Evaluation of ICT Skills & Elderly People´s Motivation in SATKA-project

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The aim of this thesis was to evaluate ICT competences and elderly people's motivation after SATKA- project's computer training in the City of Helsinki.

SATKA (Seniorit ja syrjäytyneet atk-aikaan hanke) stands for "ICT age for digitally excluded people". The target groups were the Finnish elderly, the immigrant elderly, the pensioners and the unemployed living in Helsinki region. In this project basic IT guidance provided in different social service centers, home care centers and elderly homes without any fee. The salaried IT instructors and the volunteer IT instructors were working in this project in different locations. The lack of ICT knowledge leads to an increased risk of marginalization of the elderly people in society. The aim of the project was to support older people to utilize their own strength in old age. The strategy also was to increase social inclusion of digitally excluded people and the elderly able to live at home for as long as possible with the help of assistive equipment. ICT skills are necessary for elderly people enable to cope with the digital world.

In this qualitative study the method used was face to face interviews with three elderly participants in the service centre settings regarding their training, Internet and computer usage in daily life. All the participants were involved in SATKA-project as volunteer tutors or participants as learners. The interviews were analyzed through qualitative inductive content analysis. In this study the qualitative thematic interview was used for data collection in SATKA-project.

Based on the interviews, the participants developed in communication skills e.g. by sending emails, using Skype and acquiring writing skills in MS Word. Being involved in SATKA-project and the activities of the project helped the participants to develop skills and make everyday lives easier. The participants used their ICT skills to communicate with their friends and children. The participants felt good to have ICT competences. The Internet search was interesting and necessary for further learning in old age. The Internet increased social and intergenerational communication.

The elderly people need different kinds of skills even in the old age in order to active living. Learning ICT is an advantage of independent living for the elderly people. In this SATKA-project the elderly people showed a wide range of interest to acquire ICT competences and showed motivation of learning ICT.

Key words: ICT skills of the elderly, motivation of the elderly, ICT for immigrants, ICT education.

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1   Introduction

Lifelong learning enhances and encourages elderly people's eager of knowledge. E-learning, virtual class rooms for adults, community education programs, third age education and learning with video games can accelerate the motivation. These kinds of activities improve the skills of elderly people (McMurtrey, McGaughey, Downey & Zeltmann, 2012). Lack of interest of elderly people can deprive them from the use of ICT (Information & Communication Technology). The computer is not universally attractive but it is needed for the older people. The important fact is to improve the situation of the elderly people using ICT. The elderly people need to understand that ICT education is more attractive and more useful. The attitude of older people towards the computer is positive (Naumanen & Tukiainen 2008). In the following chapter it is taken a closer look about the motivation of the elderly and about ICT skills.

The motivation of active learning has shown that activity of the elderly people is a way to maintain and to develop them physically and mentally (Hilt & Lipschultz 2004). Research has shown that planning of elderly people's retirement age, memory and learning capacity are the main reasons to participate in adult education. The elderly people can maintain psychological functioning well through participating actively to the training. The adult education is a way of increasing the quality of life. The positive attitude of the elderly has been seen also in elderly care and gerontology (Hilt & Lipschultz 2004). The activities of SATKA- project promote the intergenerational equality and increase ICT skills of the elderly, immigrants, and unemployed persons in Helsinki area. SATKA-project increases the use of a computer and the Internet in society because of growing number of the elderly people and the immigrants do not know how to use a computer and the Internet. Therefore, the elderly people are most digitally excluded group in the modern society and a hindrance of current development.

The declinations of physical and mental changes do not impair new learning process. Theoretically, the human ability to learn new skills is maintained throughout life. Learning for the elderly people require certain plans considering some limitation of their conditions. The method of learning ICT depends on older learners because the elderly people are heterogeneous. Malcolm Knoweles (1973, 45-48) has developed learning theory which is:

- The need to know method – Adults need to know why they want to learn.
- The learner's self-concept – Adults are responsible for their own decisions and for their lives.
- The role of the learner's experience - Adults do educational activity differently based on their experiences.
- Readiness to learn – Adults are always ready to learn with real life situation.

- Orientation to learn – Adults are problem-centered learners or life-centered learners.
- Motivation – Adults learn based on their internal pressure e.g. self-esteem, quality of life and life situation.

The elderly people acquire new skills differently than the younger and the elderly people learn from their life experiences. So, the way of learning new issue is different (Mattila 2005). The elderly people's life situation has an impact of learning also. Many elderly people can imagine in advance what is going on but others take time to understand that. When an old person applies for a course, it means that she/he has interest to learn a new subject and has motivation to learn. Motivation and interest change fast among older adults. The learning of elderly people focuses different themes. First, it is necessary to take into account that people's tendency to learn and expectation of learning. If learning expectation is negative then learning quality is poor. It is also necessary to take into account that if the elderly are not aware of convincing of ageing- learning ability, they cannot take the views to others (Mattila 2005).

This paper focuses on ICT competences and motivation of the elderly people in SATKA-project. The elderly student is regarded as senior people. Most of the senior people are the learners in SATKA project. The term "elderly people" (often referred to as "older adults" "older people" "seniors" "elderly" "adults") is concerned to describe people aged 65+, they are still active participants in social, political and educational level of their lives, they want to be independent and active until their very old age. ICT is essential for a single reason, for example, for independent and healthy ageing, living at home for long time and enable with contemporary society. That is the reason to select this topic to write this thesis. The main idea of this thesis came from SATKA project. This study concentrated shortly also on ICT education for elderly, skills of ICT, guidance to elderly, development of ICT knowledge and peer support in SATKA project. This study is an evaluation of ICT skills and motivation of the elderly people in SATKA project using different tools e.g. theme interviews, literature review and case studies. In this study it is mentioned about the knowledge and the skills of information and communication technology of digitally excluded people. The term "ICT education" is regarded in this research concerning elderly people's skills of computer and Internet use.

There are different approaches and environments to train up elderly regarding computer and Internet use. The approach of this study is to evaluate ICT competences of elderly people in service centre settings. The participation of elderly people in ICT education in this study through theme interviews do not focus on all kinds of activities of learning and development. The usability method and participatory design develops the idea of ICT teaching and training method which improves service for elderly. Entering to ICT technology of elderly people increases the participation of usability of computer software and physical tools of the system.

The number of retired people is increasing besides the nature of informal education is changing.

2   The background of the study

SATKA (Seniorit ja syrjäytyneet atk-aikaan hanke) stands for "ICT age for digitally excluded people". The project started in 2008 and it will continue until December 2013. The innovation fund under the City of Helsinki provided financial support. The basic computer training or guidance provided to the Finnish elderly, the immigrant elderly, the pensioners and the unemployed. This training program has started in different social service centers without any fee. Salaried IT instructors and volunteers IT instructors have been working in this project. The target groups are mainly elderly people and digitally excluded people and live in Helsinki region. The lack of ICT skills increase the risk of marginalization of the elderly people in society. The elderly people are one of the marginalized groups. The aim of the project is to assist older people, to support freedom of their choice, utilization of own strength in old age, to increase social connection, to live at home as long as possible with the help of assistive equipments to ensure security, dignity of life, protect of own life and welfare support.

The objective of SATKA- project is active ageing using own strength at home and in everyday life of elderly people. The aim is also to decrease the discrimination of digital exclusion in Helsinki City. The elderly people live at home with various forms of support and the use of their resources. ICT skills strengthen the social network of the elderly, increase the quality of health, enhance wellbeing, make more social support and motivate the elderly for further education. The SATKA- project contributed and supported the elderly people to feel up their needs of ICT education. The project built a link between ICT and elderly people in society. The families are connected even in remote areas with the help of IT skills (Bacigalupe & Lambe 2011). ICT skills give opportunity to the elderly people to make influence on the mentioned objectives. IT guidance provided to the different social service centers, elderly centers and family care centers. The instructors provided basic IT guidance and specific assistance to the elderly. The volunteer instructors are trained and supported by the Adult Education Center of Helsinki City. The volunteer tutors supported and motivated the elderly people through IT education. The elderly people will dare to take more training and will attend further ICT courses because of the basic knowledge of ICT they gain in SATKA project (Paulig 2012). The elderly people themselves reserved training time in advance for IT guidance. The ambulating instructors moved to different service centers every day. The flyers about the project are distributed to different locations e.g. to service centers, libraries, social service department's web pages and city's offices.

