

PERTTI LAITINEN (ED.)

AGEING IN WORKING LIFE



North Karelia University of Applied Sciences
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Ageing in Europe

In 2008, the European Commission published a report titled “Meeting Social Needs in an Ageing Society”. One of the important issues it presents is the opportunities and needs in an ageing society, focusing in particular on the ageing baby-boomers and their potential for contributing to the economy and society. The importance of such an analysis was highlighted in the Commission’s Renewed Social Agenda of July 2008. According to the report the EU population pyramid clearly shows an increase in cohort sizes just after the end of World War II, marking the start of the baby boom. This was 60 years ago – and the first of these large cohorts born over a period of 20-30 years are now beginning to retire. (Commission of the European Communities, 2008, 11). We have seen this development already in most European countries, but the pace of it will become much faster and the challenges more difficult.

The European commission report presents that, over the past decade, both the population of working age (20-59 years) and the population aged 60 years and above had been growing by 1 to 1.5 million people per year. From here on, the population aged 60 years and above is estimated to be growing by 2 million people every year for the next 25 years. The growth of the working-age population is slowing down fast and will stop altogether in about 6 years; from then on, this segment of the population will be shrinking by 1 to 1.5 million people each year. (Commission of the European Communities, 2008, 11). These are estimates, but it is more probable that the figures will be larger, not smaller.

This publication has been written by the Finnish student group that participated in an Erasmus funded intensive program, Multidisciplinary European Program, in Lille, France in spring 2011. They have studied the issue of the program, ageing, from the perspective of the Finnish economy and working life. The focus of the Multidisciplinary European Program, (MEP) is ageing from a wide perspective. This is an issue especially European countries are faced with. The populations of most European countries are becoming predominantly populated by elderly people. We are faced with many types of challenges, which range from economical to social and ethical. Instead of restricting the scope of the problem to mere national problems, it was considered by the multinational project group to be preferable to tackle the matter from a variety of perspectives: economic, social, financial and medical. Starting from a multidisciplinary and multicultural basis, the aim of partner institutions has been to review the current ways of dealing with ageing in order to try and work out a distinctly European approach of the subject-matter, which would be based on sustainability and citizenship.

The program has included students of different disciplines, belonging to different types of curricula, coming from a variety of countries. The working methods used during the IP have been student-activating methods. Problem-based learning is used for the definition of the problem, for the review of the different approaches, and for the gathering of relevant data.

Work has been supplemented by conferences with experts, by tutorials and field-work. Various workshops then investigated the solutions experimented in the various countries involved, in the social, economic, financial and medical fields. The participants of the program have gained valuable information and experiences about the issue of ageing. The work continues in the participating Universities and in the intensive program workshops in Portugal in 2012 and Finland in 2013.

Joensuu 15th May 2012, Pertti Laitinen

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Picture of the students. On row two from right Waltteri Berger, Pia Karjalainen, Ossi Hakkarainen, Sonja Sorsa, Sanna Sokura and Juhana Ikonen. (Photo: Pertti Laitinen)

1 PREFACE

In Finland the development of age structure is not unusual when it is compared to other developed western countries and to Europe. The number of elderly people is high and the diminishing working population has to keep the society alive and in action. Life expectancy is growing higher and the birth rate is dropping. Concept of elderly people means people in their 65s or over. Population structure effects economical growth, employment, public expenses especially social expenses and social security and welfare. (Valtioneuvoston kanslia 2004.)

This project introduces Finnish age structure through statistics, how it has developed over the years and what can be expected to happen in Finnish population in future. Elderly people outnumber the working people. Unemployment rate of young people is high though elderly people leave vacant posts when retiring. Efforts of nation to adapt to changes and to find solutions to the challenge are popular current topics in media, in politics, in workplaces, in municipalities and also among citizens in Finland.

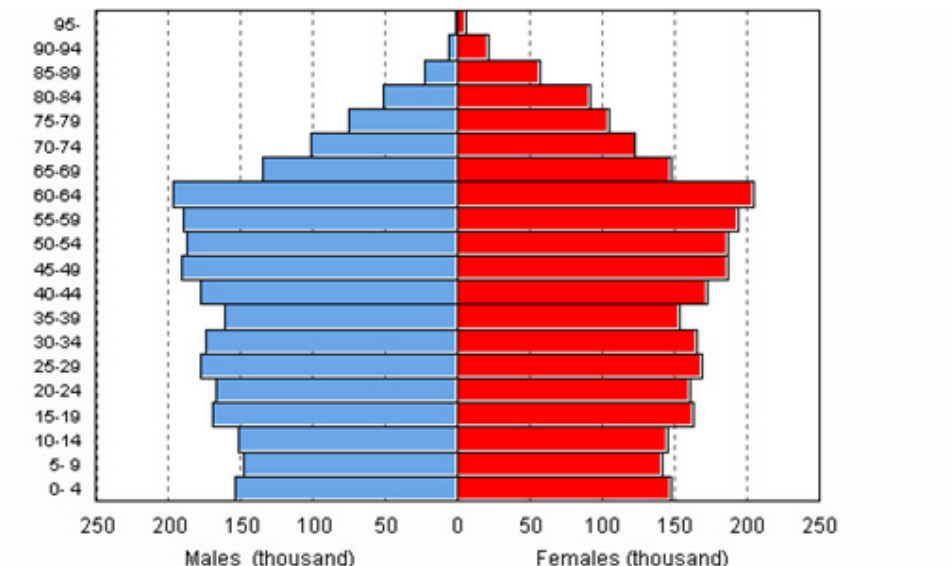
Ageing is an individual process that leaves individual marks on everyone. Ageing creates different challenges for the worker itself but also for the surroundings of ageing worker. For some people ageing is an easier process and they stay vital and vigorous even in old age. They may study throughout their life which brings more opportunities and challenges in work. Other ageing people cannot keep up with the demands of the work life and they have to opt out earlier. When health deteriorates it is not a question if you want to work or not, it is a question whether you are able to work or not.

