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Older adults' perceptions and opinions regarding digitalization

—Interviews among older adults in the Turku region

Master's Thesis in Governance of Digitalization
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Abstract for Master's thesis

Subject: Governance of Digitalization	
Writer: Janne Blomqvist	
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Abstract:

This study aims to explore older adults' perceptions and opinions regarding digitalization, including devices and services. Based on results achieved through interviews of older adults, the actions needed to improve the situation of less or non-digitalized individuals were determined. The research aims to deepen the understanding of older adults' perceptions and opinions of digital skills, which are increasingly required by the majority of the population to receive the needed information. The study was conducted with older adults living in Turku and the participants were found in co-operation with Turun Seudun Vanhustuki ry, which organized a computer course for older adults, who were not expected to have had any previous experience in using digital devices and services.

This thesis aims to answer the following research questions:

- How could the older adults be supported most appropriately with digitalization?
- What motivated the older adults to participate in the course?
- How motivated are the older adults to learn digital skills?

The expectation is that digitalization and the use of digital devices and services will increase. Simultaneously, the number of people in unequal digital competence situations will also increase. The outcome of the study is that everyone should have access to digital information. However, technical devices and services are often experienced as complicated by older adults. Furthermore, the complexity of using digital devices and services often arouses fear and anxiety among older adults. When planning to teach digital skills to older adults, it should be noted that the entry level of every person may vary remarkably. Therefore, older adults should be taught and treated bearing this in mind. In the future, particular attention should be given to older adults with low entry level and anti-digital attitudes to prevent digital exclusion and promote both digital and societal inclusion.

Keywords: older adults, digitalization, perceptions, opinions

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1 INTRODUCTION

Even before the Covid-19 pandemic, some older adults had limited access or in some cases no access at all to the digitalized society where most of the information is and will be available on the Internet. While it is expected of most to be capable of using digital technology, there are many, especially older adults, who are either left outside digital development or at least in danger of falling by the wayside. Furthermore, there is presumably a gap between digitally and technically advanced individuals and those who are excluded from digitalization and/or incapable of using it. The assumption is that owning a mobile phone alone will not necessarily guarantee the possibility to use digital services.

The question of supporting and encouraging older adults in digital matters could be reconsidered the same way as supporting and encouraging them to live in their homes for as long as possible. Digital solutions could help older adults improve mental health and self-employment and decrease technophobia, anxiety, and loneliness. According to Hietanen and Fröjdö (2016), removing loneliness and increasing social activity are considered important among older adults.

However, some older adults want to have nothing to do with digitalization. Despite lacking digitality and digital devices, older adults themselves may feel they can take care of their affairs. Furthermore, what is notable is that there are older adults who are aware and also digitally skilled.

1.1 Overall aim of the thesis and research questions

Using personal and focus group interviews, this thesis aims to explore the reasons behind the older adults' digital behaviour and inequality; how it shows among older adults, what kind of emotions and actions occur, and what could be done to decrease inequality and increase participation as well as older adults' quality of life.

In this thesis, the focus will be on older adults with various digital skills, backgrounds, and entry levels. Most of them have participated in the computer course, which was aimed at those over 65 years old, and who were not expected to possess previous experience of

computer use. Besides investigating the reasons and motives for adopting or rejecting digitalization, the intention is to give these participants a chance to express their perceptions, opinions, and experiences about the subject. The results will provide suggestions on how to include older adults in society and find ways to prevent exclusion, isolation, and loneliness among them.

To achieve results and investigate the situation among older adults, this thesis has been implemented as qualitative research, which enables the versatile presentation of the older adults' perceptions and opinions about digitalization. Material from an interview among focus group interviewees and individual interviews among participants and instructors of the course offered an extensive source for further studying. Content analysis was used on this occasion due to its suitability in qualitative research.

This thesis aims to answer the following research questions:

1. How could older adults be supported most appropriately with digitalization?
2. What motivated the older adults to participate in the course?
3. How motivated are the older adults to learn digital skills?

1.2 Limitations

The thesis will concentrate on results that have been obtained from interviews among a certain number of older adults. The questions were first tested with the focus group interview, after which the individual interviews were conducted with the course participants and instructors. The results have been achieved by using qualitative research concentrating on interviewees' perceptions and opinions. Using a qualitative approach instead of quantitative limits the number of responses but enables a deeper understanding and analysis of the subject.

Some subjects would have been interesting to implement during the process, e.g., discovering and interviewing other older adults, who have participated in similar courses. This would have produced even more rich material and a chance to compare the results between different groups. Due to time and work restrictions this was not possible to implement.

1.3 Structure of the thesis

In the first chapter, the thesis' background, motivation, overall aim, research questions, and limitations are introduced. The second chapter presents the relevant concepts, literature, and research concerning older adults and digitalization. Barriers, challenges, and suggestions for improving the use of digital devices and services are also presented. In the third chapter the research methods, qualitative research, focus group interview, and content analysis are presented. Furthermore, the substance of the interviewees and the procedure of the interviews are introduced. The fourth chapter raises the most important and repeated subjects from the interviewees' point of view. In the fifth chapter, the main findings are analyzed and interpreted.

In the sixth chapter, the results from the interviews are reflected upon against the theoretical framework and literature review. Furthermore, research questions are answered, the thesis' validity and reliability are evaluated, and suggestions about whether something could have been done differently are speculated on. The seventh and final chapter presents thoughts related to the subject, which could be potentially researched in the future.

2 LITERATURE REVIEW

This chapter presents the background for the definition of older adults, their challenges in the use of digital technology, research, and suggestions for improving digital capability, and theories related to information behaviour.

2.1 Definition of older adult

One of the key concepts in this thesis is an *older adult* and therefore is highlighted here. The purpose is to use equal and respectful term to describe older individuals without discrimination. According to Putnam (2015), the *elderly* as a term has a more negative tone than an *older adult*. Putnam, who is an Editor-In-Chief at the Journal of Gerontological Social Work (JGSW), insisted the authors not use the term elderly but favour older adults instead. Putnam mentions that she also objects to the term senior because the term gives an impression of reduced physical or mental health. Putnam claims, that the use of proper description is a benefit for older adults as well.

Avers et al (2011) state, that though some inappropriate terms (e.g., senile, aged) are no longer widely used, the term elderly should not be used either due to impressions of frailty and dependency. Though individuals may be highly active, sharp, and functional despite their age, they can be judged stereotypically and treated unequally. This can lead to ageism when on the contrary older adults should be treated fairly and use proper and respectful terms.

A guidebook, Media takes: on aging (2009) recommends to rather use the term older adult than senior or elderly. The book states the following about the terminology:

"If you need to identify individuals over the age of 50, "older adults" is preferred over "senior" and "elderly," which can be discriminatory in nature. After all, we don't refer to people under age 50 as "junior citizens."

In this study, the term older adult(s) will be used.

2.2 Ageing of population

Christensen et al (2009) investigated challenges that the ageing population is facing in the future. Despite territorial differences, ageing will accelerate in nearly every developed country due to decreased fertility and increased lifespan. Furthermore, it is expected, that a constantly increasing number of older adults not only live longer but are more capable and operative as well. Tenani et al (2019) claim, that ageing is a worldwide phenomenon; the number of people aged 65 and above has been estimated to achieve 16 % by 2050.

Sander et al (2014) state, that increase in the mean age of the population will lead to the following challenges:

1. Biological: how to maintain physically and mentally capable in later life.
2. Social: how to define the age of retirement.
3. Cultural: how to ensure a purposeful and dignified life for older adults.

Jivraj, Nazroo & Barnes (2012) use the word *social detachment* to describe the state, which is often significant for ageing living in communities and having a lack of social capital. Researchers suggest that mechanisms and practices should be developed to decrease social detachment, which has been proved to also relate to remarkable health problems.