Different organizations are working with SATKA project as partners. Enter ry (Association of senior citizens in metropolitan area based on communication technology and volunteer works for seniors), Helsinki City Libraries, Finnish Adult Education Center and Media Center of Lasi-palatsi are actively together in SATKA- project. Enter ry provides volunteer IT instructors. The volunteer instructors ambulate in different centers in different days. The City Library helps with the ASKO software. ASKO program is used in service centers with help of a library card (HelMet). The Finnish Adult Education Center provided training and peer support to those are involved in the project. There are more than 40 computers with high speed internet connection in different centers, but with limited user access because of ensuring computer safety and comfort to all users. There are some limitations of this project, for example, the elderly are not allowed to use the right button of the mouse and one computer is included with Windows Office among three computers in different centers. There is no Skype installed in all centers. The operating system is in English in some centers.

The number of immigrant people is increasing gradually in Helsinki region. The City of Helsinki has taken initiative for immigrant people. From the beginning of 2012, SATKA project has started to provide IT guidance to the immigrant people. IT- instruction for immigrant people is held in English, Finnish, Bangla and Russian. The target group is the elderly people, the unemployed and the home parents (either fathers or mothers). Kamppi, Kinapori, Kontula and Syystie service centers provided basic IT guidance to the immigrant people. There are salaried and volunteer IT instructors who are instructing in different locations. The purpose is to enhance health promotion of immigrant people, to increase communication and solidarity between generations, to increase social connection, to support their wellbeing and to being with the host society. Many elderly immigrants, immigrant parents or young people are marginalized people among others in Helsinki region without education. The reason can be, for example, that they were not able to go to school, have a low income levels, are unaware of the new society, have little knowledge of the language, lack of ICT skills and come from different cultural.

3   Theoretical framework

Theoretical framework is bunch of interrelated ideas. It guides research, determines what kind of things are going to be measured or evaluated. Theoretical framework tells how to approach to the target and controls the flow of the research (Mattila 2005). This study evaluates skills of the elderly people, the unemployed and the immigrant people through ICT education in SATKA project. Theoretical framework is divided into different parts, for example, ICT education for elderly, ICT for immigrant people, ICT skills of elderly people, upgrading skills, motivation of learning ICT, empowerment, elderly as learner of ICT, peering support and peer tutoring among elderly, learning difficulties of elderly people. Every topic of theoretical

framework has been described and reviewed through different literature and from the background of the SATKA-project.

3.1   ICT education for the elderly

ICT (Information and Communication Technology) use in Finland is growing continiously. The use of Internet among older people is becoming more popular. The Internet use among aged group 65-74 grew by eight percent points to 61 percent in 2012. The Internet use among the population age 16-74 rose up by one percent to 90 percent (Statistics of Finland 2012). Almost every Finnish people uses Internet or computer daily. Finland is one of the top countries use Internet actively in Europe. Internet use with the computers, laptops and mobile phones are increasing rapidly for shopping online, buying private or public services in health and social care field, for reservation, for tickets and admission tickets to cultural events, for tourism services and for personal purposes. Social network went their current popularity in 2012 and it is growing day by day, for example, Facebook, Google+ etc. One-third of Finnish residents aged 16-74 and nearly half of those aged 45 or under used internet with mobile phones (Statistics of Finland 2012).

Photo 1 Group learning at Syystie service center (SATKA-project).

The proportion of people aged 65 or over is to rise from 18 percent to 26.2 percent by 2040 in Finland (Statistics of Finland 2012). The highest proportion of the elderly people is in Europe (EU-27) in the world which is 82.7 million of 496 million of the population. By 2050 elderly people aged above 65 years of old will be 30 percent (Eurostat 2008). Because of this demographic change it is necessary to develop national health care fields, social systems, working

conditions and innovations. Innovation will be necessary in every sector, for example, e-services of government portals, social and healthcare sites, e-banking, online shopping, and home-based assistive technologies, flexible provision for lifelong learning, development for cognitive diseases and rehabilitation by means of computerized technologies. ICT- literate people in future will be more (Ahmadi 2012). There are still many elderly people, for whom digital world are new. The elderly still do not know the benefits of ICT.

Ageing is considered as a risk group to use computer and new technology. The elderly people are digitally and socially excluded among other groups. ICT is for all kinds of age groups and it benefits all. Technology increases hope and expectation. The elderly people think that learning is a subject for the younger people. They believe that ability declines while ageing. Some people believe also that after 65 years old learning ability declines automatically. Researcher of this study has experienced as IT-instructor that how the elderly people have developed ICT skills slowly in SATKA project. Different people's learning ability are different. Elderly people learn in different way. It is true that it declines some of sensory and cognitive ability which is described in elderly as learner's part in details. Different study showed that elderly people feel shy and want to away from learning but somehow they like to learn in an old style (Mattila 2005). Lack of necessary learning skill and with the minor learning skill they can meet the needs of modern learning style in the digital age. The motivation of learning is necessary until later life. Who have those kind of motivations they are practically benefited. Use of ICT has started to grow up rapidly after 1990 (Tuominiemi 2011). Research has done because of growing demand of information technology usage among the elderly. The elderly people are touching different technologies nowadays. This is the matter of fairness and the democracy. The researcher thinks social interaction and information technology are combined now. The socio-cultural aspects of ICT strengthened and secured more attention to activate the elderly people to function in society.

3.2   ICT for the immigrant people

When digital natives remain plugged into cyberspace and video games, the digital immigrants spend less time exposed to this type of new technology. The immigrants grew up during a less techno-frenetic era, and the current digital revolution occurred after their formative years. A lot of baby boomers can remember when they had one television in the house and may be not color television. Some baby boomers find it easy to adapt with new technology. They shop online, communicate via email, Skype, Facebook and use smart phones. These are all conveniences that picked up as adults after most of their brain's hard-wiring was already set in place. These immigrants are adjusting to digital age, their approaches differ from that of digital natives. The typical immigrant's brain were trained in completely different ways of socializing and learning, taking things step by step and addressing one task at a time. The immi-

grants learn more methodically and tend to execute tasks more precisely. The immigrants are tend to learn new digital language which is challenge for them because the immigrants come from other countries and do not speak native language. It is important to use different parts of the brain to learn language in adulthood than those who are used to speak a language in early life (Small & Vorgan 2008. 40).

Photo 2 Computer training at Kontula service center with immigrant people in SATKA-project.

The older migrants from different ethnic and religious minorities can have special needs which are not met enough infrastructures in their home countries. Their demands differ according to their origin, reason for migrating, educational and social status, religious and cultural background. The individuals experience integrations. The migrants older group face particular challenges because of language difficulties. Regardless of elderly people's age and lack of knowledge about their fundamental rights are also reason to be marginalized abroad. To make equality and to decrease the social exclusion, EU has taken an initiative in 2012 which is "Active Ageing and Solidarity between Generations" association with Age Platform Europe (AGE) and European Network Against Racism (ENAR). The joint issue has been explored and targeted to develop long-term situation of the older migrants and the ethnic religious people in European Union (AGE-ENAR 2012). So, according to that development process the City of Helsinki provided IT education to the immigrant people in SATKA- project from 2012.

3.3   ICT skills of the elderly people

In SATKA project there is no specific course to teach. The guidance depended according to the clients. Clients come even for one time or for several times. They come for 45 minutes to one and a half hours once a week. Some elderly people came to learn how to use Internet banking and how to find information using Google. There are lots of clients who do not know what to do but they wanted to learn computer, want to use Internet. Some people who wanted to open Facebook account in the first lesson, they did not have any Internet know-ledge at all. Even they did not have email account. There are lot of people who wanted to read newspaper online. So, in this project there is no specific subject to follow. This project offers client-based IT guidance to the Finnish people and to the immigrant people. We listened to the clients and ask first what they know about a computer and the Internet and what they want to learn more. Some people wanted to learn MS Word and Excel. With the immigrant people it was more difficult to classified their demands and learning process. Some of the immigrants are illiterate in this project. The problem was lack of common language. That was a great challenge with the immigrant people. Those kind of people who did not know how to read but they knew how to count one, two, three. They did not go for school in their home land but they went for some Finnish courses here in Helsinki. That's why they can count. They played internet games in papunet.net or practiced how to use the mouse through *hiiri Hukassa*. Learn to use Skype was one of the common programs which was the most popular. We followed that kind of program with the immigrant people, which was necessary for them. The most instructed program was journey planner (www.hsl.fi), how to create e-mail account and to use, how to use Internet banking and very basics of MS Word were common. There was an instruction book in Finnish and in English. The instruction guide was not followed all the times because it was difficult with some of the immigrant people who did not know how to read and write.

