and skills necessary to navigate the digital world > Educate participants on identifying and protecting themselves from online scams, fraud and digital abuse > Use technology as a tool to reconnect homebound seniors with their communities, families and religious or social groups > Empower older women to access essential virtual services independently, including health care portals and online government resources	> Provided tablet computers to isolated senior women living alone to ensure they have the necessary tools for participation > Offers patient, step-by-step tech training designed for beginners, focusing on practical use cases like video calling and Internet navigation > Operates under a "by older women, for older women" model, ensuring a non-judgemental atmosphere that builds self-esteem alongside technical skills > Combines technical training with safety workshops (often in partnership with organizations like Wen-Do Women's Self Defence) to build both physical and digital confidence > Includes weekly group sessions that offer free lunch and transportation on public transit, ensuring that physical and financial barriers do not prevent attendance	> Participants report a significant increase in social connectivity, using their new skills to attend virtual church services, exercise classes and family gatherings > Older women move from being "technologically excluded" to feeling empowered and capable of managing their own digital lives > Senior women gain the specific tools needed to recognize predatory online behaviours, reducing their vulnerability to financial elder abuse > By moving programs into a hybrid or virtual space, the initiative has successfully reached seniors who were previously unreachable due to mobility or health constraints

Program/ Organization	Objective(s)	Training Model	Outcomes/Impact
Digital Navigator Model[172]	> Reduce digital inequities by supporting individuals who face barriers to connectivity, device access and digital skills > Help participants obtain affordable Internet, appropriate devices and practical support to use technology effectively and safely	> Client centred, one-on-one support delivered by a trained Digital Navigator > Assistance includes broadband enrolment, device acquisition, basic digital skills training, online safety guidance and troubleshooting support > Flexible delivery through in-person, phone or virtual formats, depending on participant needs > Embedded within community-based organizations such as libraries, workforce agencies and social service providers > Emphasizes ongoing problem solving and follow-up rather than one-time training sessions	> Widely adopted across community digital inclusion initiatives in the United States and increasingly referenced as a best practice model in Canada > Model aligns well with Canadian digital inclusion priorities by addressing affordability, access and skills simultaneously, particularly for seniors, newcomers, low-income households and rural or remote communities > Ongoing navigation support helps reduce persistent barriers such as high connectivity costs, device setup challenges and limited digital confidence > Programs using this model typically track quantitative indicators such as number of participants supported, successful Internet connections and devices distributed

Program/ Organization	Objective(s)	Training Model	Outcomes/Impact
Connected Canadians & Toronto Council on Aging[173]	> Reduce loneliness by empowering seniors to use technology for connecting with loved ones and engaging in community life > Equip older adults with the skills to recognize online fraud, pushing and scams (e.g., "Staying Safe on the Internet" workshops) > Foster the digital skills necessary to access essential services, such as online banking, health portals and government resources > Support seniors in Naturally Occurring Retirement Communities (NORCs) within Toronto to stay connected and safe in their own homes	> Pair seniors with tech-savvy volunteers—including many newcomers to Canada—for personalized, human-centred technology support > Offer a series of virtual (Zoom) and in-person workshops covering diverse topics, from basic device use to "Logging Out: Preparing Your Digital Life for End of Life" > Train residents within NORCs to act as on-site digital mentors, creating a sustainable peer-support network within the community > Volunteers complete a rigorous process, including self-paced modules, group sessions and role-play evaluations, to ensure they can teach seniors effectively and patiently > Leverage partnerships with senior-serving organizations (like TCA and local senior centres) to identify and reach seniors who need help most	> In 2026, the partnership continues to deliver interactive workshops (e.g., with MROO and TCA) that have successfully transitioned hundreds of seniors from "digitally excluded" to "digitally confident" > Targeted workshops on cybersecurity have empowered seniors to manage their finances safely, with participants learning to spot scams in real-time > The program facilitates a "double impact" where newcomer volunteers gain cultural awareness and conversational practice while seniors feel a sense of pride in welcoming new Canadians > By training on-site mentors in Toronto NORCs, the project ensures that tech support remains available even after formal workshops conclude > Began as a local initiative and scaled into a national model, with a 2026 goal of providing free tech support to all Canadian seniors by 2030
TELUS Wise (Seniors)[174]	Provide seniors with tools to navigate the Internet safely Enhance digital safety and privacy knowledge Connect seniors to loved ones through secure platforms Educate on identifying sophisticated online scams	Offered in-person or virtually, led by trained TELUS Wise Ambassadors A dedicated physical or digital booklet covering everything from smartphones to gaming Short, high-contrast videos designed specifically for non-digital natives Combines training with low-cost Internet programs for low-income seniors	Offers a range of easily accessible resources in a variety of formats. Significant reduction in "tech anxiety" regarding online banking and social media use Empowered seniors to autonomously manage privacy settings and identify phishing attempts

