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How are senior citizens capable of coping with the world of digital natives?

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ABSTRACT

This study discusses the continuously growing threat to senior citizens*), later called seniors, who can be isolated from society if their digital competencies and experiences are too poor in today's digital world. To cope with one's pursuits, seniors need to actively construct and maintain their capabilities in flexible ways in the world of digital devices in response to the changing vicissitudes of life. Thus, the claim above illuminates that learning from experiences is highly valued in the digital world.

Seniors must closely consider the changes in the environment and flexibly respond to them as we live in a world of constantly unexpected incidents and changes. In the future, seniors are more and more expected to accept modernized and renewed digital systems to survive in everyday life.

The results of this study indicate that the readiness, willingness, and ability to develop oneself digitally are influenced partly by the knowledge and skills resulting from the studies and work experience and partly by the necessity and force of the digital world. The global challenges call seniors for new directions in education and training. The outcome of this study helps digital trainers and specialists educate senior trainees on a curriculum basis in subjects requiring their digital skills. Consequently, seniors also want to be regarded as good citizens in this digital field.

Keywords: senior citizen, digital native, digital learning, wireframe

Introduction

This study aims to investigate how older citizens develop themselves as digital natives. The focus is on understanding the factors that influence senior citizens to become digital natives or continue their social status chosen by themselves in a digital world.

Countries across the Organisation for Economic Co-operation and Development (OECD) are in the midst of a rapid demographic transformation as they are experiencing dramatic growth in their aging population. Due to a decline in fertility and an increase in longevity, it is estimated that in less than ten years, older people will outnumber children for the first time in history. The speed of population aging has been particularly fast in Japan; there already is a more significant proportion of dependent older persons (those over 65) than dependent young (under 15) to be supported by the taxes of the working population (dependency ratio of 35%). Similar but less pronounced trends are also evident in nations



such as Australia, the USA, Germany, France, the United Kingdom, and Scandinavian countries. (Merriam and Kee 2013; Beard et al. 2012, 6; OECD 2013, 1; ILO and OECD 2019).

These changes have led to new expectations in the digital environment concerning professional qualifications, mastering one's life situations, and different kinds of communication. The intellectual approach to digital learning is highly challenging and holistic, both in a personal and social process. Digital learning demands more delving into the digital environment and setting new goals. We are responsible for our progress: to an increasing degree, we have digitalization to cope with.

Statement of the problem and questions of the study

The research problem of this study is the following: Why do senior citizens fail to meet today's digital requirements? This research problem is examined through the following research questions:

- 1) What score skills does the current digital environment require from seniors?
- 2) How does society ensure that senior citizens become active users of digital skills?

Goals and objectives

The study aims to research and analyze the capability of senior people to cope with the world of digital natives. Analysis in this context refers to the description of the skill set, competencies, and attitudes that ensure the ability of senior people to manage their daily digital life without being excluded from society. The goal is to build a wireframe that solves the main challenges of digital devices and develop a curriculum-based training material that is practical enough for seniors to adopt.

Theoretical framework

Challenges of the change

We must accept good and bad changes that happen to us throughout our lives as the changes are hard to master like climate change. Although, we cannot control how we will react to them. However, what skills can we learn to help us embrace changes so that we emerge as victors and not victims? (Newton 2019). Finland is internationally recognized as a highly competitive nation, and Finnish education ranks high in the international PISA study. Nearly twenty years ago, Himanen (2004) challenged us to build a caring, encouraging, and creative Finland. He has recorded the ten major development trends of our information society: 1) increasing international tax competition, 2) the new global division of labour, 3) population aging, 4) increasing pressures on the welfare society, 5) the second phase of the information society, 6) the rise of cultural industries, 7) the rise of bio-industries, 8) regional concentration, 9) a deepening global divide, and 10) the spread of a "culture of emergency." (Himanen 2004, ref. Westerholm 2007). Kamppinen et al. (2002) have outlined a similar list of Finnish megatrends as follows: 1) technological progress, especially in ICT, 2) economic growth based on the transfer of knowledge and goods, 3) networking in its broader sense, 4) ecologically sustainable development, 5) new forms of work, 6) population aging and young people in developing nations as an untapped

resource, 7) social exclusion and a rise in welfare benefits, and 8) a new role for the public sector as a range of processes.