There are many issues must think regarding design and settings of the elderly users for ICT-education. Eyesight diminishes and manual dexterity decline while ageing (Small & Vorgan 2008). So, accessories seem to be apparent concerning ICT products. There are some computer tools and devices both software and hardware are not designed according to elderly people's need. The elderly people hardly see the small buttons and plugs which are associated with printers, speakers and external devices. Besides, software which presents a learning curve that is not usually need for the elderly. The elderly people think twice about the drop-down menus and about the small icons which takes longer time to proceed. The font size always needs to be bigger when the elderly use computer otherwise they see nothing. The mouse does not work properly because of shaking of their hands sometimes. There are lots to be done for the elderly in the digital age. According to elderly people's need hardware and software products are developing (Mattila 2005). It is true that design issue of computer use among elderly is a crucial element. Because it seems to be accessible to all the users. The quality of life, access to e-government, access to e-commerce and others e-services of the

digital framework necessarily are impacted by accessible design. Design presents importance of all aspects of computer use by the older people (Mattila 2005). According to Statistics Finland (2012), before 2000 it was 15 percent people aged over 65 and 80 percent of the people were not involving with ICT. It is estimated that in 2015 mentioned age group will be one-fourth to involve with information technology.

Most of the immigrant people are over 60 years of age. There are some young people live in Helsinki area but unemployed, can also take part to the training. At present there are four different service centers where basic ICT guidance provided in different location to the immigrant people and ten centers for the Finnish background people. The aim was to decrease the discrimination of international background people. Many immigrant people are marginalized because of poor education background or poor financial situation of their own countries. There were some elderly students in this project who did not know how to read and write. So, they were also most potential group to learn the Internet and a computer. It was so difficult to instruct them who did not know read and write. Researcher has experienced himself that, though some of the people were illiterate but still coming to computer training center because of social relation with the same background of people and they are interested to learn new objects. The elderly people acquinted with new tools. Social relation was very important among society e.g. Somali, Philippines and Bangladeshi background people. Some people came to talk and met with others but they did not take part to the session. It was true that they were illiterate of their own languages but they had some knowledge of Finnish language. That was the way they learnt computer and internet. There are lots of foreign people who do not know how to use Helsinki region journey planner online. Ii is asked some of the elderly foreigner that how she goes to some new address or to the market. She replied that *"I know that bus comes in every 15 minutes. If I miss one then I wait for another"*. She did the same routine even in the cold and the dark winter.

3.4   Upgrading skills

ICT education and training provided opportunities for the elderly people and enhanced their language skills, professional skills, their cultural skills and facilitate social-economical integrations. The employment rate is high particularly among those kinds of elderly people over 65. The employment rate of immigrant background people is low who have low levels of education and recently arrived to European countries (Redecker et al. 2010). ICT helps to overcome language and cultural barriers and promotes immigrants with basic skills that necessary to the job market. Through ICT people are fighting against illiteracy. Some foreign people are illiterate. They are still attending to the course in SATKA project. They are practicing and also learning letters and numbers in Finnish language while they playing games online. For immigrant people having a job is the safeguard against poverty. Often they do not get job

though they have qualification, professional experiences, skills and competences but those are not recognized in the host countries. Language barriers and lacking of ICT skills make obstacles. ICT can be used to access, evaluate and demonstrate expertise by allowing elderly people and immigrants to set up portfolios and their competences of profile including language, vocational skills, recognized qualifications and facilitate them to recruit as a potential employed.

3.5   Motivation for learning ICT

The interest of the elderly people differs from the younger people. The elderly people need to think themselves as active in society but they are more willing to see themselves inactive. That's why it is not easy to instigate them into computer learning. The elderly people are heterogeneous and they have different kinds of motivation of learning. They take initiatives depending on their needs, reasons and necessities. Researchers found that cognitive interests and social contacts are most influential factors which desire to know, expand to one's mind and making new friends. The participation of elderly people in ICT enhances communication and contributes to active ageing (Tuominiemi 2011). The elderly people are eager to get information about medication, weather and religious matters through the online newspaper which is strong motivation to take part to ICT education through different kinds of courses e.g. SATKA project. The elderly people who are really willing to learn ICT, they have positive attitudes towards computer. Who have interests they learn fast and actively. The attitude knows learning motivation of elderly people (Tuominiemi 2011). For example, once one woman came to Itäkeskus service center with positive mood (because she already bought a laptop). She bought a new laptop. She asked the instructor helping to run the laptop. The instructor asked the woman why she did not open the new intake laptop from the box though she had that at home for couple of weeks. She replied "*I did not open and run because I think it can destroy the whole electric system which leads me into the dark in my home and can explode the house*". Most of the elderly did not touch the computer because of fear to use that. Normally the elderly people do not want to use new technology at all. The usefulness of using a computer and the Internet is for benefit and that can enhance elderly people to learn it. They need to ensured that a computer and the Internet are beneficial tools and ICT is potential even in older age. To increase participation of the elderly, the course planning must be appropriate for elderly for example easy going process. The environment, technology, assistive tools are taken into account to motivate elderly people to participate in ICT training (Naumanen & Tukiainen 2008, Tuominiemi 2011).

3.6   Empowerment

ICT helps the elderly people to view their cultural heritage, memorize their experiences, define their own capabilities that they belong to. ICT defines the immigrant's cultural identity within their host country and empower them to be active citizen. ICT provides resources for networking and communication. The knowledge of ICT promotes the intercultural experiences and increases self-confidence of the elderly people. The blogs and collaborative writings support social networking and facilitate sharing photos and thoughts (Hilt & Lipschultz 2004). In SATKA-facebook page elderly people can exchange their memories, discuss personal things and share pictures too.

3.7   The elderly as learners of ICT

"We will all grow old one day, if we have that privilege. Let us therefore look at older persons not as people separate from us, but as our future selves. And let us recognize that older people are all individuals, with individual needs and strengths, not groups that are all the same because of their age. I turned 64 today. I therefore feel empowered to quote a Beatles' song and that asks, on behalf of all older persons, and I quote: 'Will you still need me; will you still feed me, when I am 64'? I trust the answer is yes, older people will be provided for, and yes, older people will be needed, in the twenty-first century" (Kofi Annan 2002).

The educated elderly citizens are assets and beneficial of a country. The elderly people who are over 65, middle aged elderly who are over 55 years old and retired person are still functioning as workforce in society. The middle aged elderly are not even behind their younger generation regarding to use a computer and the Internet. The continuation education keeps the elderly people's mind sharp and positive. They learn new cases and practice new tools actively. The financial benefit of elderly has positive effect in social and psychological aspect. People are living and working long in lieu of sitting at home. The elderly people are in great demand as active resources in organization because they are talented and more experienced than younger generation for seasonal and part time works. The different forms of ICT education while ageing improved new motivational world of invention and enhanced better quality of life (McMurtrey et al. 2012). Different studies have shown that exercising brain with mental aerobics not only can improve cognitive performance scores but also can delay brain degeneration from diseases like Alzheimers's disease. Recent study with about three thousand elderly found that only ten sessions (one hour per week) of memory or reasoning training significantly improved cognition and benefits could still be measured five years after the training. It is reported that handling with daily medicine is less troubled who carrying everyday tasks (Small & Vorgan 2008. 43).

Photo 3 computer learning with elderly people

The ageing process brings number of changes such as slow down of reflexes and sensory loss, which affects data processing slowdown (Naumanen & Tukiainen 2008). On the other hand the old people can practice e.g. to improve problem solving ability. For example, the researcher of this study as instructor was instructing 65 year old Somali man in Syystie service center. The old man explained in the very beginning of the instruction that he has memory problem so he learns nothing. The instructor opened Sudoku to practice. The old man was quite exited and in negative mood. The old man said that though he has memory problem so he could not play Sudoku. But the instructor ensured the old man that memory problem leaves if he plays Sudoku. The old man said that he does not believe. Then instructor showed him twice how to play and how to match the boxes. The old man played Sudoku afterwards correctly. The instructor asked him, if he believes that his memory problem declined a little? The old man smiled and said "*I do not believe yet*". But the instructor saw in old man's face that he was so happy and satisfied when he solved Sudoku many times. After the class the old man asked the instructor that from where he can buy a laptop.

Learning and memory abilities of the elderly declined while ageing. The vast loss happens in working memory. The long term memory started to decline both in episodic, semantic and prospective memory. The procedural memory retained e.g. skill of biking, playing a piano, brushing teeth etc. Semantic memory which experiences may increase while ageing. This is called crystallized intelligence. Fluid intelligence weakened and which occurs problem in reasoning, understanding of conversation, making conclusions and learning new things. Because of cognitive slowness elderly people need more time and space to train up and to work completion. It must be short enough to think out carefully to procedure and perform a task. The

changes happen in motor functions which slow down, perceptual abilities e.g. ability to concentrate in nearby object needs increased sensitivity to glare (Naumanen & Tukiainen 2008).