According to the population forecast, the Finnish population structure is ageing rapidly. The future report emphasizes the importance of active ageing (Valtioneuvoston selonteko, 2004). Finland is the fastest ageing welfare state in Nordic countries. The last decade has seen remarkable challenges in population development, and discussions about the "state of crises" are not necessarily exaggerated. The demographic situation is unique also at the international level since Finland is at the forefront of global demographic change. Followed by the fall in birth rates in the 2010s, Finland stands out as having one of the oldest population structures in the world. This direction will lead to a decrease in social equality. Therefore, more attention should be paid to actions enabling lifelong human resource support (Rotkirch, 2021).

2.3 The older adults' use of digital devices and services

König, Seifert, and Doh (2018) state, that the digital gap not only exists between young and old but also within various groups of older adults. The results from the survey among Europeans aged 50 and above highlight, that previous experience in using digital technology will promote adoption also at an older age.

The start of the worldwide Covid-19 pandemic meant the deterioration of older adults in the sense of decreased human interactions and limitations in using digital services and technologies. Lack of the possibility to use and receive valuable information regarding digital networks in health, social life, and commerce may also increase the sense of social distancing among older adults (Seifert, 2020).

Older adults' entry-level and use of ICT are diverse. Especially eldest older adults are most likely to resist and refuse to use digital technology (Saukkonen et al, 2021). Simultaneously, the use of e.g., the Internet and email have increased among older adults as well (Official Statistics of Finland, 2021). Anderson & Perrin (2017) have acknowledged similar results. Although younger people still are at the cutting edge of technology compared to older adults, the trend toward narrowing the digital divide has strengthened. Van Dijk & Hacker (2003) point out, that the digital divide equals digital inequality, which is a more accurate and broader term. According to Findlay (2003), the digital divide and inequality concern older adults, since they are at a high risk to be driven socially isolated because of health-related issues, changes in the relationship, and migration.

In autumn 2021, the Finnish Institute of Health and Welfare published research about the use of electronic services among older adults aged 70 and above. The intention was to study factors that predispose older adults to social discrimination and older adults' skills in using web services. The results revealed that one-third of the focus group did not use the Internet at all. The probability of not using electronic services independently was five times greater among persons aged 85 and above compared to older adults aged 70 – 74. Especially those aged 80 and above experienced digital social and health services not being their concern (Saukkonen et al., 2021). The results are in line with Vilpponen et al

(2020) who claim that variation exists in the use of digital services between those of different ages and the use of services decreases along with ageing.

The report published by Official Statistics of Finland (2021) concerned the use of Information and Communication Technology (ICT). According to the report, compared to 2019-2020, the use of the Internet in 2021 increased mostly among older adults aged 65-74 and 75-89. The use of email increased by 5 % among those aged 65-74 and 9 % among those aged 75-89. Furthermore, the use of instant messaging increased in these age groups as well. Internet and video phone calls, which have been popular in previous years, increased only among older adults aged 75-89. Furthermore, the use of social network services increased only among the eldest older adults. Today, the use of the Internet in Finland increases slowly and merely among the eldest age groups. The number of older adults aged 65-74 using the Internet daily or nearly every day increased by 7 %. A similar increase among older adults aged 75-89 was 6 %.

Vilpponen et al (2020) highlight, that more than half a million individuals in Finland aged 55 and above do not use the Internet or digital services. Furthermore, one-quarter of the people aged 65 and above have not acquainted themselves with the Internet and, in their opinion, digital devices are also complicated to use.

2.4 Challenges in using information and communication technology

Older adults have several physical, mental, emotional, and social obstacles in using today's information and communication technology effectively. The non-users of the Internet and/or e-mail are often the eldest of older adults. Furthermore, they often have a lower level of education, are physically and functionally more incapacitated, have more limited social and financial resources, and are also more socially isolated (Ilyas, 2012; Mitzner et al., 2010; Wagner, Hassanein, and Head, 2010). Furthermore, Werner, Carlson, Jordan-Marsh, & Clark (2011) emphasize the decreased cognitive performances caused by ageing and technophobic or anxious feelings towards computers, their use, and effectiveness as the strongest reasons for older adults' non-use of information technology.

According to Bhattacharjee, Baker & Waycott (2020), new technologies and their use are challenging for older adults. Simultaneously, the nature of challenges or ways to overcome them is not completely understood. The study pursued a clarification of the reasons for older adults' incapability to learn digital skills and to gain positive technological experiences. Literature review and data analysis explored, the kinds of learning challenges older adults have before them, and their reactions to these challenges. As a result, five categories concerning digital skills learning challenges faced by older adults were developed, they are as follows:

1. Barriers related to age, (e.g., problems with learning speed, memory, short-term memory, physical abilities).

2. Technology or design-related problems, i.e., new technology, changes in it, and the overall speed of change may cause stress to older adults. It may occur they also find the technology design complicated, and the acquisition of technology expensive.

3. Low self-efficacy, (i.e., older adults feel incapable of using or being uncertain of their digital skills). These often tend to arouse feelings of fear, frustration, disorientation, and losing themselves.

4. Materials or lessons for training turned out to be complicated for older adults in a survey held among participants aged 60-85.

5. Negative attitudes in communities may appear in a form of other family members questioning and minimizing older adults' capability to learn to use new technology. Furthermore, family members may lack skills in guiding older adults.

Findings by Nuvain, Caldeira & Connelly (2021) from semi-structured interviews among 15 older adults aged 61-81 indicate, how older adults are facing more challenges compared to their same age, and other age groups. Since older adults do not use technology as much as others, they trust personal contacts and services more. Avoiding social interactions and having voluntary quarantine have decreased older adults' autonomy during the pandemic. Knowledge of how to use a computer enables participation online also during isolation caused by Covid-19.

The study report by the Finnish Pensioners' Federation (2021) summarized the results from a survey held among older adults aged 61-90. The focus was to clarify the older adults' welfare and everyday life, and their thoughts on retiring, ageing, accessibility of services, digitalization, Covid-19, and the future. Particular attention was paid to older adults aged 80 and above to receive viewpoints also from the eldest part of the population. Similar studies have been implemented previously in 1994 and 1998.

The latest study revealed that older adults experienced the following factors as the greatest problems in modern society:

- services and transactions digitalization
- illness and decreased capability
- excessive glorification of youth

The challenges of digitalization were asked about for the first time, which means that comparative information was unavailable. More than 60 % of respondents experienced the digitalization of services as the greatest challenge in everyday life. Digitalization even surpasses challenges regarding economic problems, accessibility of health services, and decreased capability.

2.5 Improving older adults' digital skills and literacy

With the increased amount and use of both Information and Communication Technology (ICT) and accompanying services and devices comes the expectation of the ability to use the technology and devices, and this includes also older adults (Martinez-Alcalá et al, 2018). Several factors need to be taken into consideration in designing digital devices and services, especially for older adults. According to Fischer et al (2020), the older adults' needs and demands increase while ageing. Participating and involving older adults in designing services from early planning to the end-user phase will help in better understanding their actual needs. Östlund (2015) states, that older adults are not seen as potential end-users and consumers of Information and Communication Technology but are rather invisible actors from the design technology point of view. However, older adults should have the opportunity to influence what they need and want.

Lee and Kim (2019) emphasize the importance of intergenerational interaction in their study, in which older adults were guided by young students and mentors who implemented tailored and personalized programs arising from older adults' needs. After the implementations, the older adults' results were significantly better in several fields: eHealth literacy, technophobia, self-efficacy, and interest in technology. As a result, social isolation and anxiety decreased.

