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Title	"Nonsense?" - ICT perceived by the elderly
Author(s)	Halonen, Raija
Publication Date	2011
Publication information	Mikkola, K. & Halonen, R. (2011). ""Nonsense?" - ICT perceived by the elderly". European, Mediterranean & Middle Eastern Conference on Information Systems 2011, Divani Apollon Palace & Spa, Athens, Greece, 30-31 May.
Publisher	EMCIS
Link to publisher's version	http://www.iseing.org/emcis/EMCISWebsite/EMCIS2011%20Proceedings/SCI1.pdf
Item record	http://hdl.handle.net/10379/2931

“NONSENSE?” - ICT PERCEIVED BY THE ELDERLY

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This paper describes a feasibility study of ICT and social media as perceived by elderly people. Until lately, very little research has been done on social media from the perspective of older people. This is surprising as prior literature reveals that the amount of elderly people is increasing in the future. The empirical research material was collected by interviewing elderly people who lived independently at home. The qualitative study showed that not all elderly find social media necessary or interesting but several of them use ICT due to need for services. The results will contribute further research on the use of ICT and elderly people.

Keywords: Social inclusion, Social media, Elderly people, ICT.

1 INTRODUCTION

Only little research has been done on the link between user acceptance and individual (Venkatesh et al. 2003). Our study is a step to find out who those users are who accept but who do not use. Especially, the focus is on information and communication technology (ICT) that is proliferating in our living surroundings (Nygård & Starkhammar 2007). This study investigated how elderly people experience ICT and social media. The target group consisted of individuals who participated social activity clubs and no previous information about their ICT use was available. In this study, elderly people are people who are 65 years or older. The topic is relevant as people are living older, thus changing the age structure (Lutz & Samir 2010), and the role of technology in the society is increasing. Adding to that, it is important to recognise the early warning signs of IT project failures as examined by Kappelman et al. (2006). As the society is getting ever more ICT-based, also many services are moved into the Internet (see e.g. Quico 2008). To effectuate social inclusion it is important that individuals have the possibility to utilise the services.

Even if the topic of old adults and technology has been investigated already earlier, very little research has been done on elderly among other age groups from the perspective of ICT and social media. This is surprising as prior literature reveals that the amount of elderly people is increasing in the future (Adam & Kreps 2006, Mordini et al. 2009). In addition, while "Design for All" and "Universal Design" are principles that define generic guidelines for designing mainstream products and services planned to benefit users including also disabled or older people, not all disabled or elderly are able to use products that follow "Design for All" (Alpay et al. 2004, Marcus 2003).

Most elderly people haven't yet been working with computers while younger generations cannot even think of living without technology (Goodman et al. 2003). Selwyn (2004) continues that compared to all people the elderly use ICT less measured both in extent and frequency. In addition, elderly experience more fear and anxiety towards computers than the younger ones and also fear of spending too much time when learning to use computers (Marquie et al. 2002). Charness and Boot (2009) mark how bad design in technology is a potential reason to cause fear for technology and further hinder technology adoption. However, the last decades have developed ICT in unexpected pace and converted ICT a central part of work, education, health care, communication and amusement (Czaja & Lee 2007).

To find out how elderly people perceive ICT and social media in their lives we interviewed 12 persons who were not previously known to be familiar with computers or social media. In our study the participants were 67-86 years old and they lived independently instead of supported housing. It

appeared that five of them did not use computer while the others had at least minor experience of them. One respondent commented her use of social media by "*Nonsense, as there are severe matters in life, as well.*" The proposed study enlarged knowledge about information and communication systems in the research context. Despite the availability of ICT in homes in the future, it is likely that a significant share of it will not be utilised for versatile reasons. The results are useful when designing ICT-based services for elderly people as it revealed the reasons for not using ICT as well as aspects that were perceived important by the elderly.

The paper is structured as follows. Next, the main concepts of the elderly and ICT are introduced. This is followed by a section where the research setting is described. After that, the study results are described and interpreted. The paper ends with discussion and conclusive words.

2 ELDERLY PEOPLE AND ICT

In this section we take a look at the elderly from the viewpoint of utilising technology while concentrating on ICT and social media. As a concept, "social media" is not unequivocal. Kaplan and Haenlein (2010) describe its history back in mid 1970's as a social networking site that brought together online diary writers into one community. Kaplan and Haenlein continue that the growing availability of high-speed Internet access enabled the emergence of social networking sites such as MySpace and Facebook.

In the developed countries across the world, there are increasing numbers of older people and the major share of them is living relatively healthy and independent lives (Magnusson et al. 2004). Furthermore, the statistics of the EU commission predict that the demographic changes induce great concerns in the near future as the population profile is projected to become older in almost all regions (Giannakouris 2010). ICT is expected to be usable in a number of ways to improve the living experience and quality of life of people at home and their living neighbourhoods; and ICT solutions for the elderly and those with dementia are becoming ever more used (Magnusson et al. 2004, Nugent 2007, Selwyn 2004). Following that, due to the great share of cancelled IT projects before completion or otherwise failed IT projects it is reasonable to identify possible early warning signs of the failures (Kappelman et al. 2006).