Work community is influenced by the whole range of workers. Work efforts and working abilities should count no matter how old is the worker. Know-how through experience and updated new knowledge is equally important. Human resources are not limitless therefore wellbeing is essential in all aspects of life and work. More experienced workers could pass on their know-how for beginners to help them to work efficiently and to readjust to new conditions faster. Through communication, mentoring, demonstrating and written information is knowledge transmitted to generation to generation efficiently and easily.

A case study is focused on Abloy Oy which is an age-friendly work community. Abloy has developed a program to solve possible problems of ageing workers. This program provides means to improve ageing workers health and stamina to extend careers but also practices to share knowledge and experience between a beginner and an old hand. Abloy has proven that taking good care of workers brings results and helps the organization as well as the people working there.

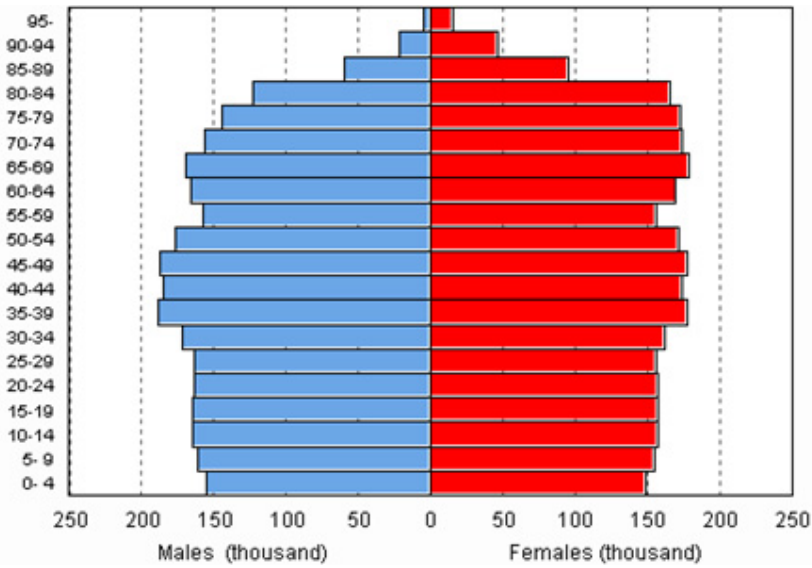
2 FINNISH AGE STRUCTURE

As it is shown in table 1 there are approximately 5 378 165 people living in Finland in 2010. The number of population is estimated to rise about 5-2 % per decade. It is forecasted that year 2060 there are about 6 213 048 people living in Finland. Through the times the amount of elder people has increased dramatically and the fertility rate has declined. In very near future this situation is going to be unbearable. There will be too many elder and retired people regarding to younger population. Age pyramid (picture 1) shows clearly that in 2010 we are living the time before the storm. Our largest age groups are approaching their retiring age and when they do retire, there should be more pension payers at the bottom of this pyramid.



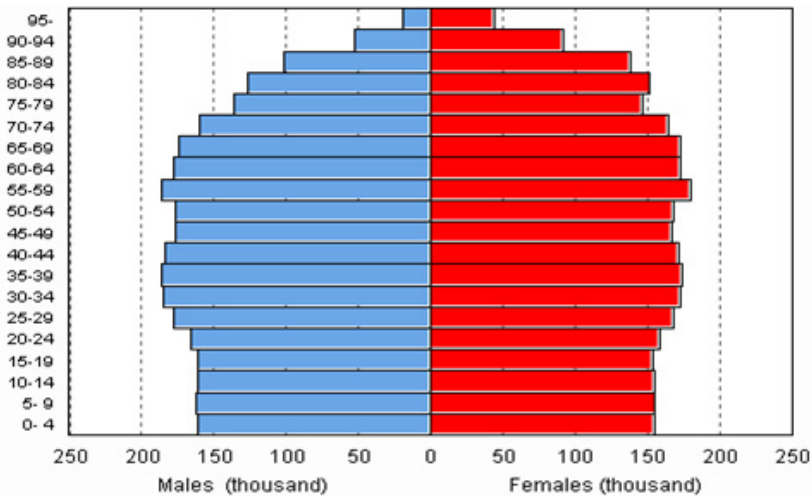
Picture 1. Population by age and gender 2010 (Tilastokeskus 2009a).

