Impact case: ICT among senior citizens

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Abstract
This impact case describes the results of a study of access and IT-literacy among Swedes aged 65-85. One of the most surprising results was that 20% did not have such access and, moreover, this is not a figure that is expected to decrease over the years as younger, IT-literate cohorts grow older. One important reason for this is the decrease of material, social and discursive resources – and not least health – associated with aging. Such facts present serious challenges regarding the increasing reliance on IT-infrastructure for all sorts of services in society – media access, banking, shopping, health service…you name it. A large part of the population risks increasing degrees of exclusion. The authors of the study wrote a debate article in the largest Swedish newspaper (DN) which opened the floodgates. It was picked up by newspapers, radio news, radio debate programs, and specialist press and advocacy media. The 20% figure was quoted nationwide. The topic became hot, as evidence not least by a visit from the prime minister and the finance minister to an IT-education for/by pensioners in January this year. In the following we give some background and describe the study, the results and the impact in more detail.

ICT AMONG SENIOR CITIZENS

The western world faces a challenge with an ageing population. Although it is of course a positive thing that more people can enjoy a long, healthy life, this brings about a complex economic situation in society as well as a strain on the healthcare system.
Another development in our society is that of how our everyday life has turn digital. Daily life is now permeated by a range of more or less mobile devices for online connection, such as mobile phones, tablets and laptops. As a consequence, the Internet has increasingly become an infrastructure for all kinds of services, including commercial (banking and shopping), public (contacts with tax agencies, social insurance agencies, etc.) and health-related ones.
The degree of digitalization of information and services in Sweden is high, and there is also a manifest effort to digitalize the country's public and health-related services. Furthermore, the level of access to ICT is high compared to the rest of the western world.
Research has shown that elderly people's access to and use of ICT tends to be more limited than those of other social groups. Emerging patterns of digital inclusion and exclusion among senior citizens in Sweden today can, to some extent, serve as a harbinger of possible future developments in other digitalizing societies.

The two societal developments are separate, but have also become interrelated. While the emergence of an ageing population has been interpreted as a challenge for contemporary welfare societies, digitalization has come to be perceived as a potential partial solution to the problem: with help from digitalized information and communication, both contacts with and services to an ageing population can be made more effective.
Peoples access to and ability to use digital applications vary, and that variation is even more accentuated among senior citizens. For some groups of elderly, the digitalization of societal communication and services might actually decrease their ability to participate and be included. This points to the importance of paying close attention to degrees of access to information and communication technology (ICT) among senior citizens, as well as to seniors' abilities to use it. To what extent do senior citizens have access to different devices? What abilities do they have to make use of various ICTs?

THE STUDY

In the autumn of 2015 a postal questionnaire was sent to a simple random sample of 2000 Swedish citizens aged 65–85. 1264 questionnaires were returned, giving a response rate of 63%. 1200 persons responded by mail, only 64 digitally, that is, 5%.

Drawing on data derived from this nationwide survey the study analyses the general patterns of: (a) degrees of information and communication (ICT) access and (b) ICT-literacy among Swedish senior citizens. The overall patterns of access and literacy are analysed in light of senior citizens' assets – conceptualized as material, discursive and social resources – and their age and gender. The analysis reveals a positive correlation between levels of material (e.g., income), discursive (e.g., English skills) and social (e.g., social networks) resources and access to ICT. With greater resources, the average number of devices increases. The analysis also reveals a positive correlation between discursive and social resources and ICT-literacy. Gender has no bearing on access to devices, but might have some effect on ICT-literacy. The correlation between age, access and literacy is negative. With increasing age, both access and literacy decreases. In this respect, the study reveals a generational effect. However, since all three resources tend to decrease over the life cycle, the results are also discussed in terms of an age effect. These data and our analyses are contextualized by a critical discussion that reflects on the implications of these general patterns: What do they mean for senior citizens' abilities to be included and participate in a continuously digitalizing society?

RESULTS

Access to ICT should not be understood as a dichotomy, i.e., either you have access or you do not. There are, of course, elderly people who are digitally excluded in the sense that they completely lack devices, and there are also so-called silver surfers, that is, elderly persons who are digitally included and have the full range of equipment: laptops and tablets at home, and mobile smart phones to use outside the home. But it is also possible to find people who have only a single device, and, consequently, more limited opportunities to utilize digital technology.

20% of the respondents lack access to ICT, and, consequently, 80% have some kind of device. However, 14% have only one device. They constitute a category that is not digitally excluded, but they are nevertheless not fully included, insofar as their technological opportunities are limited.