In their qualitative, ethnographically-inspired study Nygård and Starkhammar (2007) observed several occasions in the homes of people with dementia from the viewpoint of everyday technology. In their study, everyday technology consisted of electronic equipment such as remote controls, microwave ovens and mobile phones. They also note how several numerical codes are needed to access apartment buildings and to administer everyday financial transactions. Nygård and Starkhammar recognised several barriers to everyday technology use and classified them in four domains: First, interfering conditions that appear as hindrances in technology use; second, limitations in the person's knowledge of the technology and its potential; third, communication difficulties in the use of technology; and fourth: instructions for use that often appears as an illusion in support. The barriers deserve to be taken for granted as they may response to the question why certain groups of people tend to be non-users of ICT (Selwyn 2004).

However, web-based technology has already become significant for our everyday life and social interaction (Hardey 2009). Likewise Marcus (2003) proclaims that future is already here and technology is marching onward toward ubiquitous, networked, smarter objects and associated services for communities of all people, not just special people with unique needs. While ICT-based activities are acknowledged to promote the independence of older people and to help them live in their own homes (Curry et al. 2003), there have also been efforts to empower senior citizens in their effort to become active seniors (Fuglsang 2005). On the one hand, Selwyn et al. (2005) question whom the Internet belongs to and ask who is or who is not using it, and if they do use, for what purposes they use it. Selwyn et al. continue that it is important to enable people to live their everyday lives and to find out if ICT enhances their abilities to fulfil active roles in society instead of falling off society in case of staying without ICT.

On the other hand, online social networking has been said to enrich the lives of the elderly as they provide them with an easy way to stay in touch with friends and family (Lewis & Ariyachandra 2010). Therefore in the society with rapidly aging population the acceptance and utilisation of developing technologies by the elderly is becoming increasingly important (Broady et al. 2010). Furthermore, the ethical aspects regarding ageing and increased emphasis of ICT in all age groups need to be seen and managed (Mordini et al. 2009).

Ethical aspects were concerned also by Eccles (2010) who explored telecare technologies in their implementations. He believes that the use of assistive technology will reach ever more significant prominence in the near future but also expresses his worry of future funding for increasing assistive technology. Eccles concludes that the use of telecare technology in human services necessitates pertinent debate about how it can be ethically implemented keeping in mind that good care may appear very different for different user groups.

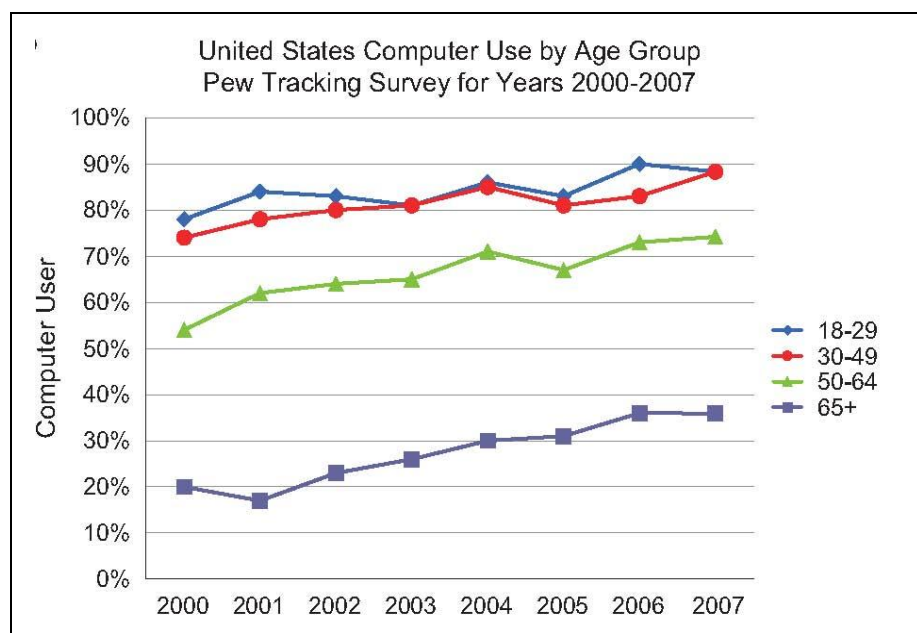


Figure 1. Computer use by elderly (Charness & Boot, 2009, p. 254).

In their review of U.S. Internet use Charness and Boot (2009) realise that there has been significant increase in computer use over the past decade even if the gaps between age-groups did not close. Figure 1 verifies that the change in the oldest age group was greater than in any other age group but despite the great change, the elderly stay far below the others.