3.8   Peer support and peer tutoring among the elderly

Peer support is distribution, share of interaction, knowledge, experience and skill in the same situation to achieve a goal in the same kind of group or age. Vuohelainen (2011) has described about the senior's best practice of peer tutoring. The peer tutors know challenges and recognize week point of learning ICT. Peer tutors guide and advice. They know when it is necessary to repeat. Good tutors listen students and can take advices from the students. It shares knowledge in different way. They are equal to every student. The elderly tutors instruct others from the experience of their lives. Nowadays senior tutors are aware and know much about ICT. When the elderly tutors start to teach others the elderly learn more. Peer tutoring is a volunteer work but the result does not come without effort. There are lots of activities, coordination and communication needed concerning good peer tutoring. It has lot of challenges too beside good management. Peer tutor is not a teacher but she/he guides. They do not do on behalf of others. She/he knows the necessity of other. The tutors who are involved in SATKA project are senior people but there is no age limit to be a tutor in this project. The salaried instructors are younger than the volunteer peer tutors. The strategy of EU for growth 2010-2020 aimed to develop an economy based on knowledge and innovation which is more competitive, efficient, deliver high employment and sustainable. It targeted an employment rate 75 percentage for 20-64 year old to decrease the social discrimination and exclusion by 2020. Achieve those objectives EU declared "European Year for Active Ageing and Solidarity Between Generations 2012" (Age Platform Europe, 2011).

A good tutor is interested to and likes her/his work as a tutor. Volunteer tutoring is a social work where different capabilities work together with different people (Mattila 2005). Interest is most important factor to be good tutor as it is seen when instructor instructed elderly students in SATKA-project. The children and the elderly people with the help of others develop forms of function and tools of learning system which focuse role of the students. The positive effect of peer tutoring is to motivate and support each other of learning. Researchers have found that through peer tutoring the tutors and students grow confidence among them, develop and strengthen cognitive skills. The tutors know how to evaluate every student equally. Tutoring opens perspective of teaching and learning process which enhance experiences of individual tutors such as self-esteem, feel to be honored and usefulness of development (Tuominiemi 2011).

3.9   Learning dificulties of the elderly people

Older people do not mean that they are disable, but sometimes they are in this group because of natural age related impairment. Here accessibility means the use of interactive tools of the computer and the Internet by the elderly disabled people. The term disabled is described in this study who have learning disabilities. There are lot of elderly people who cannot keep the mouse in the right place because of ageing and natural ageing disease. What kind of interactive tools are provided for the benefit of the elderly people concerning ICT education are important. The usability is factor of learnability, efficiency, memorability and pleasantness of system (Naumanen & Tukiainen 2008). It is focused in this study about accessibility of the elderly people for ICT guidance and pleasantness in learning environment including assistive tools. The elderly disable people are also vulnerable to be marginalized, because they have less social support, less accessibility, social exclusion, limitation of using tools and lacking of knowledge of computer and Internet usage. Nowadays the elderly people and the elderly disable are most potential groups concerning product designing. To get real benefit of ICT for the elderly disable people government, organizations, innovators need to find elderly people's capacity, weakness and expectation to implement active ageing (Naumanen & Tukiainen 2008).

Here is one example of a case study: The researcher of this study as instructor in SATKA-project went to one of the elderly houses in east Helsinki to instruct the elderly about Internet. It is noticed that there are problems and limitations in the service centre's clients than the people who came from outside of the centre for IT-guidance. Normally the people who had stroke were more vulnerable group to use the computer and the Internet. The limitation was to use the mouse and to write on keyboard. The elderly people could not manage those tools properly because of their hand shaking. Most ot the problem was to click the mouse and to move the mouse in the right place and in the right location. When the elderly wanted to write texts they found another problem. If they wanted to write one letter then it came several letters same time. The elderly people's wrist touched keyboard and shaked hands because of ageing. Still they came to learn something or to see something on the Internet. The elderly people of that house accessed to the Internet through a library card (Helmet). SATKA project used ASKO software of Helsinki library in service houses. Some of the elderly people would like to see their old cities and houses using Google map's street view. The elderly looked at street views with much concentration. The photos in Google stiggered up their memories, it is noticed in somebody at the time of the instruction. They liked to see photos of different things, for example, horses, dogs, seals, flowers and to read newspaper. They wanted to see something than to learn to use Internet. The City of Helsinki provided assistive tools, for example, supportive mouses and keyboards to use the computer for the elderly people in SATKA-project in some elderly houses.

There are 35-40 thousands (Finnish Government 2010) intellectually disable people live in Finland. They need assistance somehow for everyday living. There are many different institutions that have responsibilities to rehabilitate of intellectually disable people. As statistics said that half of that amount of disable people are adults and they need strength for independent living. EU targeted that group to provide same kind of rights and choices in their daily lives same as common people. The aim of EU was to care and support to disabilities would be up-to-date and technologically developed. Every year EU funds provide lot of community-based developing health, social and educational programs such as ICT education, physical training for disable people to attain freedom, independency and good quality of life (European Commission 2010).

The elderly people are active learners in SATKA- project provided by the City of Helsinki. The government, the organizations, the innovators need to recognize ICT competences of the elderly as strong forces which impact co-operation and promote health and welfare of society. The perspective of this study is to assist those understanding through some common examples concerning computer and Internet use in daily lives of elderly people.

4   Purpose of the study and question

The purpose of study is to describe importance of ICT skills and elderly people's motivation in SATKA- project. The aim of this thesis is to evaluate ICT skills and motivation after SATKA-project's computer training through following questions.

a) What kind of ICT skills are necessary for the elderly people?
b) Why elderly people need ICT skills? and
c) How elderly people are motivated of learning ICT in older age?

5   The methodology of the study

Qualitative study is a research of social relations. The features of qualitative research are the correct selection of right methods and theories; the recognition and analysis of various perspectives; the researchers' own reflections on their own research as part of the process of knowledge production; multiple approaches and methods. The qualitative study is pluralization of new obscurity, individualization, biographical patterns, life styles and way of living (Flick 2002, 3-4). In this qualitative study the method used was conducting interviews with three elderly participants regarding their internet and computer usage in daily life. Interviews were extracted and viewed literatures through a qualitative method which observes the elderly people's personal acquisition of ICT skills, social changes and evaluates the motivation of learning ICT through SATKA-project. The previous literatures in the subject field were reviewed. The findings of this study emerged from the theme interviews and from literature. The elderly people, who are as Finnish and immigrant background and over 65, were actively involved with SATKA- project as learners and as volunteer instructors. Participants are digitally excluded except participant T1 because she is a volunteer tutor. They are in lower and mid level financial situation. One of them is immigrant older person. The average computer usages by them are from three months to 20 years. To reach the conclusions the background of the study, SATKA- project and participant's interviews were combined.

5.1   Participants

Three elderly people participated in this study process. Participants were both Finnish and immigrant background people. One of the participants was actively involving as a volunteer IT-instructor. She learnt and developed ICT skills in SATKA- project. She liked to work with the immigrant people. She guided immigrants at Kamppi and Kinapori service centre. She was a Finn and 73 years old. She speaks Finnish, English, and Norwegian. T1 involved in SATKA-project from the beginning of 2012. She was in advance user in ICT, so she participated to be

a tutor. She taken also SATKA-project's tutor training from Helsinki Adult Education center. She told that the elderly people are now her friends and the elderly people are the main surrounding of her life. Another participant was A1. He was a foreign background and 68 years old. He was from African region. His profession was police in his country and he moved to Finland 8 years ago. He was retired person. He participated in SATKA-project in 2012 as an active learner in Syystie service sentre. He came once a week but he used Internet at home 3-4 times a week. Third participant was P1. He was 72 years old. He started in individual instruction of ICT in Kontula service center for three months ago. He participated once a week for 45 minutes and used computer only at Kontula service centre. He speaks Finnish. The participants were from different working background. The motivation of learning in the project was to know new things and to give knowledge to others.

5.2   Data collection

The qualitative method of data collection is generally more subjective in nature, as it seek subjects's view of the phenomenon on interest or description of lived experiences. The qualitative evaluation of research emphasizes the value in-depth and case-based approaches to learning about a program. Face-to-face open ended interview provided authentic data concerning of person's experience, view, and assessment of a program (McDavid & Hawthorn 2012. 186-187).