Eighty per cent of respondents with access to only a single device have either a laptop or a desktop. If they work properly and the users have basic ICT-literacy, then these respondents are reasonably well-equipped to enjoy the benefits of digital technology – watch TV, read the news, pay bills, etc. – albeit predominantly in their homes or indoors. When outside of the home or travelling, these 80% have limited opportunities to benefit from the services that mobile technology provides. On the other hand, those with only a smart phone or an e-book reader, while quite few in number, are severely limited on the whole. For instance, in the Swedish context, it is difficult to fill out forms and contact public authorities, e.g., the Swedish Pension Agency, using only a smart phone.

1. **Resources decrease with age**

Samuelsson, Olsson and Viscovi's data and analyses suggest that individuals' resources are not constant. Instead, they seem to vary over the life cycle, and among average senior citizens, resources seem to decrease with age. The simple act of retiring means reduced income, since few pension schemes fully compensate for lost earnings. To lose a life-partner also means financial loss, and – above all – social loss. With increasing age, social networks become smaller; friends pass away and declining physical capacity makes it more difficult to participate in clubs and

associations. Finally, as a natural consequence of ageing, our cognitive abilities, and thus our discursive resources, decline.

2. **ICT literacy is not constant**

Although it may seem obvious, it is worth mentioning that ICT-literacy is not like conventional literacy. Almost everyone who has ever learned to read will normally retain this ability throughout their lifetime, and most literate persons also have continuous access to printed and broadcast media. With ICT, the situation is different. On the one hand, we must invest fairly regularly in hardware and software, and the market is not likely to abandon this business model. Those who do not update their technology will be gradually excluded. We must both maintain our systems and continuously learn new things, because interfaces and applications are constantly changing.

Taken together, this means that we cannot consider ICT-access and literacy as solely related to generation. Access and literacy are strongly associated with resources, and since these decline with age, both access and literacy become a question of age. Thus, we cannot assume that contemporary silver surfers who are 65 will remain equally included at the age of 85 or 95.

IMPACT

These insights have served as an eyeopener to policymakers. If one of the ideas about how to solve problems associated with an ageing population is to make more extensive use of digitalized public services and e-healthcare, then an awareness of the fact that such policies have significant limitations is essential. For a substantial proportion of senior citizens, specifically those in the oldest age span, digitalization appears, in reality, to be a much less viable option.
As a result of this study and the media coverage the topic has been, and still is, discussed all the way up to the Swedish parliament. Several efforts and investments are coming and have been made to enhance senior citizens ICT-literacy and access to new technology. Organizations and municipalities as well as the Swedish state are now launching educational efforts, ICT-guides, public ICT-centers etc.

For future research it is important to pay additional attention to senior citizens' opportunities for inclusion. One useful step forward for research is to focus more on senior citizens' everyday practices. More specifically, what we are suggesting is to move beyond analyzing degrees of access and literacy and to look into the ways in which digital media are used. In light of degrees of access and literacy, what becomes of ICTs in senior citizens' everyday lives? What happens among various groups of elderly users? In our opinion, survey data is an important asset in this regard. Such analyses of everyday usage of digital media, however, do not need to stop there. They could, instead, move beyond statistical measurements and work with data derived from interviews in and observations from everyday lives of senior citizens. Among other things, this would offer research the opportunity to also listen to and analyze senior citizens' own reflections on what it means to grow older in a digitalizing society.

Voices from the stakeholders

SeniorNet Växjö
Thomas Thörn, informationsansvarig

About the impact of the research within the organization:
Research results from "Digital Exclusion among the Elderly" have been a guide to SeniorNet Växjö's business development. We found that our members mainly consisted of a well-educated

high- and middle class. Our business is difficult to reach out to the people in the "digital exclusion". A strategy has therefore been developed to reach seniors who are not yet digitally involved. After nearly two years of fruitless attempts to get support from Växjö municipality in realizing our strategy, we are now applying for a 3-year project at the *Arvsfonden Foundation,* which is largely based on Linnaeus University's research findings. The activities of the project will be conducted independently from SeniorNets regular activities, but with SeniorNet as project owners. In short, the project is summarized in the following sections:

• The target group is people 55+ where specific actions are directed against persons with functional variations.

• Create a network of civil society organizations to establish contact areas for the target audience. The network now includes 40 disability organizations, the tenants association, the Tallgården Activity Center and the Studiefrämjandet. Our ambition is to extend the network with pensioners organizations, immigrant associations, hometown associations, town councils and "fiber associations", etc., as well.

• Collaboration with authorities, municipal administrations and IT companies to enable long-term financing of operations after the end of the project.

• Do business with proximity to the target group found in environmental areas and smaller rural areas.

Who has benefited from research within or outside your organization?