Even if age seems to have a strong emphasis on adopting and making decision to implement new technology, the influence of age is significant only in first experiences of technology (Morris & Venkatesh 2000). Later, along with time and experience the difference between younger and older adults is getting smaller. This finding is in line with Haddon and Silverstone (1996) who studied people aged 58-72 years, and according to their study, the computerisation had taken place in different phases of life. Haddon and Silverstone note how some of their interviewees had actively avoided learning to use new technology and new processes as the age of their retirement was so near. On the other hand, the younger age groups had learnt and acquired knowledge of computer use in their work at the time when they still had several working years ahead. Contrary to that, Hanson (2009) believes that in 20 years, the technology will have changed such that the next older generation will perceive difficulties with the technological applications at this time. This conception is in line with Charness and Boot (2009) who assume that technology will continue to advance rapidly and cause continuous lag in technology adoption. They also expect that the lag is decreased with better guidelines and tools that enable technology better attuned to older adult capabilities.

The assumption that the elderly people have negative attitudes towards technology may root from the selective use of software as the elderly utilise only those applications they needed (Broady et al. 2010). Broady et al. find the assumption misleading. Older computer users also typically avoid errors by limiting what they try out. Furthermore, due to lacking well-developed design vocabulary and because of being unaware of the adjusting and accommodating interfaces, older people find it hard to describe what they want regarding computer functionality and features (Hawthorn 2007.) This is in line with Selwyn (2004) who points out how elderly adults move through different levels of technology use depending on their circumstances and context as people who used actively ICT at work may then change into minor use of ICT after having retired. In their literature review Broady et al. (2010) point out that instead of only differences there are also similarities between attitudes and experiences of young and older adults in using ICT. Ten years earlier Morris and Venkatesh (2000) reported that younger people seem to be more taken by attitudinal factors while older people are more motivated by social and process factors. Morris and Venkatesh explain the difference with different working experiences that people have accumulated over time. Some of them may have had technology training while the elderly appear to be more taken by behavioural control.

In their study of adult's use of social networking sites for communication Subrahmanyam et al. (2008) reported that their participants' use of social networking sites was integrated with both the concerns and people from their offline lives. However, the analysis also revealed some overlapping between the offline and online social networks. Despite that, the participants did not think that their use of social networking sites influenced their relationships.

Lehtinen et al. (2009) reported the most hindering factors that they found in their study of older adults' understandings of social networking sites. Their list of hindrances included lack of confidence in personal computer skills in combination with concerns of other people using the elderly persons' personal information; fear of accidental social blunders in mediated social interaction through not understanding privacy issues; incompatibility of perceptions of social relationships with perceived preconceptions and assumptions about social networking sites; and costs related to the change from old way to interact to the new way to interact.

Moreover, instead of utilising ICT-based social media the elderly are more likely to socialise in more traditional manners (Broady et al. 2010). Another view comes from the study of Haddon and Silverstone (1996) when they report about people who were not interested in acquiring a computer of their own even if they had been utilising computers in their working places. Haddon and Silverstone continue that some people got interested in computers and new communication technology at work but the interest remained at that level, in general. Charness and Boot (2009) add that poorly designed technology is one reason to cause fear against technology and thus builds an obstacle to adopt new technology. Negative feelings and attitudes make thinking more difficult and people cannot concentrate on new tasks and features. Therefore new technology should be designed keeping in mind the abilities of elderly people and the changes that are caused due to ageing, Charness and Boot conclude.

In addition, a significant hindrance for accepting new technology and use is the difficulty to understand guidebooks that are often written with confused language and structure (Hawthorn 2007). Hawthorn points out the hidden assumptions about representative users that implicitly are seen similar to the designers at least to some extent. With older people this implicit assumption does not hold as the differences between older and younger age groups witness. On the other hand, if elderly people have positive attitudes towards new technology, they are pleased to test specific technical equipments (Eisma et al. 2004). Furthermore, despite the hampering factors caused by cognitive or physical failings, the elderly tend to believe that there is a need for them to accept ICT, rather than a need to avoid them (Broady et al. 2010).

In his study of developing a conceptual model on social networking usage by elderly people, Lewis (2010) introduces ten important factors that influence senior social networking use. Even if many of the factors fit to any age group, Lewis delineates that the elderly will vary widely on each of the factors, compared to other age groups. Lewis concludes that very likely the elderly will surf online more in the future when new applications will be developed and introduced.

Mordini et al. (2009) express their concern over digital divide caused by new technology as the gap between those people with effective access to digital and information technology and those without access to it seems to widen. Specifically, they point out that the digital divide is chiefly age-related. According to the European Commission, 38 % of EU citizens were regular Internet users while only 8 % of people over 65 years were regular users. However, the major influence of older people's avoidance of technology is caused by the lack of knowledge of the capabilities of modern ICT and of how to utilise it (Broady et al. 2010). Following Lamb and Kling (2003), the elderly may have conflicting thoughts about ICT and social media; despite that, their responses and attitudes benefit further IS research and IS development.

General attitudes towards ICT have been visible over the last twenty years (Broady et al. 2010). The role of social influence constructs has been controversial (Venkatesh et al. 2003) even if there is evidence of social influence to be more significant among women in early stages of experience and among older workers (Venkatesh and Morris 2000). Venkatesh et al. (2003) argue that social influences do matter at least in mandatory usage settings.