Studies and research published within the last two years reveal, that some preconceptions and modes of operation concerning older adults and digitalization should be corrected and/or clarified. Rivinen (2021) is the first in Finland to publish a dissertation about media literacy among older adults. Rivinen states that older adults' media literacy is more neglected compared to other age groups. Despite having older adults included in alignments concerning national media literacy, more should be done on the matter. Furthermore, there is a need for clearer content when planning how, where, and by whom media literacy should be guided and instructed.

According to Rivinen (2021), older adults are a diverse group of individuals who, following the principles of media literacy geragogy, should be approached by:

1. taking older adults' individual needs into account.
2. using holistic media literacy viewpoints.
3. utilizing different pedagogical viewpoints.
4. utilizing supervisor(s) possessing friendly social skills.
5. supporting older adults' cognitive skills.
6. supporting older adults' empowerment.
7. offering systematic and continuous support.
8. increasing multidisciplinary co-operation.

Rasi (2021) claims in her dissertation, that older adults are often considered digitally marginalized due to a lack of proper digital skills, and limited or non-use of the Internet. According to Rasi, older adults and digitalization together are often described in a

negative light. In comparison with researchers and newspapers' often-negative tone in describing older adults' digital capability, older adults themselves see the situation as positive as well. By refusing to "go with the flow" they rather see themselves making individual, critical, and questionable choices.

Though citizens are expected to take a "digital leap", digitalization may on the contrary cause exclusion due to shortages in skills, and unwillingness in using digital devices and services. Furthermore, digital services may not appear user-friendly from the older adults' point of view. Older adults, who were interviewed in a study by Rasi, experienced the Internet as a threat to their freedom, lifestyle, health, and security.

Based on the results, to decrease the displacing effects of digitalization on older adults, Rasi suggests the following actions:

1. Professionals in adult education and media literacy can utilize the results in planning and implementing support and education concerning older adults' digital capability.
2. To political actors promoting digital participation, the results show the need to ensure user-driven digital services and support for older adults. Also, alternative modes of operation should be taken into consideration.
3. Media professionals are encouraged to describe older adults together with the Internet more positively and more diverse.

Based on findings by Bhattacharjee, Baker & Waycott (2020), the importance of family members and society is crucial as they have a chance to motivate and support older adults, highlight positive attitudes and, even show sympathy towards them in their digital skills learning intentions. Furthermore, training programs should be designed to be more effective by noticing older adults' diversity, targets of interest, and like-mindedness. Finally, both researchers and designers are recommended to make the learning of digital skills and technology easier. They should also design products, not entirely for older adults but for anyone with various lingual, cultural, physical, and mental backgrounds.

According to Peine, Marshall, Martin & Neven (2021), older adults are often thought of as slow starters in their use of technology. Therefore, they are also thought to be excluded from digitalization. However, recent studies using gerontology, science, and technology

provide alternative viewpoints, which suggest that changes in demography and technology construct the connected and fundamental phenomena. Researchers claim that these changes will shape Europe's older adults' experiences of everyday life.

Nuvain, Caldeira & Connelly (2021) emphasize the importance of designed and supportive socio-technology, such as synchronous video or VR. Innovations could increase the older adults' sense of autonomy in everyday life. Furthermore, innovations can also be seen as potential trust builders between older adults and unknown individuals, who assist them. The point is that helping the same older adult can lead the assistant to better understand older adults' preferences in general.

2.6 Theories related to older adults' information behaviour

This study utilizes results from the research, in which the information behaviour theories of the Monitor-Blunter Style Scale (MBSS), and Tailoring have been used. MBSS aims to recognize the individuals' characteristics (monitor/blunter), whereas tailoring aims to transform the needed information in the most suitable way for an individual. These theories complete each other regarding the thesis aim. Also, they appeared to correlate well with results received from the survey. Both monitoring and blunting traits and the need for tailoring older adults' digital training became evident.

According to Wicks (2004), older adults often have clearly defined needs for information. Therefore, it is crucial to understand both older adults' diversity, their information behaviour and needs. Recognizing older adults' character traits will enable a better approach and focus on their needs for support and guidance related to digital competence.

Older adults face several challenges often related to ageing with health problems, which can occur as learning difficulties. Other challenges are related to technology, which is perceived as awkward by older adults, and may therefore lead to stress, low self-esteem, feelings of complexity, and negative attitudes (Bhattacharjee, Baker & Waycott, 2020).

2.6.1 Monitoring and blunting

The Monitor-Blunter Style Scale (MBSS) by Miller (1996), divides the characters within information behaviour into monitors and blunters. The MBSS is often used in connection with health information behaviour by utilizing quantitative methods, e.g., counting scales. However, due to obvious monitor-blunter characteristics among the thesis' interviewees, the results can be observed and utilized by using a qualitative approach. MBSS describes and relates well to older adults with various entry levels and attitudes toward digitalization and learning to use it. Applying Miller's MBSS model, more active monitors and fewer active blunters can be recognized among the interviewed older adults.

The Monitor-Blunter Style Scale (or Miller Behavioral Style Scale) MBSS, observes the measures and levels of monitoring and blunting. Monitoring and blunting are two concepts and types which observe how different people may behave in the event of received information, which may be experienced as threatening to some extent, e.g., concerning health issues. Typically, monitors usually seek more information, and they want to stay informed to decrease their stress levels. Blunters, on the contrary, tend to avoid information since they think it may cause them stress. According to studies, often monitors are most likely to acquire more detailed information, and they have a better understanding of the situation compared to blunters. However, depending on the informational situation, monitors may cope better by receiving more information, and blunters by receiving less information (Miller, 1996).

The MBSS is basically a questionnaire, which measures the individuals' tendencies; whether to search or avoid possibly threatening and stressful information. Style Scale includes four fictitious and stressful situations, which are followed by eight coping alternatives from which to choose. Four of the alternatives deal with information seeking (monitoring), and the other four with information avoidance (blunting) (Miller, 1987).

The MBSS has been utilized in research by Miller (1995), who assessed and categorized patients and their ways of coping with cancer. In a conclusion, patients who were informed about their state of health by considering their styles of coping (monitoring or

blunting), seem to manage better. Furthermore, tailoring a more sensitive approach was seen as recommendable, especially for monitors with pessimistic attitudes.

Zhang (2013) used the MBSS in his study, where the intention was to observe the participants' preferences and behaviour regarding the health-related search for information. The participants' perceptions and experiences were also notified. In the study, the MBSS appeared to be an unreliable method due to the small number of participants, and the limitations of the method.

The MBSS has also been used to identify monitors and blunters on other occasions, e.g., when investigating differences in coping styles during the cold pressor task (Efran et al., 1989). The study aimed to examine the monitors' and blunters' reactions in two strategies, the rational statement and the self-observation, which were designed to notify the individuals' characteristics.

Case et al (2005) conclude, that sometimes individuals tend to avoid presumably threatening information, especially in the health context. Information avoidance is not as highlighted as information seeking and monitoring. In future, it is crucial to better understand the reasons why some individuals tend to avoid information.

Alwreikat (2022) investigated in her study the information behaviour of a group of mothers during the Covid-19 pandemic. Qualitative semi-structured interviews disclosed the appearance of both avoidance and monitoring of information in mothers' behaviour. Avoidance occurred as ignorance of information and news, since they may cause inconvenience and anxiety. On the contrary, monitoring was typical for those, who constantly prefer to stay up to date to control their feelings.

2.6.2 Tailoring

Significant with the tailoring method is that it transforms information to be more effective for a person (Neuhauser & Kreps, 2003). According to Rimer & Kreuter (2006):

"Tailored health communication is any combination of information and behaviour change strategies intended to reach one specific person based on information unique to

that person, related to the outcome of interest, and derived from an individual assessment."

Tailoring enables emphasizing various personal characteristics, e.g., demographic information, or individual characteristics, e.g., specific interests, needs, and levels of health information literacy (Lustria et al, 2009).