The University has participated in a national business conference, the association's handled events organized by SeniorNet and an estradiophone conversation at a seniors' exhibition about the elderly digital life. On these occasions, the research results have been presented.

How significant is the benefit of research within your organization?/How has research contributed or led to effects within your organization?

Research has increased knowledge about the elderly and digitization within the organization, but also contributed to increasing involvement and motivation among the supervisors through the confirmation they received on the importance of their work efforts. One important effect within the organization is that new business areas targeted at new target groups, previously excluded.

Are there any plans to further utilize or apply research within your organization

We have a continuous dialogue with the University and an ambition and will to translate research results into concrete activities for increasing older people's participation and understanding of the transformation of society that digitalization entails.

SeniorNetSweden was founded when the home computer broke through and the internet became known to the general public just before the turn of the millennium. One could still live comfortably without computer and internet connection. When the mobile technology with the iPhone and later the Android phones quickly became men's and women's property, SeniorNet experienced a hectic time in the early 10th century. In a few years, the number of members doubled each year to stabilize around 1,000 members. Today, I experience a challenge that may be greater than the breakthrough of mobile technology. AI opens up for a multitude of applications that will cause profound changes in society, and as usual, older people may end up in the backwater. At the same time, I fear that the digital divide may widen further. SeniorNet must start planning how we can provide resources and skills for our education work on AI-driven technology development, to facilitate the entry of the elderly into the new digital landscape. Here I hope that SeniorNet can collaborate with the

University as well as IT companies, in order for our seniors to be given the opportunity to take advantage of the new technology's benefits.

References:

Olsson, T., Samuelsson, U., Viscovi, D. (2018). At risk of exclusion?: Degrees of ICT access and literacy among senior citizens. Information, Communication and Society (pp. 1-18).

Samuelsson, U., Olsson, T., Viscovi, D. (2017). Differences and similarities among Swedish senior users and non-users of the internet: Who and Why?. Conference paper, Senior Citizens Domesticating ICTs Symposium, Lund, 27-28 April, 2017.

Olsson, T., Samuelsson, U., Viscovi, D. (2016). Senior Citizens' ICT Access, Use and Literacy: How Material Resources Matter. Conference paper, 6th European Communication Conference : Mediated (Dis)Continuities : Contesting Pasts, Presents and Futures, Prague, 9-12 November, 2016.

Samuelsson, U. (2015). The future is already here – Learn to master IT!. Conference paper, The 6th conference of the ESREA Network on Education and Learning of Older Adults, Jönköping , 14-16 October, 2015.

Some of the media coverage:

- DN debatt - https://www.dn.se/debatt/var-femte-aldre-stangs-ute-i-det-nya-digitala-samhallet/
- Artikel i DN (Insidan) - https://www.dn.se/arkiv/insidan/en-del-aldre-valjer-bort-ett-digitalt-liv/
- Artikel i TTELA - http://www.ttela.se/nyheter/trollh%C3%A4ttan/det-%C3%A4r-ett-demokratiproblem-1.4197122
- Riksnyheter Ekot https://sverigesradio.se/sida/artikel.aspx?programid=83&artikel=6856480 , https://sverigesradio.se/sida/artikel.aspx?programid=91&artikel=6790209
- PRO Pensionären 3/2017 – intervju med U Samuelsson
- SPF Senioren - https://www.senioren.se/nyheter/400-000-seniorer-utan-internet/
- Äldre i centrum - http://storage.lenanders.se/aic/171/files/assets/basic-html/page-54.html#
- Nordegren och Epstein i P1 - https://sverigesradio.se/sida/avsnitt/960737?programid=4058
- Kvällspasset i P4 4/10 2017 – Medverkan av U Samuelsson
- SVT Nyheter - https://www.svt.se/nyheter/lokalt/smaland/forskare-minst-400-000-aldre-lever-i-digitalt-utanforskap
- Hela Gotland.se - http://www.helagotland.se/samhalle/aldre-riskerar-att-hamna-utanfor-14999572.aspx
- Fokus Forskning (LU) - https://www.fokusforskning.lu.se/2017/04/18/aldre-slinker-ur-natet/
- LT, Mittmedia - https://www.lt.se/artikel/opinion/ledare/det-smidiga-och-enkla-ar-inte-tillgangligt-for-alla
- Åbo Underrättelser - https://www.pressreader.com/finland/%C3%A5bo-underr%C3%A4ttelser/20180110/281711205045049
- Visit by prime minister and Finance minister to an IT-education for seniors: https://www.pro.se/pension/Nyhetsarkiv/Statsministern-och-finansministern-besokte-PROs-IT-utbildning/