In this study the qualitative thematic interviews used for data collection. The thematic interview is also called semi-structured method. The basic idea of thematic interview is that the theme of the interview is same for all interviewees. In this study thematic interviews selected as a method for collecting data because it enabled interviews to proceed in the forms of conversation which provided thematically planned questions. In the thematic interviews questions of "why" and "what" need to be answered before question of "how" can be answered. This is as important in qualitative evaluation study as in quantitative one (Sewell 2012). Interviews were based on two main themes. The first theme covered about ICT skills of elderly and second theme covered about motivation of elderly people (please see appendix 1). There were three individual's face-to-face interviews that were tape-recorded. Interviews allowed possibility to concentrate on what were being said and listened again. The permanent recording captured whole conversation, as well as the tone of voice, emphases and pauses. Thus the manuscript became the data used in this study. Interviews conducted in Finnish and English language based on participant's language fluency and lasted from 30 minutes to 45 minutes. Interviews took place from March to April 2013 in Helsinki. All interviews were tape-recorded to keep accurate information with the permission of participants. The interviews taken in service centers where each participant usually participated in SATKA-project's IT-training. The researcher booked the time in advance for interviews and place. During in-

terview the purpose of the study explained to participants and consent letters signed by the participants.

5.3   Data analysis

The qualitative analysis was a process of fitting data together and making invisible obvious based on outcomes. The qualitative data analysis was an active and dynamic interaction between researcher and his or her experience of data which can be written, verval and visual communication messages. Researcher needed to become familiar with the data. This involved reading and rereading the transcribed materials.The qualitative data analysis focused on reducing the large volume of data acquired to facilitate studying. The reason was to gain broad description of the phenomenon, and outcome of the analysis were concepts or categories describing the phenomenon. Content analysis allowed researcher to test theoretical issues to enhance understanding of data into categories. The purpose of that category was to make a model, conceptual system and conceptual map. It assumed when classified into same categories, words, phrases and share same meaning. The open coding system was a process where data broken down first then examined, compared and conceptualized and finally put into suitable categories. Conceptualizing data happened through breaking up data into sentences, events and observations, and giving these a name (Flick 2002. 176-177).

Qualitative inductive content analysis was applied in this research. Inductive analysis method used, as the purpose was to derive suggestions for acquisition of IT skills and nourishing motivation of participants rather than from literature review. Data analysis began with transcribing recorded tape interviews into written texts from word to word. The voice was not taken into account because emotional expression was not important here in this study. The analysis was done manually. Transcribed material read several times to capture the meaning of texts. The notes were collected to coding sheets based on interview's questions and answers transferred into sub-subcategories, sub-categories and categories (Flick 2002. 185-186).

Table 1. Data analysis process

Coding (questions)	sub-subcategory	sub-category	category
pre- computer/internet knowledge programs used before come to SATKA project ICT-skills in SATKA project practice computer/internet at home satisfied with contact hours more contact hours further courses of ICT group or individual training	Digitally excluded, no-experience of ICT, no computer, illiteracy, no participation to any training at all, no computer at work, language barrier	ICT skills through SATKA-project, awareness of living, working ability increase, communication through emails, writing ability, joining computer club, going to the library, working with MS Word, group training.	digital wellbeing, health promotion, independent living, searching informaiton, fluency of work, social participation, contributing social changes, active living, helping friends.
feel good/tired to use computer/Internet fun with Internet programs that interesting IT-competences enhanced daily activities Internet/computer increase motivation increase social connection ICT is important to aged people	fear to touch computer, unawareness of society, no knowledge about internet, no friends, no activities, loneliness.	feel comfort to touch computer, motivation through learning and friends, fun with instructors, interest to new things, social connection, reading newspaper, develop country, learning language, listening music, watching theatres.	mental satisfaction, social connection, virtual communication, virtual wellbeing, happiness, feel good, no tiredness, helping friends, want to be with people.

6   The findings

The growing development and competitiveness in employment in Helsinki area is dependent on the development of ICT. The successful implementation and adaptation of ICT skills are required to all fields. So, a well balanced interaction of the society of ICT skills and users are necessary for potential development of society. The present society needs ICT skills and practitioners of ICT. ICT usage increased and changed aspects of daily living in the recent years. Study has shown that it is not sufficient if somebody know only how to send emails. The banking system, developing writing skills, searching selective information and image editing are highly demandable. It is very common that all kinds of sectors are ICT oriented e.g. services sectors, government services and business organizations. ICT skills and qualifications are necessary in every sector. According to interviews evaluations of this study showed that ICT skills are necessary for maintaining communication, developing cognitive skills, expressing life experiences and feeling comfort. These kinds of activities motivate them somehow. Table 2 shows ICT competences and motivation that participants developed in SATKA-project training.

Table 2. ICT skills and motivation through SATKA-project.

Partici-pants	Age	ICT use/week	Primary use/purpose	Acquisition of ICT skills through SATKA-project	Motiva-tions/importance
T1(tutor)	73	everyday, many times a day	learning lan-guages, informa-tion search, writ-ing something interesting, cul-tural knowledge, guiding others.	Internet search-ing, Google, MS Word, YouTube, Email, spam mails, Skype, Facebook, many browsers open, writing without watching key-board	*I think, internet opens my eyes and writing is some-thing that always opens my mind. I am not forcing my-self to do search.*
A1(learn er)	68	3-4 times, 1-2 hours at a time	communication with friends, reading newspa-per, writing my life story, express myself, support-ing others.	Email, spam mails, Google, internet search, Skype, YouTube, photo editing, editing texts, many browsers open, net-	*There are lots of thing missing with-out ICT skills. I like group learning be-cause my friends who do not speak enough Finnish or English, they need*

				banking, moder-ate keyboard user.	*support and I like to help them.*
P1(learner)	72	45 minutes	paying bills, communication, writing,	Net-banking, email, internet search, Google, internet virus, some writing skills, slower keyboard user.	*I learnt here something, I used that with my grand children and they give me much comfort. I contact with my grand children by sending emails.*

Internet Explorer opening, Information search, file open, www-address in the address bar and one click or double click of the mouse were difficult to manage in the beginning of the computer guidance. The participants developed the skills after starting the course. Sending emails using CC and BCC, spam mails and opening different browsers together and searching were familiar to T1 but A1 and P1 knew how to browse in the Internet. They know what is Google. Each participant knew how to send attachments and photos.

When the participants were asked what kinds of information search and programs they have learnt from SATKA-project, everybody answered that Internet, Google and searching are very important and necessary for them because they find everything that they wanted to know through those. They got lots of information through Internet. Two participants found that MS Word skills are a very useful tool when writing. They are writing their lives stories for their grandchildren. So, when they started to write, some new ideas come from inside always. All participants have used emails and they think that emails are strong tools of communication. They are more connected with their friends and relatives because of emails. Email increased their social and intergenerational communication. Computer and Internet are fun and interesting. The Internet opens their eyes and improves their learning skills. Each participant agreed that ICT skills motivate to learn new subjects. All the participants are comfortable to use computer and Internet. They are happy to be in SATKA-project. One of the participants expressed that "*I would not be happier if I would have iPod, iphone, imac, tablet computer. I have to be at home with the machines. I do not want that life because I want to be with people giving and taking something.*"

They were also asked about what kind of skills need more. They want to develop more skills in writing, surfing the Internet, editing photos and smart phone use. Nobody said that their course is sufficient. They want to learn more in this project. More teaching and practicing

help them to develop skills and make easier activities. According to the participants' answers each individual liked individual instruction. One participant does not have a computer yet, but he is going to buy one soon and wants Internet connection at home. All participants liked to read newspaper online.

7   Conclusions

Elderly people need different kinds of skills even in the very old age in order to active living. Learning ICT is an advantage of independent living. It is very difficult to live in Finland with less or no knowledge of ICT skills. The ageing population increases in Helsinki region. Besides risk of digital exclution increasing and growing gap between generations because of fast developing new technologies. The immigrant and the elderly people are the most vulnerable groups. In Finland it is hard for the immigrant people to enable with host culture with no or less computer background. The way to enable those groups is to develop computer skills. The City of Helsinki is providing computer guidance in SATKA-project with the help of service centers and preventing digital exclusion in society. The project empowered the elderly and the immigrant people. The elderly people are involved in developing and innovating together with the city. Learning outcomes of the elderly people in SATKA-project is contributing to do activities electronically and the City saving labor. It is worthwhile to note that the acquisition of the digital competences are an important elements of supporting active ageing and opening up new learning opportunities for the elderly either formally or informally. ICT skills make benefits across different generations, cultures and brings young people and seniors together. ICT competences are enhancing the digital integration and the social connection.