Changes of this nature pose new and different challenges to the seniors who compete with the generation called digital natives. The global challenges call for new directions in the education and training of senior citizens.

Motivation path

Learning in later life, citizens over 65 and/or retired, is becoming common; job-related needs or labor market qualification requirements are replaced by more personal aims such as curiosity, understanding the environment, feeling more integrated, pleasure, or keeping active. These personal aims can be seen from the quality-of-life (QoL) perspective, where education increases well-being and understanding of oneself and society and helps senior learners feel they are participating in and form part of society. (Escuder-Mollon et al. 2014, 510).

According to Jarvis (2007), lifelong learning is the combination of processes throughout a lifetime comprising the whole person – body (genetic, physical, and biological) and mind (knowledge, skills, attitudes, values, emotions, beliefs, and senses). Learning generally occurs throughout individuals' lives within a social context. (Jarvis 2007, 1-12).

There are clear signs that the notion of a career as a one-time choice and a lifelong channel for one's economic pursuits is being replaced by the notion that seniors are interested in constructing a portfolio or boundary-less career. Besides, career identities (in employment or self-employment) evolve open-ended and flexible in response to the changing vicissitudes of life. (Council of the European Union 2004; Cedefop 2008, 5-7; Takanen-Körperich 2008, 144; ELGPN 2010, 7; Biebaut 2010, 5; Nykänen et al. 2012,187.) Thus, the ability to learn from experience and lifelong learning are valued (e.g., Munch and Jakobsen 2005, ref. Westerholm 2007).

As Escuder-Mollon (2012) states, people are social beings, so they need to share activities with the other people around them. At any age, isolation can cause undesirable negative impacts: irrational thoughts, disturbed behavior, etc. When individuals get older, this behavior may increase due to events that can bring about this isolation, like the death of relatives, children becoming independent, or friends who move away.

Senior citizen

A senior citizen is known as an elderly person or a senior. Categorically, a senior citizen is a social demographic based on age. Being a senior citizen typically means that a person is at the age at which they retire from work. (<https://www.seniorliving.org/life/senior-citizen/>)

Digital native

A digital native is a person who has grown up in the digital age, rather than having acquired familiarity with digital systems as an adult, as a digital immigrant. Both terms were used as early as 1996 as part of the Declaration of the Independence of Cyberspace. They are often used to describe the digital gap in terms of the ability of technology use among people born from 1980 onward and those born before. Thus, today's students are "native speakers" of the digital language of computers, video games, and the Internet (Prensky, 2001).

Methodology

Data collection

To get a holistic view of the seniors' digital world, the approach adopted in this study is qualitative. This study is based on the empirical data collected by semi-structured interviews where persons of the focus group produced a narrative by telling about their experiences and how they train seniors to deal with digital smart devices. According to McAlpine (2016), narratives are one of many interpretive approaches used in sociology and organizational, gender, and education studies. Narratives involve telling stories by recounting how individuals make sense of events and actions in their lives – with themselves as the agents of their lives.

By using both literature and empirical data abductively, the researchers have aimed to identify the development of seniors in digital environments. Narrative data gathering, processing, and analysing are tightly intermingled. The focus is on understanding the factors that influence the seniors' decision to use different digital smart devices. The research has been restricted to seniors' use of digital smart devices.

The supplementary interviews that constitute the present study's data are not reported in pure narrative form. However, the informants' narratives form the basis for interpreting the cases here. The central issue in this study is not in analysing the narratives themselves, but they provide a means for approaching the digital world of the seniors. According to the focus group, the emphasis is on the seniors' perspectives and perceptions.

The researchers have used the data that were initially commenced in December 2018. The informants were asked if they were interested in participating in this research and to tell their experiences concerning the senior digital users. Also, the informants were asked to report in short narratives-their experiences, and afterward, they were phoned to give answers to supplementary questions.