Program/ Organization	Objective(s)	Training Model	Outcomes/Impact
ABC Connect for Learning[175]	> Empower seniors who are uncomfortable with the Internet to get started using it > Provide accessible, "clear language" learning materials > Build foundational knowledge of Internet safety and security > Support community agencies in delivering senior literacy	> Designed with large fonts and simple instructions for those with literacy barriers > Mirrors real-world threats (like fake emails to build practical, defensive skills) > Training is tailored to the specific questions and pace of each individual senior > Partnership with libraries and local senior centres to provide a "Digital Literacy Dictionary" for technical jargon	> Increased access to vital online health care and government information for the elderly > Over 650,000 Canadians (including seniors) reached through funding from DLEP > Participants reported higher confidence in using QR codes, Google Maps, and video conferencing apps > Established a sustainable network of local "Learner Advocates" to support seniors long-term



Appendix B: Guiding Framework for Inclusive Digital Skills Programs for Older Adults

Table B1

Framework for designing inclusive digital skills programs for older adults in Canada

Program dimension	Guiding principles	Best practice
Objective(s)	> Clearly defined and measurable goals > Clearly defined primary/target population > Explicit connection between skills concrete tasks or application > Embedding social connection, belonging and well-being alongside technical goals	> Objectives explicitly state social, functional and/or safety outcomes (i.e., online threat and scam detection, telehealth access, reduced loneliness, understanding of device or application) > Target groups are selected with tailored aims (i.e., ensuring equitable access to devices and opportunities to improve proficiency for low-income seniors) > Objectives describe how skills support independent living, access to services, and/or engagement in social and/or economic activities > Individual empowerment by ensuring mental well-being, confidence and comfortability of learners

Program dimension	Guiding principles	Best practice
Training model and relationship building	> Intake/needs assessment and tailoring of content, pace and modality to meet individual goals > Capacity to offer one-to-one, small-group mentoring (peer, intergenerational, or "navigator" roles) > Trainers/mentors trained in anti-ageism, empathy, communication and patience, tailored to the specific barriers faced by target population > Leverages local and/or trusted networks and relationships of target population to help facilitate or deliver training > Flexible delivery mode formats are provided (i.e., in person, hybrid, virtual; structured courses, walk-in or based at care facilities) to improve inclusion	> Individual goals are incorporated into pedagogy and training offers flexibility depending on learner's abilities > Structured mentoring (one-on-one or small class sizes) are central to program design and training staff roles are clearly defined, including a designated "navigator" to provide personalized assistance > Training staff and mentors complete mandatory onboarding training in tailored pedagogy, aging process, intersectionality and equity, and safety > Utilize existing trust networks and/or ensure comfortability and familiarity by pairing training staff with learners consistently, to enable trust and progressive learning > Adaptable hybrid models are available depending on the evolving needs of participants
Access and connectivity	> Device and hardware provision (i.e., subsidized, loaned, discounted) > Pre-configured tools to reduce setup barriers (i.e., installation of apps, preloaded accessibility settings) > Program facilitates and arranges subsidies for connectivity services and provides support for enrolment in affordable options > Ongoing technical help built-in to programming and options that extend beyond training > Considerations for logistics and wraparound supports (i.e., transport, timing/flexibility, location, food-accommodation during mealtimes)	> Program supplies necessary access to cost-free or affordable devices and provides support in selecting appropriate hardware > Devices are "ready to use," loaded with relevant software, convenient shortcuts and accessibility options already configured > Help obtain low-cost connectivity services (i.e., cellular data, home Internet) and explain various options to aid with selection > Clear and dedicated ongoing support options for troubleshooting and challenges that arise during and/or post-training > Subsidized transport options, accessible locations, flexible scheduling and supports for low-income households