In all, one can conclude that the role of ICT in our everyday life will grow and as predicted by population projections, the share of older age groups is increasing especially in the developed countries. This implies that the elderly will face ICT in their lives more often and in more contexts.

3 THE STUDY

Our study focused on elderly people of whose computer use we did not have earlier knowledge. The elderly participated in social activities offered by the social and welfare services of the local administration. To get access to appropriate research source for the fieldwork (Walsham 2006), the study plan was first introduced to the leaders of the social activities who were asked to inform the elderly in their groups. Those interested were asked to leave their contact details or to contact the researcher directly. To make the interviews easier we utilised questions based on prior theory. The interviews were semi-structured and they enabled the interviewees to talk from their perspectives and to emphasise issues and aspects relevant to them. To observe, describe, and understand the real work the elderly did (see Mintzberg 1971), and to ease them respond and describe the settings, the interviews were mainly carried out at the premises of the elderly. In addition to the ready-made questions, the topics that evolved in the discussions were included in the study (see White & Weatherall 2000).

After every interview the interview was recalled and notes were completed. In addition, the interview was summed up with the interviewees to ensure that all experiences were understood in the way the interviewees had meant. The interviews were steered by questions such as “If you have no computer of our own, where do you use computer?”, “What kind of experiences about computers do you have?”, “What do you think of computers and Internet?”.

The study applied qualitative content analysis that emphasises the need for text interpretation to point out the experiences and feelings of the communicator, and - as especially in our case - to note the situation of text production (Mayring 2000). The results were read one by one and significant meanings and aspects were sought. The identities of the interviewees were hidden to avoid disclosure (see Walsham 2006).

Altogether 12 persons were interviewed, consisting of four men and eight women. Three of the interviews were carried out in the Senior Day Care Centre that was familiar to them. The interviews lasted from 22 minutes to 70 minutes according to the use of computers or to the talkativeness of the interviewee. The youngest was 67 year old and the oldest was 86 years old. Seven persons had a computer of their own and they used it regularly. All those users had an Internet connection at home. Two of the interviewees had never used a computer; three had tried a mouse or email but never actually used a computer. The non-users were 67-86 years and the users were 68-77 years old.

4 RESULTS AND ANALYSIS

Two interviewees of twelve told that a computer is a tool and that they use it only for practical reasons. For five interviewees the computer was more important and it was used more versatile. In this case, the interest in computers was great and it was important to learn more. It seemed that the computer was a part of life. It was an important and significant tool that makes it quicker to take care of tasks and it was also easy to keep contact with the help of computers.

"It is great. It interests a lot [...] A large area, you cannot get to know everything, otherwise it takes too much time." Kim, 77 yrs.

All computer users were familiar with eBanking and emails. The eBanking was perceived important as it was not necessary to go to the banks and to queue there. Furthermore, personal banking services were seen expensive. On the other hand, misuse of one's property was scary as expressed by one interviewee. Another hindrance was seen in the reliability of the Internet:

"Buying ... I'm scared of using my credit card in the Net. They say it can be misused." Vicky, 68 yrs.

"Wikipedia, is it reliable? I wonder if there are bilgewater?" Tina, 68 yrs.

Also image processing, information retrieval from the Internet and reading online newspapers were common among the interviewees.

"Computer is a necessity for me. A good device and one can engage in several things." Mary, 68 yrs.

Not all participants utilised computer as versatile even if it was experienced as important equipment. Some did not use computer daily or did not utilise it in amusement or hobbies. However, computers were seen practical when physical movement was not anymore easy. Several tasks could be managed at home with the computer, no need to go to the city and one respondent noted how the computer saved also several steps.

The elderly understood that it was important to understand information technology in future when physical movement becomes more difficult. In addition, people wanted to stay up-to-date (see Selwyn, 2004). Furthermore, other people had influenced with their opinions on the decision to learn to use computers. One respondent told how her friend had laughed at her and wondered as she had no computer. In the beginning it had been besetting to learn:

"First, I was strained and beset. I felt that I had to quickly press a button. Now I can look with more peaceful, it doesn't blow up." Tina, 68 yrs.

Despite the problems and difficult situations with the computer, it was seen so useful that people did not want to get rid of it:

"Sometimes I think that I'll wave it into the rubbish heap but then again it comes that no way. I'm so used to it. It helps in my life and everyday. I'm so glad I took this road. I'll manage." Tina, 68 yrs.

Of those computer users only one had learnt to use computer in her late years, after retiring. All the others had learnt the basics while working, and thus the computer had only been a tool. However, it also influenced the situation later, whether to have a computer at home or not. One lady described:

"If I was still at work, I had learned. When my brains were working." Ruth, 80 yrs.

Many elderly underestimate their skills and they have negative attitude towards technology (Goodman et al. 2003). In our study, the underestimation was seen among those who did not use computers. Some elderly also saw themselves too old to learn new things:

"If I was 20 years younger, I'd have the apparatus." Ruth, 80 yrs.