Tailoring has been utilized in designing a persuasive model for older adults to pay more attention to their health (van Velsen et al, 2019). In the research, the aim was to create a method, by which to persuade individuals of various natures to adopt health-related technology. To find a proper way to approach the person, the importance of delicacy and precautionary is crucial since the subject may be sensitive to the person. As a result, a web-based survey among older adults aged 60 and above proved to be useful when motivating older adults, and in clarifying which features to use to persuade them to engage. Furthermore, the researchers discovered that older adults could possess several kinds of motivation.

Fischl et al (2020) underline the importance of supporting and encouraging older adults to use digital technology. Decreasing loneliness and exclusion is crucial. The study explored the possibility to create a scheme concerning older adults' commitment to digital technology using tailoring. The case study methodology was used due to its capability to explore the tailoring process to support older adults' digital preparedness

A proposition by Fischl et al (2020) to create a scheme to support older adults' commitment using tailoring is presented in Figure 1.

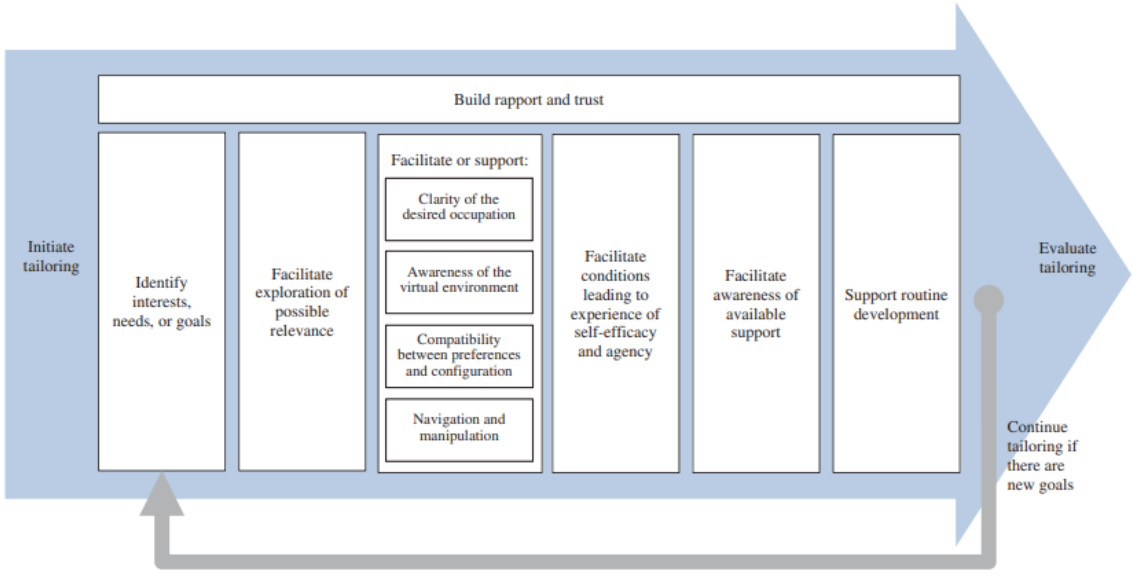

Figure 1. Fischl et al (2020). A proposed scheme for tailoring to support older adults' engagement in digital technology-mediated occupations.

Based on the results presented in Figure 1, the recommendation is to test a scheme in e.g., home, community, or clinics. Building a multidisciplinary team to offer alternative ways of solving challenging occupational and tailoring challenges was seen as crucial. Collaboration with other disciplines increases knowledge and perspective. Furthermore, therapists will benefit from the scheme, e.g., by encouraging individuals on how to engage in digital technology, and how to participate in a digital society.

3 RESEARCH METHOD AND MATERIAL

3.1 Qualitative research

The qualitative research method was chosen as a method for this empirical research. Methods in qualitative research are appropriate when studying subjects in their nature. The aim is to make interpretations of the interviewee's opinions (Denzin and Lincoln, 2005). According to Hirsjärvi (2009), a characteristic of qualitative research is to pay attention to value premises since they determine how the investigated phenomena are being understood. Qualitative research aims to investigate the subjects as holistically as possible as well as to find or expose facts rather than verify already known facts and statements.

3.2 Focused interview

The focused interview can be expressed as a discreet way to pry and occasionally indirectly ask to approach and clarify the investigated phenomenon. The focused interview is a qualitative method, and it is possible to implement either as an individual or a group interview (Kananen, 2010). According to Tuomi & Sarajärvi (2018), a focused interview is also called a semi-structured interview which will approach a deep interview, and it includes basic themes and theme-related clarifying questions, which drive the interview forward. The interview aims to find answers depending on the purpose, problem sets, or research question(s).

3.3 Content analysis

Content analysis is a basic analysis method, which can be used in every qualitative research. Content analysis is suitable for both separate methods and open theoretical frames. Furthermore, it can be attached to various analytical entities. Most of the analytical methods in qualitative research are based on content analysis. The recommendation is that the content observes as an analysis of written, heard, and seen contents in an open theoretical way. Content analysis enables analyzing documents systematically and objectively. Practically any literal format, e.g., book, article, diary,

letter, interview, speech, conversation, dialogue, and report, can be read as a document. The content analysis aims to summarize and generalize the subject of research (Tuomi & Sarajärvi, 2018).

3.4 Background

Data for this thesis were collected from interviews with older adults. The interviews were gathered in cooperation with Turun Seudun Vanhustuki ry, which is a local older adults' association. Working together with the local older adults' association is dating back to cooperation with the Turku City Library. For several years, these two quarters have together implemented lecture series, which have been held in the library Studio for several years. The main target group is older adults, to whom lectures are intended to include content close to older their interests, e.g., health (physical and mental), nutrition, motion, and other crucial and current topics. Also, the University of Turku participates in organizing lectures. Following the Covid-19 pandemic and a sudden demand for digital services and devices, it was natural to approach the older adults' association in search of suitable individuals to interview on the subject.

3.5 Piloting through a focus group interview

Before individual interviews, the interview questions were tested with another group of older adults who played cards at Turun Seudun Vanhustuki, a local older adults' association. Pilot interviewees were seven, and they were females aged 66-86, which also is close to the actual interviewees' ages between 66-94. Interviews were implemented as a focus group interview at Vanhustuki in December 2021. As a result, it appeared that participants responded well to the questions. The focus group interview lasted approximately thirty minutes, which was also the original purpose: to ask essential questions that do not take too long to answer. With the focused group interviewees, some questions were omitted. Since interviewees did not participate in the course, they could not answer the course-related questions either. However, the focus group answers and comments were taken into consideration and compared with the results from the course participants' interviews.

3.6 Interviewees

In autumn 2021, a course for learning digital skills was organized in the association. This course was intended for older adults with no demand for previous experience in digitality. The content of the focus group interview was proven to be current and usable for the course interviewees. The course took place between September and December 2021, and the interviews concerning the course were implemented in January 2022. Originally ten older adults registered for the course and the final number of participants starting the course was nine. Besides seven participants in the focused group, seven older adults participating in a computer course and their three instructors were interviewed. Thus, the total number of interviewees was seventeen. The course participants and instructors were interviewed individually using a mobile phone.

All interviewees and their backgrounds are presented in Table 1.

INFO ABOUT INTERVIEWEES (FG=Focus Group, CI=Course Instructor, CP=Course Participant)			
	AGE	**GENDER**	**OCCUPATION**
FG	86	Female	Gardener
FG	85	Female	Housekeeper
FG	83	Female	Bank clerk
FG	68	Female	Cook
FG	79	Female	Teacher
FG	66	Female	Head of the bank department
FG	71	Female	Customer service person
CI	70	Female	Secretary
CI	78	Male	Technician
CI	70	Male	Executive director
CP	94	Female	Home helper
CP	85	Female	Yoga teacher
CP	66	Female	Lecturer
CP	80	Male	Technician
CP	86	Female	Entrepreneur
CP	84	Female	Library assistant
CP	70	Female	Customs export agent

Table 1. Information about interviewees

3.7 Procedure

All interviews – the focus group interview, interviews with course instructors, and interviews with course participants - were recorded using a recorder application on a mobile phone. Firstly, all interviews were transcribed word to word by listening to the recordings and using the Microsoft 365 dictation and transcribing program before printing the interviews for observation. The interviews were verified by listening to them and comparing them to machine-transcribed texts. Corrections and additions were made when necessary to ensure the precise and original word-to-word interview contents.