According to participant T1, she has not any life without Internet. Internet is an addiction for her. She does not have anything if she has not any Internet connection. She used Google for searching difficult and interesting matters. She did not search anything which needed to search, but she searched because searching was interesting. When she searched something and noticed that some other cases were more interesting then she forgott what she was looking for. She thought lot of interesting matters in search page to see. There are new things coming continuously which were more interesting and she learnt something new all the time. She thought that searching opened her eyes. Through email she liked to communicate in French. She sent mails to different people daily. She contacted with people using email for cultural and political purposes to learn French. She wanted to keep up with contemporary news in culture and language with different people. She wrote something using MS Word when she found MS Word in the service centers' computer. She did not have Office Package in her computer, so when she was in the service centre or in the library, she wrote something. Writing was creative and opened her mind to something new. She thought that she needed to learn Windows if she had chance to learn that. She did not feel tired at all, but she always

took a walk after every specific time while using Internet. She was happy to say that it was absolutely fun with computer and Internet. It could be some sorrow matters too in Internet but I need not to concentrate on that.

If she has some problems with computer at home then she contacted to the Adult Education center in Helsinki. She felt comfort to contact with them. She thought that the mouse was perfect for her but ergonomically the table was not perfect. She suggested to develop position of sitting. She has problem with eyes. She has Glaucoma. Sometimes she saw everything on the monitor very well but sometimes not, so she did not see texts on the monitor properly all the times. Though she has problem with fingers but she can manage nicely on keyboard. She does all the things at home independently.

There are lot of things missing without ICT skills, A1 thought. When he was a police, there was no computer and Internet at his office but nowadays every sector has computer. It is so important to learn computer. He compared that computer typing is very nice to make any record fast than to write on type-writer. He used type-writer at work. ICT skills motivated everyday work. He has more energy now to do things. But he thought that it is too late to start computer in details. SATKA-project enhanced social connection, he added. He has skills now to manage photos too. He liked group learning. At the time of group learning, he has friends who do not speak enough Finnish or English, they needed support and he liked to help them. But he liked individual instruction. He did not think that Internet use made him tired. He said, if he used Internet for long time he felt pain on his eyes and he could not sleep at night. So, he did not use computer for long time at a straight. He did not like to play games because he said that he did not know how to play games but he wanted to learn.

Normal mouse was good for him. If there was any problem with computer or with internet sometimes, he asked to his adult sons. They helped him but he is an independent at home. He has not any difficulties with vision. He believed that he can be volunteer instructor. He liked to give something to his friends. In his opinion peering support is very important. For example, he has friends who do not use computer. He can instruct them. He believed that he would go to his own country in the future. He wants to establish computer training centre for his friends and for the digitally excluded elderly people.

P1 said that SATKA-project has increased social connection, *I learnt here something and I use that with my grand children. They give me much comfort. Without computer tools I am not attached much with them, I contact using emails with my grandchildren and friends.* Computer learning is fun, he thinks. Internet motivated him different way. There was no problem with mouse and keyboard. He has not used computer much but he has interest to learn. He

said that If he practiced programs, he could learn more. According to P1, he was much older to be a volunteer instructor.

The participants will use computer daily and browse internet at home or in the service centre or in the library. The main purpose of using Internet by elderly people is to cope with modern world by searching information for health and medicine, keeping in contact with relatives or friends, using web banking, e-tecketing, writing and gaming for fun. Two participants wanted to take more or some specialization course in future in Adult Education center.

8   Discussion

The findings of the qualitative study are presented according to qualitative content analysis based on the research's answers of the questions. The participants talked about their IT-skills and motivation in SATKA-project through theme interviews. Theme interview was used as a method of data collection. The purpose of this study was to find out about ICT-skills, describe those and the motivation of the elderly in SATKA-project. The transcribed data has been reviewed to ensure that information relating to the participants. The participants were asked about their background information i.e. age, sex, education, profession, starting time of ICT-training and pre-knowledge of computer usage. These give the study an insight of the background of the participants. The background information helps researcher to interpret participants' interaction and discussion that is easy to follow during the interview session. The findings of this study show the practical focus: how elderly people develop their ICT skills and get motivation of learning computer and internet in SATKA-project.

8.1   Ethical issues

Ethical procedure is an important part of research. Ethics required to provide participants with written information about aims, purposes and processes of the study. Researcher has carefully considered questions of participant's interest protection. Participation in this research was voluntary and participants were aware of their right to withdraw from the study at any point with no consequences. Name, address, age, sex have been collected only for purposes of research in order to assure and enrich study. In this study first step taken prior to the study, was obtaining permission from participants by telephone. The purpose of interview has explained at the time of first talking over telephone. The consent was signed by participant at the time of interview. An example of the consent can be found in appendix 3. The language of consent was Finnish because of understanding languages by participants. Two participants are Finnish and one of them is immigrant background people but the consent has explained in English. He understands Finnish very well. In consent it is written about giving permission to use participant's interview anonymous in the study. Interviews being recorded

to keep all the information. The interviews were recorded through audio tools. The voice of participants and file name of interviews are identity of audio files. The researcher of this study has right only to listen and to transcribe the texts. All information that taped will be destroyed after final report of the study.

8.2   Trustworthiness

In qualitative research the concept of trustworthiness measures the ideas of validity and reliability. Absence of information makes it difficult for consumer to come conclusion about the believability of qualitative findings. The meaning of reliability criterion of reliability is whether the research instruments are neutral in their effect and would be the same result when used in other occasions (Guba & Lincoln, 1989). With qualitative research the researcher self is an integral part of the research instrument. Evaluation of ICT skills and elderly people's motivation in SATKA-project has been challenging due to wideness and abstractness of the concept. The researcher has paid a lot of attention in the literature to seek concentration where the materials produce new information. There is possibility that there are some points or concepts do exist in other studies. Another researcher might has dues different sources of different codings and ways of presentation, but the overall result of the concept would have probably been very much alike. The main aspect of qualitatively significant corners are fulfilled.

Conformability guarantees that the findings and conclusions are supported by the data. There are internal agreements between the investigator's interpretations and actual evidences (Polit & et al. 2001). Discussion part has a key role in confrontability of this research. In addition to literature reviewed in theoretical framework, an informative review has conducted based on findings of this study. The interview's questions and theme of the categories have drawn up according to researcher's knowledge and personal experience as IT instructor in SATKA-project.

The researcher should be able to justify that the procedures described in the study actually took place. To address the issues of confirmability and depend-ability researchers usually rely in professional to audit the research methods of the study. The term neutrality as data and interpretational confirmability, and described the audit as the best strategy to establish confirmability (Stringer 2007). Information search has been taken place according to the subject term. Search engines, articles about the subject, books, project's materials, personal experiences from the project have been used in the preparation of this study. The data collected have been accurately written as possible and the original quotations translated from Finnish to English language.

8.3   Discussion of the findings

In this present study elderly people have shown wide range of interests in ICT competences, abilities, experiences and environmental conditions with respect to their computer usage. Participants of this study used emails which are very important for them. The elderly people, when surf on the Internet, were more likely to seek information about their special interests rather than mass media. Older adults are now using the Internet and emails for different purposes of life activities. In a research in America it was found that 2 percent of Americans aged over 65 went online in 1996 but the percent increased up to 15 percent in 2000 and 22 percent in 2004 (Gatto & Tak 2008). They usually like to use Google or Youtube for searching weather information, health information and entertainment information. For many elderly, Google is the home page or starting page of searching and surfing in the Internet. ICT- training and the use of a computer or the Internet are not easy matters for elderly people. Older adults are motivated when they see that other citizens or grandchildren use a computer (Bacigalupe & Lambe 2011). The participants used Internet several times a week. The participants took the challenges to learn new things. The elderly participants thought that learning ICT was enjoyable and it was fun (Gatto & Tak 2008). The tutors and participants both need patience and good relations among them. It is normal that elderly people forget many issues very fast, so the tutors need to remind and redo all the tasks with the participants. What the participants have learned this week thus forget by next week. The elderly people need to do the previous work at least once in the lesson to remind their skills. They meet only once a week for 45 minutes or for one and a half hours. If they do not have a computer at home or if they do not practice in service centre then it takes more time with them. The lack of language and learning skills is a problem of active learning. Memory problem is another factor of active and sustainable learning. The elderly and the immigrant people need more time to learn very simple case. But if the elderly learn something once actively the elderly remember that until end of life. It is very common that many users have their firsthand experiences on computers in SATKA-project computer training. Some do not have computers at home to practice. The project empowered and motivated to the digitally blind old people and immigrant people. The elderly people contribute to the societies through ICT skills.