"I wonder if I could learn, not quickly, at least ... In this age one must take easy, what is difficult can be ignored." Martha, 86 yrs.

"I suppose I'm so gaga I can't learn." Kathy, 67 yrs.

"I wonder if it is worth of whitening for my head for the rest ten years?" Tim, 80 yrs.

However, some people did not find it important to utilise computers. Among those non-users, there was perceived trust on own skills and only lack of interest was mentioned the greatest reason for not learning to use computers.

"In our home, we had the reason that my husband did not want, he had such an aversion to computers. If he'd had interest also I had learnt. I didn't want to get wiser." Ruth, 80 yrs.

"I can't even imagine what the technology might be, I don't feel I'm lacking." Ruth, 80 yrs.

"It's for the young, I don't need." Kathy, 67 yrs.

All interviewees utilised older technology such as television and radio. Furthermore, digital television adapters were familiar to them, without any difficulties. All except one had a mobile phone, which was used for calls, if nothing else. Writing and reading SMS was not easy for all. One respondent expressed her concern of future development:

"I didn't bother to learn, I suppose it won't stay in my head. Also the others (friends) can only make phone calls, no SMS and I've agreed with the younger that no SMS are sent." Helen, 86 yrs.

Helen's comment showed that she questioned her ability to remember what she had learned. She had no need to write SMS's because the others did not write them. Without any need to learn it seems difficult to start learning. Helen's case also expressed that a mobile phone in use is not an adequate reason to learn new technology. One reason might be that ageing influences human cognitive and motor systems (see Charness & Boot 2009).

On the other hand, in another comment Helen expressed that she regretted for not learning modern skills already earlier:

"I'm not afraid that I wouldn't learn but it won't stay in my head. I still have some interest if I only got elementary teaching. I'd like to chat ... it irritates me that I didn't learn in earlier times." Helen, 86 yrs.

Helen's conception was supported by Tim (80 yrs) who was definite that he could learn if he only wanted:

"One surely learns, there are no psychic obstacles. Technique is not interesting, rather nature ... I've pondered if I acquired a computer but I don't get it done. The older one becomes the more difficult it is to make the initiative ... for information purposes there's no reason because there are so much books." Tim, 80 yrs.

Only two respondents did not find any obstacles or preventing factors for using computers. Problems with language were hampering two persons. Despite that, software was used even if linguistic skills did not allow full understanding. For example, in image processing it was possible to test and try out how the application should be used.

Difficulties with declining eyesight, hear and motor functions were reported by the interviewees, too.

"The use of mouse and keyboard is difficult. Alone I won't even try out. Weird equipment – motor functions and working principles!" John, 71 yrs.

"The mouse pad is odd, it is so difficult to focus the cursor." Mabel, 70 yrs.

The interviewees also complained of their declining memory and the problems of forgetting things. They described how their poor memory also influenced their ability to learn as new ideas and matters were not remembered as well as were earlier learned and familiar matters. Therefore the important matters had to be written up or otherwise they would be forgotten.

"Yes, you can learn OK but the matters will not stay in your head. You are not so stupid."
Helen, 86 yrs.

The interviews showed that in general, the elderly have positive attitudes towards technology. Also those elderly who did not use computers seemed to understand the benefits that come with technology. Table 1 sums the benefits listed by the elderly.

Benefits
Possibility to get information
Keeping in contact
Staying up-to-date
Speeding up of conducting matters

Table 1. Benefits from technology.

The computers make life easier and also the change from face-to-face services to online services was perceived positive. However, not all services may be computerised as expressed by the interviewees. The respondents emphasised that the change must take place slowly and it must be informed properly. However, the change will cause problems in the future and therefore another choice should be available, explained the elderly. All elderly do not trust on technology and they are afraid of making mistakes. Tailored courses should be offered to them and cover also the services online, argued the elderly.

“I question if it (change to online services) will succeed, all people have no machine or intellectual capacity. Shares the society into two ... makes life really hard.” Tina, 68 yrs.

“The elderly are losers, it will not be possible, there will be problems.” Ruth, 80 yrs.

“Not all have capability. And there (in courses) come only the most active, what about those who will not come.” John, 71 yrs.

Social media was utilised only little among the interviewees. Only one respondent had a profile in Facebook but she didn't visit it regularly. Victor (72 yrs) was about to register in near future due to curiosity reasons. One interviewee told that she had had a profile in Facebook but she had taken it away as she had experienced it so disgusting. All the other computer users told that they had no interest or time for Facebook. However, all respondents knew what Facebook is.

“Facebook is not real life, it's only virtual. Better face-to-face or on phone. Nonsense, as there are really difficult issues in life, as well.” Vicky, 68 yrs.

Facebook was seen as useless time consuming and the idea even made some people laugh. Especially the “like” function woke a lot of amusement among those who had seen Facebook. Some interviewees told that they had received invitations to join Facebook but that they were afraid of joining in. The elderly told that it was impossible to remove one's information from Facebook once they are inserted and it was not possible to get rid of Facebook even if one wants to. One respondent also wondered why one should join Facebook in the first place.