Secondly, interviews were read through and the main points from the interviewees' answers and comments were underlined and collected separately together in the groups of focus group interviewees, course instructors, and course participants. Thus, organizing, describing, and interpreting the material appeared to be easier.

Thirdly, the main points and results from the interview data were further compressed to clarify the most relevant factors, which would answer the research questions. Finally, the interview texts were further analyzed and categorized for this paper using content analysis.

4 RESULTS FROM THE INTERVIEW STUDIES

In this chapter, the interviewees' comments and factors raised from the data are processed in the same order as presented in a survey (Table 1).

4.1 Focus group

Besides testing the questions through a focus group interview, including also the group's perceptions and opinions on the thesis felt reasonable. People in the group were mainly asked about their personal use of digital devices and services as well as about their opinions about digitalization from the older adults' point of view. Survey questions related to the course were not asked from the group due to their non-participation in the course. During the focus group interview, the participants were asked about their use of digital services, requisites for independent use, the biggest barriers to using digitality, and suggestions for keeping up with digitality.

4.1.1 Use of digital services

All seven focus group interviewees were female and aged 66-94. Two of them had worked in a bank, the rest as a gardener, a housekeeper, a cook, a teacher, and a customer service person. Four of them owned a smartphone and/or tablet computer, laptop computer, or desktop computer. Two owned an average mobile phone and tablet computer or laptop computer. Only one of the focus group interviewees owned merely a mobile phone.

Though owning a mobile phone, one of the interviewees resisted the entire idea of owning digital devices.

"I do not own (devices) and I do not want to have such." (Group member 1)

The participants' use of digital devices and services was variable; from practically non-use (because of illness) to weekly and most seldom daily use. Devices and services were most often used in connection with banking affairs, (e.g., paying bills), personal medical data (e.g., Omakanta), and more seldomly e-games and e-papers. Furthermore, the role of participants' children was significant, when there occurred problems in using the device or entering the service. Two interviewees stated that their children will take care

of everything concerning digital transfer, such as banking and medical operations.

4.1.2 Requisites for independent use

The participants mentioned that they very often turned to their children when they were asked what they would need to be able to use the devices and services independently. Furthermore, though being capable to perform basic digital functions, help from children was eagerly claimed.

"I have taken care of my things, but in case of some problem I will call my youngest (child) to come and help me quickly." (Group member 2)

"Everything works out with a device. The only thing is, when there is something, I can't handle by myself so then I'll contact my daughter or son." (Group member 3)

Besides turning to their children, the focus group members did not otherwise answer straight to the question concerning independent use of devices and services. Instead, other expressions such as forgetfulness, ignorance, incompetence, and disinterest were mentioned.

4.1.3 Greatest barriers to using digital devices/services

The largest variation occurred when asked about the greatest barriers to using digital devices/services. Impatience and lack of interest were mentioned.

"I push the button always too fast. My daughter says that you must be calm and look, but when I push the button, the whole program goes wrong." (Group member 4)

"I am too impatient; everything should happen so fast. I'm not able to concentrate. And then, of course, I don't have enough interest, and you try to cope with what you know already." (Group member 5)

In addition to impatience and lack of interest, laziness, health issues, forgetfulness, and a fear of being cheated were mentioned as barriers to using devices/services. One participant suggested that in case of a problem there should be a chance to contact e.g., a seller in a store via chat.

4.1.4 Suggestions for keeping up with digitality

Four out of seven focus group members stated that the use of digital devices and services should be clearer and simpler. In turn, it was recognized that the change may not be that easy to implement.

"It should be easier. Why can't it be, that you'll get there straight when I ask something? Instead, there will always be a new link, and a new link." (Group member 3)

"There will always be a new link and when passing one link, you enter the next one there, there, and there. It's quite endless, and that's why you need to have an interest in it, I think. Not everybody is interested in it. I guess someone is tremendously interested in it. That's why they learn and know much more about everything." (Group member 5)

"There are several functions, which can't be changed." (Group member 6)

In a focus group were two women, who both had done their careers in a bank. They were the only ones in a group, who stated they have been involved with digital technology while working. One of them said experiences feelings of anxiety even to this day, and another woman had similar experiences.

"While still working, we continuously received the new computer programs. I was the person, who loaded all the screens and other things. Sometimes I'm still having nightmares, that I must do something, but there's nothing I can do anymore." (Group member 3)

"You feel so uncertain, it's a terrible situation. You feel like "Help, I can't", though I would like to. You just can't, so you feel quite insecure then." (Group member 5)

In addition to comments concerning the ease of use of digital devices and services, and anxiety caused by digitality, focus group participants also worried about other older adults, who have no family or children. Asking for help with digital issues was recommended to proceed with caution.

"What about older adults with no children or such, where do they get help?" (Group member 3)

"You can't trust everyone, because it is quite personal with your computer, so where can you turn to?" (Group member 4)

4.2 Course instructors

Three instructors, one female, and two males gave help and guidance to participants during the course. Instructors possessed a large variety of digital devices, and knowledge and capability to use various services. All three had used both devices and services while still at work, and they still do. Furthermore, every instructor had also participated in computer-related courses and utilized their capability in hobbies and e.g., organizational activities.

Instructors were asked the same questions as shown in a survey except for those dealing with a course participation and independent use of devices/services. Some questions were also slightly formulated to fit better for the purpose.

4.2.1 Most rewarding and useful subjects for participants

When asked about the most rewarding, useful, i.e., best things for participants during the course, information about devices (e.g., tablet, laptop) and applications (e.g., FB, WhatsApp) and their usability in everyday life, Internet bank and security, and basic computer functions emerge from instructors' responses.

"They (participants) received quite a versatile information package. Firstly, all kinds of devices and applications, how they ease everyday life, and secondly practical exercises. I hope they had some reassurance in using devices. Many had such fears, that they don't dare to push the button because of fear of a whole device breaking down. I think they received at least that kind of help from the course." (Instructor 1)

"It was already in the beginning, a kind of clarifying, what is this all about; what does it mean, when you are online? Very basic things, which may sound quite strange for older adults. You may get some understanding of the computer's basic functions if you have not earlier received them anywhere." (Instructor 3)

4.2.2 Most complex subjects for participants

Challenges in basic functions and concepts were often named when asked, what instructors thought to be most complex for participants during the course. This came up already within the first question about positive subjects. Furthermore, participants' uneven starting points were obvious as was the importance of even the slightest experience and interest to use digital devices and services.

"Without previous experience at work (about computers and devices) will cause difficulties with basic things, such as the use of mouse and moving from one site to another. We couldn't quite think, how many of them were in their infancies. There should first be the course for beginners, where to go through the machine parts, how to deal with them etc." (Instructor 1)

"The most complex thing is, that you can't all the time advise by the hand to use and try. It is a big problem when you must every time try to remember, how to open the device and why problems occur. To some extent, you're afraid to use the device, and then you think, that there will be some permanent damage." (Instructor 3)

4.2.3 Best motivators in learning

Two out of three instructors stated that individual guidance is the best stimulant to learn to use devices and services. The third instructor highlighted the importance of free guidance, a familiar place, and a true will to learn as motivating factors.