Two of our informants are very qualified and skilled digital specialists with a long training experience, not only with Finnish people but also with multicultural immigrants, e.g., employees, unemployed, students, trainees, and homemakers. The third informant belongs to the supportive group of a commercial bank assisting seniors, not only Finns but also international customers, in digital matters. The group concentrates on this customer group once a week before bank opening hours. The following

defined questions to the theme were used in the research, and afterward, the informants were phoned to give answers to some further questions if needed.

- What are the main challenges for seniors in the current digital environment?
- What is your opinion about seniors as digital learners?
- What did surprise you most when training the seniors?

Analyzing and interpreting the narrative

The number of respondents reported by the informants amounted to 45 female and male trainees over 65 years. The answers with the same contents have been erased. The empirical data have been delivered following the question order. According to Fletcher (2007), narrative analysis helps researchers to move beyond the “what” and the “how” of informants while being able to answer theoretically “why” such processes migrate and stretch across different cultures and contexts.

What are the main challenges for seniors in the current digital environment?

- The life cycle of digital devices is shorter and shorter, which causes great diversity among the equipment.
- Most senior learners use their own devices and programs, which can differ significantly from those used in training.
- It is difficult to restrict the course material used because the number of devices and services the users need varies.
- The users may have different demands, which lead to course failure.
- There are remarkable differences between the starting levels.
- A few physical weaknesses or limitations like sight, hearing, and handiness might appear. The only feasible solution might be authorizing another person to care for one’s issues. If a senior does not use digital services, it does not mean that he or she is incapable, unwilling, or shy but simply because the service is insufficient; in other words, it cannot be used with other tools.
- The background may vary among the users and influence their digital learning.

What did surprise you most when training the seniors?

- Most senior learners are excited and inspired to learn digital issues, and their activity is enthusiastic.
- The general interest is to follow actual events in the digital world.
- The joy of success brings satisfaction.
- The senior learners complain when forced to learn new digital issues, but an encouraging trainer can make them more enthusiastic.
- The age is not a challenge; the users’ interest overcomes possible hindrances.
- The users accept the short life cycle of digital devices and do not give up practicing because they feel they are forced to learn.

What is your opinion about seniors as digital learners?

- Generally, the users are enthusiastic and very keen on learning
- The new environment is a big challenge because security is important for the users.
- The users do not inevitably achieve their achievable goals because of problems in using digital devices.
- The Age does not define their ability to learn and practise; in other words, the change does not frighten.
- The positive attitude to the change is “half of a victory.”

These answers were analysed and classified by our two digital specialists in Figure 1. The empirical data were combined under the four components: User friendliness = Simplicity, Guidance = Training, Positive attitude = Personal motivation, and Reachability = Prevent marginalization. In addition, the analysis and classification were reviewed and revised by the researchers as experienced pedagogues.

Findings

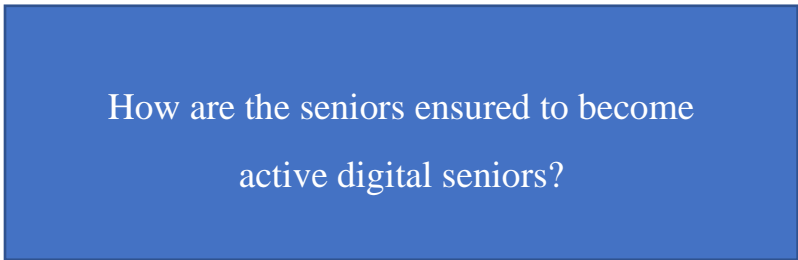
After the analysis and classification of the empirical data, the following results were summarized as Figure 1 illuminates:

User-friendliness

= Simplicity

Guidance

= Training



Positive attitude

= Personal motivation

Reachability

= Prevent from marginalization

Figure 1. The wireframe with four sections.

The figure presents the wireframe with four sections answering the core question: “How are the seniors ensured to become active digital seniors?” The sections reflect the informants’ narratives about their senior trainees who brought valuable expertise and wisdom.