Four interviewees had used or tried to use Skype in phone calls. One interviewee told that she chatted with her grandchildren every now and then. Most computer users read online discussion forums but did not upload their own comments. Discussion forums invoked strong opinions:

“I don't bother reading the discussions, it is childish, they are younger. The things go over my head. I can't comprehend why small things are made so great issues.” Victor, 72 yrs.

“I'm not reading online discussions because I discuss enough even without them.” Vicky, 68 yrs.

“Are they talking bunkum? It's difficult to distinguish.” John, 71 yrs.

A mobile phone was seen as the most practical tool to communicate even if also emails were written. The mobile phone was valued because useful when things had to be managed quickly. People living further off, especially those abroad were contacted by emails. In addition, emails were useful when communicating over official errands.

In all, the interviewees expressed mainly positive attitudes towards ICT. This can be seen also in the comment of Helen (86 yrs) who explained her situation:

“Somehow I feel I’m lacking something – but I can only blame my self. I could learn if there were other people like me. They teach too quickly, I haven’t got me off ...It would be wise to teach the elderly that the world is going forward, not backwards. It irritates me when everyone talks that earlier it wasn’t like this or like that.”

5 DISCUSSION

The main objective of the paper was to present a preliminary study of ICT and social media from the viewpoint of elderly people. In other words, what elderly people think of ICT and how they utilise it in their everyday life. Twelve persons were interviewed either in their home environment or in a Senior Day Care Centre where they socialised and participated in hobbies or just had lunch together. Due to the small amount of interviewees the interpretations are only suggestive.

Lehtinen (2009) listed several obstacles for adopting ICT. In our empirical study, lack of confidence in personal computer skills was perceived by several persons. However, not all old people questioned their abilities to learn. For example, Tim (80 yrs) and Helen (86 yrs) were positive that they could learn new skills and they only challenged their ability to remember what they had learnt.

So far, only some research has focused on social media from the senior citizens’ view. While Lewis and Ariyachandra (2010) believe that online social networking enriches the lives of the elderly, our interviewees socialised rather face-to-face than online. Also mobile phones were in active use but all interviewees did not utilise SMS either. On the other hand, prior research shows that ICT has become a notable medium in our everyday interaction as described by Hardey (2009) in her paper about being constantly connected. Our study showed that not all elderly find computers or social media important even if several of them utilised ICT due to the need for services offered through it. For instance, eBanking was seen important because it decreased the need to go to the city and to queue in the banks. On the other hand, Vicky (68 yrs) was wise enough to worry if using her credit card through the Internet is safe or not. This is in line with earlier research. Morris and Venkatesh (2000) showed that age influences only at the beginning when people learn to use ICT. In our case, Tina (68 yrs) described how she first became nervous but later took her time and understood that the equipment would not explode in her use.

Especially, our preliminary study responded to the question of Selwyn (2005) who analysed whom the Internet belongs to and its users and non-users. It seemed that even if the elderly had access into Internet some of them did not perceive it important. Even some of the younger interviewees thought that ICT existed for the younger people, not for the elderly. For example, 67-year-old Kathy was definite that computers were for the young and that she did not need them. She was also afraid of being too stupid to be able to learn, thus underplaying her skills and understanding (see Goodman et al. 2003). A milder form of the negative attitude towards modern technology was seen in the comments of Martha (86 yrs) and Ruth (80 yrs) who complained of their laziness or their slow way to learn as described also in prior research (Marquie et al. 2002).

John (71 yrs) defined that the computer is only a tool and that he finds a mobile phone much more practical in daily use. Furthermore, Tina (68 yrs) was very definite that there would be problems because all people would not utilise ICT in their private life. This concern was noted also by 80-year-old Ruth who delineated that the elderly are losers. The concern should be noted also by the society where apartments and public and private services are increasingly filled with ICT (Nygård & Starkhammar 2007, Charness & Boot 2009)

On the other hand, 68-year-old Mary perceived that she definitely needed computers because she was able to perform several tasks with it. Likewise, Tina (68 yrs) was very pleased with herself because she had taken the trouble to learn her computer use. Kim (77 yrs), too, was pleased with computers and he emphasised the wide area of interests that may take too much time to be familiarised with. These findings verify the research results reported by Selwyn (2004) who expressed the need to stay “up-to-date” as perceived by the elderly.

According to our study, not only one's own attitude was important when considering computer usage. Ruth (80 yrs) explained that she didn't learn to use computers because her husband had such negative attitude towards ICT. Ruth was also definite that there will be problems in future. She explained how the elderly will be losers because they belonged to the non-users (see Selwyn 2005).