"Despite we were all together and showing something, how to get in (to the Internet) and so on, it was sitting beside the students which worked best." (Instructor 2)

"If there is help available free of charge and in a familiar place, I think it makes at least half of the motivation, and then there is another thing; you need to want to learn.". (Instructor 3)

4.2.4 Greatest barriers to using devices and services

The question concerning the greatest barriers for the course participants raised a great variety of subjects among instructors. Prejudices, appealing to high age, and negative attitudes toward using digital devices and services were repeatedly mentioned. Instructors stated that some participants dislike the devices and would not like to learn to use them either. However, participants recognize the need to learn to stay involved and get access to the needed information.

"Incapability and unwillingness to learn will probably increase among older age groups. People retiring nowadays are more prepared since many of them have e.g., smartphones. But how to motivate the eldest adults? I think it is a bit complicated on a general level. Attracting their attention (towards digitalization) in a fun way could work. Large use of the peer-to-peer network; such should be available, and it could be even a specific peer guide. If a person has even some will to enter the digital world, this peer guide could lead the person with small steps, holding hands." (Instructor 2)

Furthermore, ways to overcome barriers were discussed. One instructor said half of the participants had never used e.g., Facebook, and some had no intention to do so even later. As a solution, instructors highlighted encouragement; telling older adults there is always help available when needed. Furthermore, showing the use and possibilities of devices and services as well as trying to reach older adults through their targets of interest was also seen as important when trying to overcome prejudices. It seems, however, that overcoming principal resistances is harder.

4.2.5 Suggestions for keeping up with a digital society

Personal guidance in a relaxed atmosphere came up when asked about measures intended to improve the situation and increase the number of people to be included in the digital society. Instructors also talked about the importance of responsible persons offering "a guiding hand" to those in need. In addition to arranging education and having encouraged and competent persons in charge, the work to promote the older adults' learning of digital skills should be network-like and cooperative.

One instructor claim, that the resources to organize guiding occasions are inadequate. Occasions in presenting the purchase of devices should be organized as well.

Furthermore, the need to hire a professional coordinator was introduced. The coordinator could act as an enabler, who would activate, encourage, promote, and maintain activities among organizations, peer-to-peer networks, and volunteer workers. Finally, a demand for free-of-charge occasions was seen as crucial.

4.3 Course participants

Seven interviewed course participants had a variety of both devices and skills in operating them. Five participants owned a laptop and a smartphone, and two owned a common mobile phone together with an iPad or tablet. Furthermore, two participants also owned a tablet computer together with a laptop and a smartphone. Five participants named banking as the most often used service on the Internet, especially when paying bills.

Compared to banking, the use of e.g., Facebook, WhatsApp, Google, e-mail, Instagram, and medical databases were lower among participants. Three participants said they use devices and services daily or nearly every day, two said to use them weekly, and two did not use them at all, or the use was very low. Five participants were familiar with digitality, usually by computer using while still at work, and have continued to use it after retiring. Two stated to have familiarized with digitality to some extent at work but haven't continued as extensively after retiring. Five had earlier participated in the courses organized either by employers or various institutes. Two had not participated earlier in courses; one stated to be able to handle basic functions, while the other has a low level of capability despite owning a digital device, and despite having been acquainted with the digital device at work.

4.3.1 Reasons for participating

Most of the course participants named desire for learning or essential requirement as the main reasons for participating in the course. Some also wanted to increase their digital skills. One participant signed up for the course due to a case of illness in the family. One participant claimed that the course was advertised with no demand for previous (digital) experience, but the participant experienced it the other way. Overall, a need and somewhat compulsion to learn digital skills was very acknowledged among participants.

"It was said that the course was meant for older adults, and you don't have to be able to do nothing yet. But then, when these skilful people wanted personal guidance, then we moved into other things." (Participant 5)

"You must be up to date and learn though you didn't really feel like it. I don't want to be left in the background either. You don't cope with it if you don't go to courses, you don't learn them all by yourself." (Participant 7)

4.3.2 Opinions about the most rewarding and useful factors

The adept and approachable instructors were highlighted when participants were asked about the most rewarding and useful factors during the course. Learning itself and receiving at least something from the course was a rewarding experience, e.g., technical functions, use of Internet bank, and social media resources. However, also emotions of complexity, incompetence, and fear appeared. Some participants had feelings of low self-esteem because they felt they were not as capable as others.

"I learned that it's not self-evident that device is ready to use when you take it with you to the course; you also have to adjust it, that it is connected in the network." (Participant 2)

"There were also others, who were not that smart. You always get something out of the course. As it is, I'm afraid of the computer; when I was doing something, I received a set of warnings, don't do this, don't do that." (Participant 5)

4.3.3 Opinions about the most complex factors

When asked about the most complex factors in the course, previously mentioned emotions of complexity and incompetence appeared in many comments. Only two participants mentioned technical-related problems. One participant complained about the lack of time in teaching, and one said there was nothing complex in the course.

"I have tried to participate in the courses, but they often have such fail, that courses have been said to be for beginners. Then, there are always these wise in the crowd, who take over the whole thing. Then you feel stupid and stop asking anymore." (Participant 5)

"There wasn't enough time to go through many things because there were different teachers. It is ok with one or two things, but when there are many, there isn't enough time." (Participant 7)

4.3.4 Best motivators for learning

Three out of seven participants named the will for knowledge and learning as the greatest motivators in learning to use devices and services. Moreover, enthusiastic and approachable peer-to-peer instructors and the need to keep up to date were mentioned.

"Usually, knowledge is good for you. Before the course, there were things that I didn't know and couldn't do." (Participant 4)

"There was no choice, I could no longer do without a computer." (Participant 5)

4.3.5 Results and suggestions for learning

The variation was large in subjects the participants said they have learned or would have wanted to learn. Participants mentioned basic use functions, e.g., sending e-mail, connecting devices to the Internet, and how to shut down the computer. They were also pleased to know more about the use of e.g., library and cultural services.

Participants were asked whether they would have liked to learn or know more about some subject; saving passwords, learning more basic functions, and precautions on the Internet came up. One participant supported the survey practice used at the beginning of the course.

"Everybody was given paper. Then, there was some preliminary survey, where you could write own things, which you would like to be taken up during the course, and they will then come up with everybody." (Participant 7)

4.3.6 Independent use

The intention of asking about possible needs for independent use of devices and services was to clarify, what practical needs participants may have. Visual impairment and general deceleration due to ageing appeared in participants' comments.

"I don't recognize the words, I should commit to memory, and then the words are so small, that I need a magnifying glass every time to see them." (Participant 1)

"It goes slower, but I do find things from the Internet. It's not like the young ones, who constantly use the computer much faster." (Participant 4)

Some participants were more progressed with digitality and/or they had family or friends close by to help if needed. One participant living as a single stated about the lack of support. Furthermore, a request for a lower-level course came up.

"I would need some assistant or person to ask. I would like to know these basic things so that I wouldn't have to think all the time." (Participant 6)

"There should be such course, which would start from the lower level, where you could repeat and do things together. Now it was assumed, that people knew these things, and they had brought their own devices." (Participant 2)

4.3.7 Greatest barriers

Two participants who were among the eldest in the course named changes in comprehension, understanding, and feeling of incompetence as the greatest barriers to the use of digital devices and services. Rejection, impatience, and lack of interest were mentioned as well.

"My comprehension must have changed. I think ageing must be the reason that I don't understand. Simply, I don't understand what is being said." (Participant 1)

"I have natural rejection toward this; I'm not interested and don't have the strength to orientate. If I don't succeed at once, I'll lose my faith in it, that it will not work out." (Participant 3)

Webpages were also criticized for being occasionally unclear, complex, and designed for more technically oriented. Furthermore, one participant claimed, that user guidance is sometimes contradictory.