User-friendliness

= Simplicity:

It is acceptable that the seniors use their own devices, and the programs are not allowed to differ from those used in training. In addition, the seniors must have single and understandable material. The general interest to learn arises when the digital demands are not confusing but user-friendly enough.

Guidance

=Training:

Guidance is the main factor in senior training. The seniors might have different demands and expectations, leading to training failure. Their background may vary and influence their digital learning. The age is not a challenge because the seniors’ interest overcomes possible hindrances. In addition, seniors accept the short life cycle of digital devices and do not give up practicing because they feel forced to learn. The main principle is that all trainers use elementary and fundamental training material for the seniors. Supportive, fair, and unitary training has to be developed and maintained.

Positive attitude

=Personal motivation:

Generally, the seniors are enthusiastic and keen on learning: The positive attitude to the change is “half of a victory.” The joy of success satisfies them because most senior learners are excited and inspired to learn digital issues, and their activity is admirable. Besides, the senior learners feel satisfied working with digital devices independently without outside assistance.

Reachability

=Prevent marginalization:

The general interest is to follow actual events in the digital world. However, there might appear to be some physical weaknesses or limitations like sight and hearing, and handiness. The new environment is a big challenge because a sense of security is essential for seniors. They do not inevitably realize their possibilities contra restrictions using digital devices. As digitalisation proceeds, modern society supposes that every senior citizen also has a smartphone, which may create significant challenges, e.g., how to conduct online banking operations.

Discussion and conclusion

Our society will save in resources and costs when social officers and health care personnel cooperate with their senior citizens. They are expected to speak the same language as the seniors; in other words, the terminology includes common expressions and words familiar to seniors. In summary, it is to emphasize that society will gain a remarkable advantage when senior citizens can use constantly increasing digital services.

When seniors use the wireframe, society will not exclude and marginalize them. The seniors are proud of their digital skills and competencies, which are an obligatory route for future steps in keeping up with what is essential in the digital environment. This means that reaching the best possible outcome of modern societal development, like data protection, must be considered. For any reason, no hindrance can disturb senior learners from taking care of their daily activities. The quality of life improves considerably and accordingly, creating new effectiveness in the whole society. Thus, a positive attitude is central when approving the digital world.

This research demonstrates that the more engaged, active, and healthy older adults are, the less drain they are on community services and resources. At the same time, these same adults contribute to a community's well-being through volunteering, caregiving, civic engagement, and intergenerational activities. (Merriam and Kee 20013). Furthermore, such characteristics as willpower, intuitive thinking, spirit, and communication skills impact the ability to manage practical problem-solving situations. Learning from experience and lifelong learning are valued (Munch and Jakobsen 2005, ref. Westerholm 2007).

Digital devices enable continuous connectedness and have increased users' freedoms psychologically, socially, and physically. The side effect of the increased freedom leads the users of such technologies to experience disorders of freedom that significantly deflect from their values.

These findings indicate that digital knowledge arises from knowledge, skills, and attitudes resulting from motivation and work experience. The significance of one's personal development as a digital user proceeds through life stages utilizing lifelong learning. The person might regard himself/herself as an independent digital user at his/her age. Concerning life-long learning, Escuder-Mollon et al. (2014) state that learning in later life is becoming more common. Personal aims can be seen from a quality-of-life perspective, where education increases well-being and understanding of self and society. This search for and accomplishment of personal aims helps older learners to feel that they are participating in and forming part of society (Escuder-Mollon et al., 2014).

According to Römer-Paakkanen and Takanen-Körperich (2022), senior citizens' independence throughout life can contribute to their well-being. At the same time, senior citizens with digital skills are active in the community, and they can contribute to overall community well-being through their accumulated life experience, expertise, and engagement.

The most significant outcome of the study is *the wireframe which is “the first aid” digital pass for the trainers of senior citizens*. Accordingly, we propose an emphasis on the following perspective in further research: a topic to do with concrete senior training and education for Finnish people and other nationalities living in Finland by curriculum work. Furthermore, in the final stage, this completed first aid digital pass would be sent to the Finnish Ministry of Education to be officially assessed and possibly later accepted by the European Union (EU) decision-making instances.

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