Our study showed that the oldest people did not utilise ICT. Haddon and Silverstone (1996) described that age and prior experience are significant when analysing users and computer use. In our study, the oldest persons did not have computers at work and therefore they had not had possibilities to get familiarised with computers in their working years. However, according to their comments, the oldest persons seemed to understand the benefits ICT may produce. Contrary to the findings by Czaja et al. (2006), the possibility to utilise did not influence actual use. Our interviewees told that they had had possibilities to use computers and even get guidance if they had wanted. However, one can assume that if the benefit is not personally experienced, it will not produce positive actions.

Our study also showed that even if the elderly did not utilise ICT, they still dreamt or thought over utilising it. This was put in words by 86-year-old Helen who regretted of not learning to use computers earlier. She still pondered that if only there were others similar to her who wanted to learn and they could together find teaching. Her problem was that the teaching was too quick for her and that she did not find peer students, similar to her. One can assume that the passing of time had influenced the attitudes and that the prevailing circumstances in one's neighbourhood were supporting ICT (see Broady et al. 2010).

6 CONCLUSIONS

The study acted as a preliminary study to find out how elderly people utilise information and communication technology. To find answers 12 elderly people were interviewed. Prior to the interviews the researchers did not know if the interviewees were familiar with computer and what their activity in social media was. In this sense, the study started without presuppositions. However, prior literature reveals that old people utilise less technology than the younger generations do (e.g. Goodman et al. 2003, Morris & Venkatesh 2000).

While our study explored the experiences of current elderly who consisted of computer-users and non-users, we reflected on the wish by Selwyn (2004): "Older adults should be involved in changing ICT to be more of an attractive, interesting or useful option for many older adults" (p. 382).

When talking with the elderly, we also found out hidden wishes for the future technology. For example, Helen (86 yrs) did not send SMS with her mobile phone, neither did she receive any. One might ask if a simple user interface that enables the use of SMSs would be a good choice for elderly. In other words, the elderlies' mobile phones should be reshaped to fit better with the lives of older adults (Selwyn 2004). On the other hand, Helen (86 yrs) also regretted for not taking her time to learn chatting. This feeling shows that age is not a hindrance when a person would like to learn new skills. However, Helen already had found a solution for teaching elderly people – she thought that the other learners should be about her age.

Selwyn (2004) also notes the nature of the products in online shopping that largely are based on leisure and entertainment products such as CDs, videos, DVDs and computing equipment. He argues that older adults will not begin purchasing such products online if they are not already doing so in local stores. We might interpret that this idea was expressed also in our study with the comment of "nonsense". However, one respondent was concerned over the safety issues in buying online.

Despite the small number of interviewees in our study, we were able to find out realistic comments and experiences from the elderly. We did not inquire if the interviewees lived alone or in intimate relationship, for instance. Interestingly, we found out that an intimate relationship may act as an obstacle to utilise ICT and social media. Therefore we suggest that this finding requires more research. In addition, we did not inquire the educational level of the interviewees, which would have explained some non-use or lack of interest.

However, it was interesting to notice that even if the people were aware of the benefits of ICT, the elderly perceived the machines useless. It might be that the elderly had no personal experiences of the described benefits.

In all, as the role of ICT and social media is still increasing in the society, it is reasonable to carry out a proper study on the subject.

References

- Alpay L.L, Toussaint P.J, Ezendam N.P.M, Rövekamp T.A.J.M, Graafmans W.C and Westendorp R.G.J. 2004. 'Easing Internet Access of Health Information for Elderly Users'. *Health Informatics Journal*, 10(3): 185-194.
- Broadly T, Chan A, Caputi P. 2010. 'Comparison of older and younger adults' attitudes towards and abilities with computers: Implications for training and learning'. *British Journal of Educational Technology*, 41(3), 473-485.
- Charness N and Boot W.R. 2009. 'Aging and Information Technology Use: Potential and Barriers.' *Current Directions in Psychological Science*, 18(5): 253-258.
- Curry R, Trejo-Tinoco M and Wardle D. 2003. The use of information and communication technology to support independent living for older and disabled people. Department of Health: London.
- Czaja S.J and Lee C.C. 2007. 'The impact of aging on access to technology'. *Universal Access in the Information Society* 5(4): 341-349.
- Eccles A. 2010. 'Ethical considerations around the implementation of telecare technologies'. *Journal of Technology in Human Services*, 28: 44-59.
- Eisma R, Dickinson A, Goodman J, Syme A, Tiwari L and Newell A.F. 2004. 'Early user Involvement in the Development of Information Technology-related Products of Older People'. *Universal Access in the Information Society* 3(2): 131-140.
- Fuglsang L. 2005. 'IT and senior citizens: Using the internet for empowering active citizenship', *Science, Technology & Human Values*, 30(4): 468-495.
- Giannakouris K. 2010. 'Regional population projections EUROPOP2008: Most EU regions face older population profile in 2030', *Eurostat Statistics in focus*, 1/2010. Available: http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-SF-10-001/EN/KS-SF-10-001-EN.PDF (Accessed November 26, 2010).
- Goodman J, Syme A and Eisma R. 2003. Age-old Question(naires)s. *Proceedings of Include 7*: 278-285.
- Haddon L and Silverstone R. 1996. Information and communication technologies and the young elderly. A report on the ESRC/PICT study of the household and information communication technologies. Sussex Univ., Brighton, UK.
- Hanson V.L. 2009. 'Age and Web Access: The Next Generation', In: W4A '09: *Proceedings of the 2009 International Cross-Disciplinary Conference on Web Accessibility (W4A)*. New York, NY, USA: ACM, 2009: 7-15
- Hardey M. 2009. 'ICT and generations constantly connected social lives'. In: *The Good The Bad The Challenging*. Proceedings of the COST conference 13th-15th May, 2009, Copenhagen, Denmark. Paper 185.
- Hawthorn D. 2007. 'Interface design and engagement with older people'. *Behaviour & Information Technology*, 26(4): 333-341.
- Kappelman LA, McKeeman R and Zhang L. 2006. 'Early warning signs of IT project failure: The dominant dozen'. *Information Systems Management*, 23(4): 31-36.
- Kaplan A.M and Haenlein M. 2010. 'Users of the world, unite! The challenges and opportunities of Social Media'. *Business Horizons*, 53: 59-68.
- Lamb R and Kling R. 2003. 'Reconceptualizing users as social actors in information systems research'. *MIS Quarterly*, 27(2): 197-235.
- Lehtinen V, Näsänen J and Sarvas R. 2009. '"A little silly and empty-headed" - Older adults' understandings of social networking sites'. *HCI 2009, People and Computers XXIII - Celebrating people and technology*: 45-54.