There is a conflict in learning in the childhood and being unable to learn in old age. But elderly people learn slowly because of their cognitive problems but they learn somehow. Research has shown that curiosity motivated the elderly to learn (Gatto & Tak 2008). Friends, family members, grandchildren are main factors to encourage the elderly people to learn computer. Elderly adults browse different pages on the Internet. The Internet is useful and the elderly find what they are looking for. Getting information helped them to improve their skills (Gatto & Tak 2008). Different studies have shown that email and web-searching are very important to the elderly. They also liked to use Yahoo and Google. Some find the Internet as a online

shopping tool. The Internet is popular also for entertainment (Hilt & Lipschultz 2004). Elderly people think every simple case very seriously. They are very sensitive and take the matters personally. The elderly do not even dare to press the start button in the beginning. The elderly people need support. The educators make the elderly understand that machines are friend of people and ICT skills are necessary in everyday activities.

The participants did not lack of motivation to come to the lessons. They always wanted to learn more and different programs. Some participants motivated because of their friends and children. The children of the elderly people called to the service center to reserve time for IT-instruction. The participants thought that, there are many aspects of socialization through computer and Internet. Some people sent e-cards and e-mails in different occasions. They asked the instructor to help answer the mails or to send new mails at Easter or at Christmas. To be a volunteer instructor is a factor of peer support among the elderly. They like to be instructor and already T1 was an active volunteer instructor. If the other two participants develop their ICT skills more, there have a possibility to become volunteer instructors. Peer tutoring is a factor of motivation of learning in the old age because it facilitates the elderly.

8.4   Furure challenges

There are some limitations of this study. Through interviews it is not possible to find out about all the required factors of learning and ICT competences. The questions depended sometimes on the level of the participant's knowledge and language. Finnish and English were the languages to conduct the interviews. There was no common language between the interviewer and the interviewees. Everything has not been taken into account because of language and understanding of personal aspect. Most of the time the participants tried to make shorten their answers because of sufficient skills of English or Finnish. The term SATKA-project's ICT training used as computer training, IT- instruction, IT- guidance and ICT- learning in different situations. This study is limited to a small group of older people as Internet user. Future research needs to explore issues related to those who have not been online. Age is an important variable that influences the usage of ICT. Some other variables also have effects, for example, work experiences, technical attitudes, fear of new tools, handling interests of new technologies and the supportive environments for learning. We tried to provide the instruction according to people's need. We tried to teach them in different ways because of cultural background. Some Muslims do not allow to touch their hands. Sometimes we needed to touch participant's hand to show how to click the mouse and how to move the mouse. There are some foreign people who are illiterate, so we needed to touch their hands to show how the mouse works. We tried to give them very tailored and effective instruction. Some foreigners were close with the instructor because one of the instructors was of a foreign background.

The time is not far when elderly people and digitally excluded people will use the computer and the Internet without fear. They will feel comfortable with the Internet and will spend more time with online media. If grandchildren looking for their grandfather/grandmother ask "where are you now pappa/mamma?" or "what are you doing pappa/mamma?", the answers will be "I am online" or "I am chatting!". The Internet has opened door to everybody in the time of information age and now in Finland it is a basic right to learn ICT.

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Illustrations

Photo 1 Group learning at Syystie service center (SATKA-project).

Photo 2 Computer training at Kontula service center with immigrant people in SATKA-project.

Photo 3 computer learning with elderly people

Tables

Table 1. Data analysis process

Coding (questions)	sub-subcategory	sub-category	category
pre- computer/internet knowledge programs used before come to SATKA project ICT-skills in SATKA project practice computer/internet at home satisfied with contact hours more contact hours further courses of ICT group or individual training	Digitally excluded, no-experience of ICT, no computer, illiteracy, no participation to any training at all, no computer at work, language barrier	ICT-skills through SATKA-project, awareness of living, working ability increase, communication through emails, writing ability, joining computer club, going to the library, working with MS Word, group training.	digital wellbeing, health promotion, independent living, searching informaiton, fluency of work, social participation, contributing social changes, active living, helping friends.
feel good/tired to use computer/Internet fun with Internet programs that interesting IT-competences enhanced daily activities Internet/computer increase motivation increase social connection ICT is important to aged people	fear to touch computer, unawareness of society, no knowledge about internet, no friends, no activities, loneliness.	feel comfort to touch computer, motivation through learning and friends, fun with instructors, interest to new things, social connection, reading newspaper, develop country, learning language, listening music, watching theatres.	mental satisfaction, social connection, virtual communication, virtual wellbeing, happiness, feel good, no tiredness, helping friends, want to be with people.

Table 2. ICT-skills and motivation through SATKA-project.

partici-pants	Age	ICT use/week	Primary use/purpose	Acquisition of ICT skills through SATKA-project	Motiva-tions/importance
T1(tutor)	73	everyday, many times a day	learning lan-guages, infor-maition search, writing something interesting, cul-tural knowledge, guiding others.	Internet search-ing, Google, MS Word, YouTube, Email, spam mails, Skype, Facebook, many browsers open, writing without watching key-board	*I think, internet opens my eyes and writing is some-thing that always opens my mind. I am not forcing my-self to do search.*
A1(learn er)	68	3-4 times, 1-2 hours at a time.	communication with friends, reading newspa-per, writing my life story, express myself, support-ing others.	Email, spam mails, Google, internet search, Skype, YouTube, photo editing, editing texts, many browsers open, net-banking, moder-ate keyboard user.	*There are lots of thing missing with-out ICT skills. I like group learning be-cause my friends who do not speak enough Finnish or English, they need support and I like to help them.*
P1(learn er)	72	45 minutes	paying bills, communication, writing,	Net-banking, email, internet search, Google, internet virus, some writing skills, slower keyboard user.	*I learnt here some-thing, I used that with my grand children and they give me much com-fort. I contact with my grand children by sending emails.*

Appendix 1 Interview form

Interview questions   Date:

Purpose of the study and questions for participants.

The purpose of the study is to understand the importance of ICT skills and motivation of el-
derly people in the SATKA project provided by the city of Helsinki.

The research questions of the thesis are following

a) What kind of ICT skills are necessary for the elderly people?
b) Why elderly people need ICT skills?
b) How elderly people are motivated of learning ICT in older age?

Questions

1   Your name:
2   You're address:
3   Your age:
4   Your profession/retired:
5   How many languages do you speak?
6   When did you start with SATKA project ICT-training?

7   Did you use computer/internet before you come to the SATKA project-education?
8   What program did you use before come to SATKA project IT education?
9   What did you learn in SATKA project?
10 What do you want to learn more from SATKA project and how?
11 The guidance/training of SATKA project was helpful?
12 Do you practice computer and Internet at home?
13 Are you satisfied with contact hours of instruction?
14 Do you want more contact hours?
15 Do you want further course of ICT?
16 Do you like group or individual IT-guidance?

17 Which program do you use every day? and why?

    a. e-mail
    b. Browsing/Google (what is searching?)

c. MS word

d. Skype

e. Playing games

f. Facebook/Twitter/Google+

g. Youtube (what you do?)

18 Do you know what is spam mail?

19 Do you know how to browse opening many browsers at a time?

20 Do you do things independently at home? (tv, radio, computer, ipad, paying bills).

21 Where do you need more computer skills? (more details according to topic)

a. Writing/(MS Word)/ (how is writing speed?)

b. Email

c. E-tickets (for travelling, journey, cinema, theatre)

d. Social media

e. Net-banking

f. Internet searching

g. Music

h. Photo editing

i. Games

j. Library/Reading

k. Smart phone use

22 Did you use computer/Internet at work?

23 How do you use those programs and why you use?

24 Do you have Internet connection at home?

25 Do you use Internet every day?

26 Do you have computer/laptop/iPads/Tablet computer?

23 Do you feel good to use computer/Internet?

24 Do you think that ICT education makes you feel good?

25 What program makes you feel good and how?

26 Do you feel tired to use computer/Internet?

27 Is it fun with Internet?

28 Which program is so interesting?

29 Do you think that IT competences enhanced your daily activities?

30 Does Internet/computer increase motivation? how?

31 Does SATKA project IT-guidance increase social connection?

32 Do you think that ICT is important to aged people? and why?

33 Do you have any suggestion to development of internet and computer usage?

34 Whom do you contact with when you have problem with computer/internet at home?

35 Do you call anybody often for help to set up computer/internet/connection?

36 Do you have any difficulties to use keyboard/mouse?

37 Do you have problem to see the texts/photos on the monitor?

38 Do you want to be volunteer IT instructor?

39 Do you think that volunteer work is important?

40 Do you think peer support (vertaistuki) is important for the elderly people?

41 Do you participate actively to the other activities (dancing, gym, juga)?

Apendix 2 Authentic texts

Participant T1

I have learnt something from SATKA-project but of course I want learn more. I cannot make any measurement how much I have learnt form SATKA-project. The training from SATKA-project was helpful and supported me much. I like individual instruction. I am en existing volunteer instructor.