"I remember being said:" Don't push the button if you don't know, what it means." In turn, it is said:" Go ahead and push, nothing will happen." (Participant 7)

4.3.8 Enabling keeping up with a digital society

The final question to participants concerned their suggestions of ways to keep the largest possible number of older adults involved in a digital society. Personal guidance was often mentioned. Similar courses that older adults participated in were seen as crucial, as were courses with a low threshold. The importance of personal guidance with a low threshold was the most highlighted combination.

One participant mentioned knowing several people, who dare not to have anything to do with digital devices because they feel they are incapable. Also, the utilization of older adults' areas of interest was mentioned to clarify the concept of digital services.

"In my opinion education like this is extremely important, and as I truly noticed, many would have needed personal guidance, because everybody's problem is a bit different." (Participant 3)

"Learning doesn't happen just like that with people who have no previous experience." (Participant 6)

5 ANALYSIS AND INTERPRETATION OF RESULTS

This chapter presents the main results and findings raised from the interviews. Results and findings are interpreted to formulate and suggest guidelines to help older adults in their need to adopt the use of digital devices and services.

5.1 Digital complexity and inability

When observing all three interview groups together (focus group, course instructors, and course participants), the greatest common factors raised are the older adults' feelings of complexity and inability with digitalization and the use of digital devices and services. These feelings also included a request for improving ease of use, and/or having personal guidance when needed. Instructors were very aware of this, often using the descriptive term "a guiding hand."

Referring to participants' reactions, instructors mentioned most often the challenges in basic digital skills and functions and the need for personal guidance among participants. Furthermore, an absolute majority of the focus group interviewees stated, that in need of digital help and guidance they often and willingly turn to their children. However, this was not the case with course participants, of whom a minority mentioned their children as potential instructors. As one participant stated:

"My children or grandchildren may have enough patience to guide me, but I haven't committed them to do so." (Participant 2)

5.2 Diversity

Every participant in all three groups possessed at least a mobile phone or a smartphone, but otherwise, the use and the variety of knowledge and capability concerning digital devices and services were enormous. E.g., one participant named printing stickers as the biggest problem, while simultaneously many participants were having constant problems with getting devices opened and connected to the Internet. This was also acknowledged by instructors, who were amazed by the low level of capability among some older adults.

A great variety in participants' starting points and background knowledge caused a potential risk of arousing personal anxiety, especially among those, whose skills are on a lower level. These older adults experienced a noticeable lack of dignity and self-confidence, which was highlighted when a group included also people with higher digital skills. This led to a situation, where older adults with lower skills could not follow properly and felt that they were left outside at the expense of participants with higher skills. Also, they did not necessarily understand the ongoing education, and finally lost their interest in either participating or asking if there were uncertainties.

5.3 Desire to learn

Desire and downright compulsion to learn were significant among older adults. Despite the variety in digital skills, starting points, and e.g., personal health issues, every participant acknowledged the need to somehow keep up with development, though many experienced learning digital skills uninteresting. Prejudices and negative attitudes were most clearly seen among the eldest older adults, who are close to non-users or minimal users of digital devices and services. However, also more advanced, and technically oriented older adults were at least temporarily uninterested, impatient, and sensitive to services. This occurred especially when their digital attempts failed, causing disinterestedness toward the services.

5.4 Significance of prior experience

The participants, who had experience with digital devices and/or services during e.g., their working career were in a far better situation compared to those with no previous experience. It became obvious that even a brief experience or acquaintance with digital devices and/or services influences dependability and absorbing digital technology later in life.

5.5 Summary of main findings

This interview study among older adults brought up the diversity in individuals' perceptions and opinions, entry levels, preparedness, and reception capacity regarding digitalization. Following the thesis' aim to explore older adults' perceptions and opinions about digitalization, and to determine actions for improving the situation, the need to notice the individuals' features, and implement more focused and personalized digital training becomes obvious.

6 DISCUSSION

In this chapter, the results from the interview study and the utilized information behaviour theories of the Monitor-Blunter Style Scale (MBSS) and Tailoring are discussed, compared, and summarized. Practical implications and recommendations are suggested based on these considerations. Recognizing monitors and blunters, utilizing tailoring, and noticing less active older adults are highlighted here. Finally, the research questions are answered.

6.1 Recognizing monitors and blunters

Based on the thesis' results and previous research concerning older adults' use of digital equipment and their attitudes toward digitalization (including the use of digital devices and services), the need to recognize the diverse features of older adults (digital) needs becomes evident.

Both more active monitors and less active blunters were recognizable among interviewees and followed the idea of the MBSS-model by Miller (1996). Most of the active monitors had some experience in digitality, usually in the form of a computer and/or the related program(s). Even a brief experience of using digital technology usually eased using and embracing new technologies. This is in the same line with the results received from the Survey of Health, Ageing, and Retirement (SHARE) among Europeans (König, Seifert, and Doh, 2018).

The features of bluntering among interviewees appeared mostly in the form of potential threat, which is another common feature in informational behaviour according to the MBSS-model (Miller, 1996). E.g., one interviewee who had worked in a bank stated still having nightmares about digital processes, which she was responsible for. The interviewee said she is pleased she does not have to work with such anymore. Threats concerning digitalization emerged as feelings of e.g., disbelief, lack of self-efficacy, rejection, and impatience instead of total avoidance of digitalization. This correlates with findings by Bhattacharjee, Baker & Waycott (2020), who noticed similar characteristics in their study about older adults' ability to learn digital skills.

The course instructors stated they were amazed by the broad level of older adults' digital skills and capability. This leads to both conclusion and recommendation, that instead of providing the same course content for every older adult in need of digital support, diving deeper into older adults' characteristics by utilizing the MBSS could help to recognize their personal needs more accurately. Thus, the right content and approach for the right individuals are recommendable since it enables more effective learning.

6.2 Tailoring to help older adults

The information behaviour-based tailoring method can act as help in building the most proper and effective model for the specific person(s). Taking the individuals' features and interests into consideration by tailoring (Lustria et al, 2009) will increase the weight and effectiveness of a customized and most suitable model for a specific person.

Previous research indicates, that the MBSS has mainly been used in health-related contexts. Tailoring correlates to health issues to a large extent, but also other approaches exist, e.g., by Fischl et al (2020). They utilized tailoring in planning a system to reveal, what would support older adults best in their attempts toward adopting the use of digital technology and participating in a digital society.

The need to design appropriate and encouraging educational programs shows throughout the entire interview material. Regardless of the interviewees' digital entry level, every participant stated that there is room for improvement at least in certain areas. Participants having low or almost non-existent digital skills often stated, that courses should start from a lower level. Therefore, due to many older adults with great variety in digital skills, the representatives in e.g., social services and health care, elderly work, institutes, and non-profit organizations are recommended to cooperate, mutually agree on the practices and share the responsibility and workload.

6.3 Noticing less active and lower-level older adults

According to Case (2005), avoidance and ignorance of information are not as researched compared to active information seeking. This is in the same line with the survey comments, where more unable and inactive participants were experiencing the more capable and active participants taking over the education. Thus, more attention should be paid to the less active, who are not the first in line to demand their rights to proper teaching.

Also occurred emotions of "feeling stupid", and not daring to ask, since the more skilled older adults "steal the show." Every more skilled participant had previous experience of using digital equipment, most typically at work, and had also later continued to do so. The skilled participants had no problems during the course, especially compared to those lower-level participants.

This leads to the conclusion, that to avoid inequality and unnecessary feelings of inferiority compared to others, older adults with similar entry levels should be situated in the same groups. Rasi (2021) is in the same line by stating, that when teaching digital skills to older adults, they should not all be taught the same way but to plan education by notifying the participants' individual needs and priorities.