- Lewis S and Ariyachandra T. 2010. 'Seniors and online social network use'. *2010 CONISAR Proceedings v3 n1522*. 15 pages.
- Lutz W and Samir KC. 2010. 'Dimensions of global population projections: what do we know about future population trends and structures?' *Philosophical Transactions of The Royal Society B*, 365: 2779-2791.
- Magnusson L, Hanson E and Borg M. 2004. 'A literature review study of Information and Communication Technology as a support for frail older people living at home and their family carers'. *Technology and Disability*, 16: 223-235.
- Markus A. 2003. 'Universal, ubiquitous, user-interface design for the disabled and elderly'. *Interactions* March-April 23-27.
- Marquié JC, Jourdan-Boddaert L and Huet N. 2002. 'Do older adults underestimate their actual computer knowledge?' *Behaviour & Information Technology*, 21(4): 273-280.
- Mayring P. 2000. 'Qualitative content analysis'. *Forum: Qualitative Social Research*, 1(2). Available at: <http://qualitative-research.net/fqs/fqs-e/2-00inhalt-e.htm>. (Accessed November 18, 2010).
- Mintzberg H. 1971. 'Managerial work: Analysis from observation'. *Management Science*, 18(2): 97-110.
- Mordini E, Weight D, Wadhwa K, De Hert P, Mantovani E, Thestrup J, Van Steendam G, D'Amico A and Vater I. 2009. 'Senior citizens and the ethics of e-inclusion'. *Ethics Inf Technol*, 11, 203-220.
- Morris M.G and Venkatesh V. 2000. 'Age differences in technology adoption decisions: Implications for a changing work force'. *Personnel Psychology*, 53(2): 375-403.
- Nugent C.D. 2007. 'ICT in the elderly and dementia'. *Aging & Mental Health*, 11(5): 473-476.
- Nygård L and Starkhammar S. 2007. 'The use of everyday technology by people with dementia living alone: Mapping out the difficulties'. *Aging & Mental Health*, 11(2): 144-155.
- Quico C. 2008. 'Seniors and the uses of media and ICT: exploring social iTV and social media sites potential to improve sociability and participation'. In: *Proceedings of the First International Conference on Designing Interactive User Experiences for TV and Video*. October 22 - 24, 2008 Silicon Valley (San Francisco Bay Area), California, USA.
- Selwyn N. 2004. 'The information aged: A qualitative study of older adults' use of information and communications technology'. *Journal of Aging Studies*, 18(4): 369-384.
- Selwyn N. 2005. 'Whose internet is it anyway? Exploring adults' (non)use of the internet in everyday life'. *European Journal of Communication*, 20(1): 5-26.
- Subrahmanyam K, Reich SM, Waechter N and Espinoza G. 2008. 'Online and offline social networks: Use of social networking sites by emerging adults'. *Journal of Applied Developmental Psychology*, 29: 420-433.
- Walsham G. 2006. 'Doing interpretive research'. *European Journal of Information Systems*, 15: 320-330.
- Venkatesh V and Morris M.G. 2000. 'Why don't men ever stop to ask for directions? Gender, social influence, and their role in technology acceptance and usage behavior'. *MIS Quarterly*, 24(1): 115-139.
- Venkatesh V, Morris M.G, Davis G.B and Davis F.D. 2003. 'User acceptance of information technology: Toward a unified view'. *MIS Quarterly*, 27(3): 425-478.
- White J and Weatherall A. 2000. 'A grounded theory analysis of older adults and information technology'. *Educational Gerontology*, 26(4): 371-386.