I have used computer before coming to SATKA-project but not actively. I have been using computer for 20 years. I have used computer at work (Word Perfect). I had not any computer education before. I have learnt from my office. I did not use internet at work that time. Now I am using internet everyday and many times a day. I cannot not have any life without internet now, and internet is an addiction for me. I do not have anything if am not connected with internet. I have laptop and iPad but I would prefer tablet computer with internet connection. I do not have internet connection with my iPad.

YouTube and Internet are most important programs for me. I think that YouTube is a tool of learning language. Because I like to learn many languages. So, YouTube helps me to study different languages specially grammars e.g. German, French, Spanish and others difficult things with video files. I look video file in different language to make the meaning easy. I look for different instruction in different language on YouTube. I find what I need and interesting on internet and to learn. I like to listen music as a background noise in the cafe.

I use Google for searching difficult and interesting things. I do not search anything which is need to search, I search because searching is interesting. When I search something and sees that, some other thing is more interesting then I forget what I am looking for actually, because lot of interesting thing in search page have to see. There are new things coming on continiously which are more interesting and I learn something new all the time than what I expect. I think, searching opens my eyes. It is difficult to concentrate what you are supposed to do on internet and on YouTube because of lots of interesting things. I am not forcing myself to do search. I do for fun and it has to be fun.

I do not need to use Skype. I like to communicate in French using email. I send mails to different people and I communicates through email for cultural and political purposes to learn French. I want to keep up with contemporary news of cultures and languages with different people. I know what is spam mail. MS Word is important for me to write something when I get

chance. I do not have Office package in my computer. When I am in the service centres or in the library, I write something. Writing is creative and opens up my mind to something new. I think that I need to learn Windows if I get chance to learn that. I want more money but I do not want to use net-banking. I need more skills in MS Word.

I would not be happier if I have ipad, iphone, imac, tablet computer. I have to be at home and with the machines, if I would have those. I do not want that kind of life because I want to be with people learning and teaching something. I feel irritating with telephone. I do not want to have any Smartphone. I do not play games.

I feel good when I use internet. Training with SATKA project was interesting and feeling good when I participated. Music from YouTube makes me feel good. I like to see also dancing on YouTube. I do not feel tired at all but I always take a walk after every specific time while I use internet. I think that it is absolutely fun with computer and internet. It can by some sorrow things too on internet but I need not to concentrate on that. I did not enjoy with some participant at the time of tutor training. I was frustrated because of some other participants. I think that instructor needs to be strict according to situation. But I believe still that SATKA-project motivated me much. I want to suggest that the project must develop. I think that people increase social connection through SATKA-project.

I use computer at home. When I need help for trouble shooting, I contact with Adult Education centre. I feel good to contact with them. I think that the mouse is perfect for me but ergonomically, the table is not perfect. I suggest that it necessary to develop position of sitting. I have problem with my eyes. I have Glaucoma. Sometimes I see everything on the monitor very well but sometimes I do not, so I do not see texts on the monitor properly all the times. Though I have problem with fingers but I can manage with that nicely on keyboard. I do all the things at home independently (TV, Radio, printing etc.).

Participant A1

My name is A1. I have used computer and Internet before I joined to SATKA-project as a participant. I have started to use computer 7 years ago. I knew only how to send mail and how to read newspaper on internet. I have learnt MS Word, more things about E-mail and Skype too. I have skills on how to transfer photos from memory stick and how to edit those. I want to learn more about internet and computer. I need more time. I think that, I have got sufficient support from SATKA-project. In his case with SATKA-project I like group learning because my friends who do not speak enough Finnish or English, they need support and I like to help them. But I like generally individual training.

I have not used Facebook at all even I do not want that. Facebook is for young people. I have a desktop computer at home with internet connection. I use computer and internet 3-4 times in a week. I like to use MS Word, internet and email. I know also what is spam mail and virus. I communicate with friends and family members through email and Skype. I read different newspapers on internet in my own language. I want to learn more about what is necessary e.g. YouTube, e-ticketing, net-banking etc. I feel good with internet using. Because of internet I get lot of new information. It motivates me and it helps to get new ideas.

I feel good to use computer. MS Word is good for me because I write my expression and about my life as a document for my next generation. When I use internet and I see the different good news on net which make me feel good. If I see on the newspaper that my country is developing and politically stable then I feel happy. I do not think that internet using makes me tired but if I use for long time then I feel pain on my eyes and I cannot sleep at night. So, I do not use computer for long time at a straight. It is fun with SATKA-project and learning ICT, it helps to learn new things. When I started to use computer I became so happy because I did not know that before, that I know now. I do not like to play games because I think that I do not know how to play games but I want to learn.

There are lots of things missing without ICT skills, I think. When I was a police staff, there was no computer and internet there. But nowadays every sector has computer. It is so important to learn computer and internet because of exercising human skills and activities. I see that computer typing is very nice to make any record than to write on type-writer and it is so fast. I have used type-writer at work. ICT skills motivate everyday work as I experience now, because I pay bills at home, transfer money, checking mails etc. I have more energy now to do things. But I think that it is too late to start computer for me. SATKA-project enhances social connection, I think.

The normal mouse is good for me. Though there is an ergonomic mouse when we talked about computer, but I do not like that because that is new for me. I used to use normal mouse. If there is any problem with computer or with internet sometimes then I talk with my adult sons and they help me but I am an independent person at home. I have not difficulties with vision. I believe that I can be volunteer instructor. I like to give something to my friends, to my country people. In his opinion peering support is very important. For example, I have friend in my country and they do not use computer. So, I can educate them with computer and internet. I believe that I would go to my own country and want to establish computer training centre for my friends and who do not have ICT skills.

Participant P1

My name is P1. I live in Helsinki. I am a retired person and 72 years old. I speak only Finnish. I have started in SATKA-project three months ago. I did not use computer before. I started computer here in SATKA-project. I have learnt here how to pay bills, how to use net-banking. I know how to use email and internet. I know also something about spam mails and virus. I already learnt how to write. I want to learn more what is important. This project helped me a lot. I like individual instruction because it is the best, I think. The time is very limited. I want more courses if possible. I did not use computer at work. I do not have computer and no internet connection. I use computer here in Kontula service centre ones in a week. I like to buy computer. I have learnt these kinds of programs e.g. internet, net-banking, email, writing because those are much benefited for me. I do not have smart phone.

I feel good when I use computer and internet. I use all the programs because those are fast tools of information communication and I ask to the computer and to Google what I do not know. It gives me answers. All kinds of information like map, photos, music are available on Google.

ICT skills motivate me everyday activities because it is very fun to use computer and internet, those things are very necessary. There are many programs that I did not experience yet but I want to learn that. I think, I need more skills on e-mail, net-banking, photo transfer, travel tickiets etc. I do not feel tired when I use computer and internet. Through SATKA-project social connection increased because I learnt here something and I use that with my grandchildren and they give me much comfort, without computer tools I am not attached much with them, I contact using email with my grandchildren and friends. It is fun with ICT project and I am happy to learn here. It motivates me different way. Everything is ok for me here. I like to use computer at library. There is no problem with mouse and keyboard. I see the texts well on monitor. I have not used computer much but I have interest to learn that. I want to learn more. If I practice many programs then I can learn many things. I use everything independently at home e.g. TV, Radio, phones etc. I do not know now that I am going to be a volunteer instructor because I am much old. I like to go for swimming and physical practise. Peering support is important but I am ok with young people too.

Appendix 3 Informed consent

Date………….. 2013
TUTKIMUSLUPA-ANOMUS

Hyvä vastaanottaja,

SATKA-hankkeen atk-opastuksen osallistuja.
Teen maisterin tutkintoa Laurean Ammattikorkeakoulussa. Tutkimustani varten pyydän sinulta lupaa käyttää haastatteluasi. Vastaaminen käytetään anonyyminä, eikä tutkimustuloksissa tekstisi ym. ole identifioitavissa sinuun. Sitoudun noudattamaan tutkimuseettisiä periaatteita.

Helsingissa   / 2013

Kunnioittavasti

Lutfor Rahman

Annan luvan käyttää haastatteluani tutkimusaineistona

Helsingissä   /2013

Tutkimuksen osallistujan allekirjoitus ja nimen selvennys

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