Varieties in absorbing digitality do not concern merely devices and services, but also attitudes and prejudices. This was also notified by instructors, who reported the participants' negative attitudes toward digitalization. E.g., one of the eldest focus group interviewees claimed not to own any digital devices and has no intention to have them either. However, it later appeared that the person owned a mobile phone. According to Saukkonen et al (2021), ageing increases the risk of complete inactivity with digitalization. Eldest older adults are more likely to neglect and/or decrease the use of digital devices and services compared to other age groups.

6.4 Practical implications

In sum, the two methods and their outcomes from the studies – regarding monitoring and blunting, and tailoring - can be used as guidelines when planning a digital education for older adults with various traits and backgrounds. It seems there increasingly exists such technical solutions, which ease and help older adults in their everyday life e.g., with health issues. On the contrary, solutions to ease and help older adults with digital problems, especially from an educational point of view are less.

Fischer et al (2020) and Östlund (2015) suggest greater participation of older adults when designing ICT-oriented society and services. This can be interpreted from the participants' comments, which suggest the significant need for older adults to be heard and considered individually. The focus should be on tailor-made training programs, which will better notify older adults' opinions and entry levels. Therefore, clarifying the older adults' actual digital entry levels already at the beginning of the course e.g., by using a preliminary survey is highly recommendable. Thus, the earlier mentioned disproportion in group compositions could be avoided.

6.5 Answering the research questions

All three research questions provided useful answers, and they helped to better understand the older adults' perceptions, opinions, and entry levels regarding digitalization. Furthermore, answers produced numerous suggestions on how to improve the older adults' level of digital skills.

Research question 1: How could older adults be supported most appropriately with digitalization?

Outcomes from the interviews clearly express the need for older adults' digital guidance and a more individual approach. This is due to the great variety in digital skills among older adults. Request for personal guidance was highlighted by both instructors and participants. Noteworthy was that also digitally more advanced older adults recognized and expressed the need for personal guidance for those with lower digital skills. Courses

should be formulated by including participants with a relatively same starting point in the same groups to avoid inequality and feelings of frustration.

In addition to notifying and clarifying the older adults' entry levels and traits, attention should be given to educational resources. The importance of qualified instructors having interactive and empathetic skills with older adults is crucial in removing prejudices and encouraging individuals to participate in occasions to learn digital skills. To ensure reasonable and continuous activities, cooperation between various actors, e.g., city administration, civic college, local association, and third sector is desirable to share the responsibility and avoid the accumulation of work for only a small number of authoritative.

Research question 2: What motivated the older adults to participate in the course?

Comments and experiences from the interviews reveal that participants feel they are forced to learn digital skills to keep up with digital and societal development. A great part of the participants was hoping to reach awareness and understanding about digitalization and its use, while others mostly wanted to strengthen their existing, already relatively good skills, and learn more of the subject.

Participants are aware of the fact, that digitalization is a permanent and necessary part of today's society. Despite the participants' entry level, everyone agreed about the cruciality of controlling digitality on some level even if not interested. Thus, the will to learn (digital skills) is important here; to acquire the desired skill or level of knowledge, the will to act to succeed is inevitable.

Research question 3: How motivated are the older adults to learn digital skills?

Based on interviewees' comments and previous research notifying the older adults' entry level, using an encouraging, patient, and friendly approach, and tailoring personal learning methods promote best the individuals' willingness to adapt and learn digital skills. In the right circumstances and with proper teaching older adults are coping better with their achievements.

7 CONCLUSIONS

When summarizing older adults and their relation to digitalization and its use, two perspectives emerge; the older adults' welfare, and how to ensure it. Here, digitalization can be of help, especially for older adults. As a goal, it must be necessitated, that competent education, support, and encouragement, which also notice various personal traits and entry levels, will enable access also for older adults to participate in using digital devices and services, and achieving both benefit and pleasure.

Older adults' personal needs and hopes are important to notify, since also "anti-digital" persons can be encouraged and led to use and utilize digital devices and services. Encouraging especially older adults in the weakest position to experiment with digital technology is crucial. Simultaneously, overcoming fears and resistance plays an important role. It would be reasonable to enable at least a fair way to cope with digital society including devices and services.

7.1 Reliability and validity

Examining the reliability and validity of the results proved to be challenging firstly due to the relatively narrow sample, and secondly due to utilizing quantitative-based research material and methods, i.e., the MBSS and Tailoring. However, the qualitative approach of the study produced a rich and versatile material to utilize on various occasions. Eventually, the results from the quantitative research appeared to be comparable to the thesis' qualitative material.

The thesis aimed to examine older adults' perceptions and opinions regarding digitalization. Since the survey results and previous research correspond to each other, the research can be stated to have reached the levels of reliability and validity. The research was intended to be as clear as possible, notifying both older adults and professionals working with them.

7.2 Limitations

Despite the broad range of digital competence among older adults, the interviewees for this thesis were in a way privileged, since they had a chance to participate, and they were enough motivated to participate in the course to achieve better preparedness with digital skills. Against this background, without discounting the interviewees' digital challenges, the older adults with more serious digital challenges and possible incapability to seek help are not included in this thesis.

Furthermore, out of 17 interviewees, only three were males, and the rest were females, which causes a slightly shorthanded and unbalanced situation.

7.3 Future research

The thesis concentrated on results received from interviews among a certain number of older adults, who were focus group members, course participants, and instructors. Interviews represented the clients of a certain older adults' organization. A survey implemented in other organizations and communities intended for older adults could provide a comparison to the subject. Also, multidisciplinary research utilizing quantitative and qualitative methods could gain more interviewees, results, and therefore a deeper understanding of the phenomenon.

The thesis process raised numerous older adult and digitalization-related questions and problems, which can be hopefully answered and solved in the future. Most of the interviewees had at least some experience with digital devices and/or services. However, results from the survey raise the question of how to reach older adults in need of digital guidance, who possibly do not own any device or may not even want to be involved with any digital-related subject? Who are these individuals? Can they be helped, do they want help, or is it even appropriate to help them? E.g., in outreach services works professional authorities with an attempt to find young people under a threat of exclusion. Would it be possible to employ authoritative to reach out to "unseen" older adults, who are under a threat of digital exclusion, and cannot or will not participate in digital courses?

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APPENDICES

Appendix 1. Interview questions

SURVEY

Demographic questions INTERVIEWEES AND INSTRUCTORS

Gender: Male __ Female __ Other __
Age: __
Occupation/ the last job before retiring
_____
Highest education
_____

Background (digital behaviour)

1. Do you own digital devices, what kind? INTERVIEWEES AND INSTRUCTORS

2. Do you use digital services, what kind, and how often? INTERVIEWEES AND INSTRUCTORS
- e.g., Kela, Omakanta, Facebook, Google, Youtube

3. (How is your) "personal digital history": possible previous experience from digitalization (work, hobby, other)? INTERVIEWEES AND INSTRUCTORS

4. Have you previously participated in the course(s) like this? ONLY INTERVIEWEES

Experiences

5. What was the reason to participate in this course? ONLY INTERVIEWEES

6. INTERVIEWEES: What was most rewarding and useful during the course? What was best? INSTRUCTORS: What was most rewarding and useful, and what was best for participants?

7. INTERVIEWEES: What was most complex during the course?
INSTRUCTORS: What was most complex for participants?

8. INTERVIEWEES: What helped/promoted/motivated you to learn to use devices and services? INSTRUCTORS: What helped/promoted/motivated the participants to learn to use devices and services?

9. What did you learn during the course? Is there something you would have wanted to learn? ONLY INTERVIEWEES

10. Would you need something to learn to use devices/services independently? What? ONLY INTERVIEWEES

11. What do you think are the biggest barriers to using digital devices/services? Are there prejudices? How to get rid of them? INTERVIEWEES AND INSTRUCTORS

12. What should be done to include as many as possible in the digital society? How broad is the participants' entry level? INTERVIEWEES AND INSTRUCTORS