Program dimension	Guiding principles	Best practice
Curriculum content	> Lesson objectives structured around content highly-relevant to older adults (i.e., banking, telehealth, social networking/messaging, essential online services, online safety) > Content and materials designed to ensure accessibility and inclusivity for older adults > Interwoven application practices that reflect real use cases and scenarios > Learning activities that motivate engagement and a training environment that fosters effective, smooth and natural knowledge transfer between trainers and learners, and between peers	> Curriculum is centred around tangible skills that are directly applicable to the needs of older adults and translates to real-world application > Simple to navigate course content, elements designed to address age-related impairments or challenges (i.e., simple language, large fonts, clear visuals, user interface options, glossary of related technical terms) > Extensive hands-on practice, step-by-step exercises, and encouragement of repeated rehearsal of various applications that directly correlate with intended real-world use that aligns with training objectives
Inclusion and equity	> Explicit tailoring for target equity-deserving groups (i.e., women, racialized groups, newcomers, Black individuals, Indigenous Peoples, older adults living with disabilities, and those belonging to 2SLGBTQ+ communities) > Staff and facilitators are trained in anti-ageism, anti-oppression and culturally sensitive practice > Safe, non-judgemental and culturally/identity-sensitive and affirming learning environment	> Program design, lessons, facilitation and support tailored to specific communities' contexts, needs and experiences > Training and policies address ageism, racism, sexism, homophobia/transphobia and other forms of exclusions > Training staff possess the skills and knowledge to actively create a learning environment where diverse older adults feel safe, included, respected and seen
Partnerships and reach	> Training programs are embedded in and delivered in collaboration with local trusted organizations (i.e., libraries, senior centres, housing providers, health services, community groups, employers, adult education providers) > Systematic referral mechanisms to ensure that training reaches older adults at the highest risk of exclusion (i.e., rural, low-income, socially isolated) > Capacity to develop and leverage partnerships and collaboration to share effective training programs with other relevant organizations	> Strong partnerships with multiple trusted organizations that help with co-design and skills training delivery, and promote outreach, recruitment, engagement and retention > Clear referral pathways from health and social services supported by proactive outreach to older adults facing heightened intersectional barriers > Adapted approaches leveraging partners to reach rural, remote and Northern or underserved areas for programs designed to address older adults residing in geographically isolated regions > Cross-sharing resources, training curricula, packages and tools to strengthen and expand the ecosystem

Program dimension	Guiding principles	Best practice
Outcomes and scalability	> Clear metrics and indicators defined (i.e., skills, confidence, social connection, safety behaviour changes, employment opportunities) > Collect quantitative (i.e., surveys) and qualitative (i.e., learner testimonials) data > Harness training staff and learner feedback to refine training > Curricula structure, training materials, lesson templates and digital resources that support replication > Strong plan in place for stable funding and ongoing staff and/or volunteer capacity to meet short-term and long-term objectives and delivery	> Multiple indicators tracked, including skills acquisition, reported use post-training, learner confidence and social/safety outcomes > Mixed-methods with structured tools and regular analysis to analyze training effectiveness and measure improvement overtime > Regular, structured feedback loops and advisory roles for older adult participants and related community partners to build responsive and dynamic programming > Documented models, mentor training packages, and resources where scaling is an intended element in training design > Strategy for program sustainability (i.e., funding, partnerships) and ongoing development

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