Projections on pictures 2 and 3 are based on the assumption that the birth rate and immigration are continuing at the current level and the decline in mortality rate continues. If this presumption goes as predicted, the number of people aged over 65 is increased from 17,6% to 28,8 % to year 2060. (Population Statistics 2009. Statistics Finland)



Picture 2. Population by age and gender 2030 (Tilastokeskus 2009b).

The good news is that these pyramids are not looking so upside-down pyramids in picture 2 and 3 than it is in picture 1. If you compare the tips of these pyramids, it is shown that people are going to have clearly longer life ahead of them in the future. The tips of these pyramids are getting wider and wider trough the time and this means that there are going to be more pension withdrawers than pension payers.



Picture 3. Population by age and gender 2050 (Tilastokeskus 2009c).

Table 1. Population by age 1900 - 2060 (Tilastokeskus 2009d).

Population by age 1900 - 2060 (years 2010 to 2060: projection)

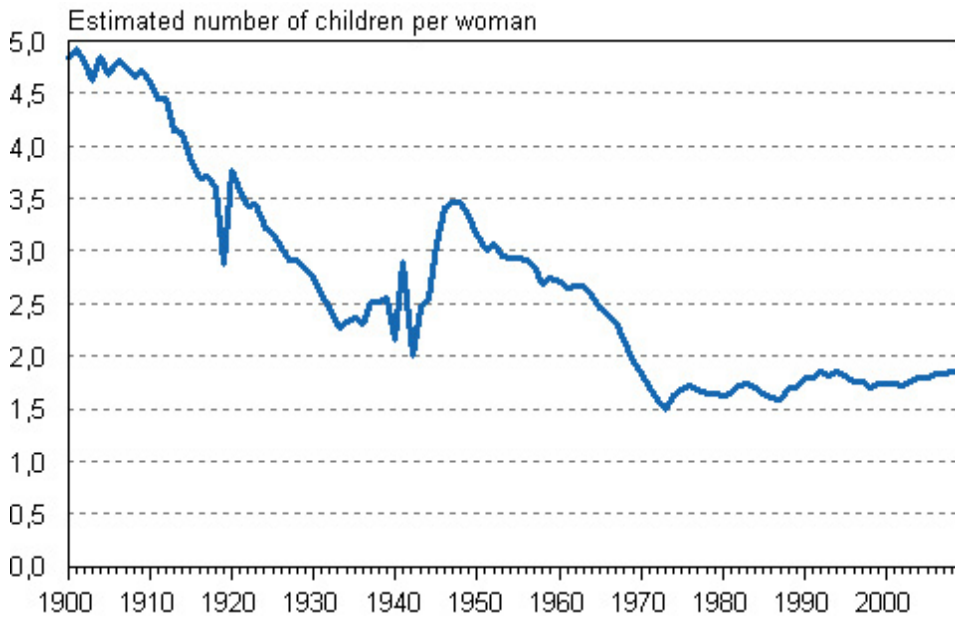
Year	Age groups total	0-14	15-64	65-	0-14 %	15-65 %	65- %
1900	2,655,900	930,900	1,583,300	141,700	35,1	59,6	5,3
1910	2,943,400	1,049,400	1,724,500	169,500	35,7	58,6	5,8
1920	3,147,600	1,051,000	1,908,300	188,300	33,4	60,6	6,0
1930	3,426,700	1,018,300	2,227,200	217,200	29,4	64,3	6,3
1940	3,695,617	995,599	2,464,107	235,911	26,9	66,7	6,4
1950	4,029,803	1,208,799	2,554,354	266,650	30,0	63,4	6,6
1960	4,446,222	1,340,187	2,778,234	327,801	30,1	62,5	7,4
1970	4,598,336	1,118,550	3,052,298	427,488	24,3	66,4	9,3
1980	4,787,778	965,209	3,245,187	577,382	20,2	67,8	12,1
1990	4,998,478	964,203	3,361,310	672,965	19,3	67,2	13,5
2000	5,181,115	936,333	3,467,584	777,198	18,1	66,9	15,0
2010	5,378,165	886,705	3,547,475	943,985	16,5	66,0	17,6
2020	5,635,938	937,331	3,408,464	1,290,143	16,6	60,5	22,9
2030	5,850,097	942,715	3,382,227	1,525,155	16,1	57,8	26,1
2040	5,985,356	926,800	3,450,788	1,607,768	15,5	57,7	26,9
2050	6,090,038	948,367	3,461,034	1,680,637	15,6	56,8	27,6
2060	6,213,048	957,068	3,469,063	1,786,917	15,4	55,8	28,8

It is shown in table 1 that the amount of people who are aged over 65 is going to increase all the way up to the year 2060. But the positive side of this table is that in year 2010 the decline of people aged 0-14 starts to slow down.

2.1 Fertility rate

Fertility rate can be described as a human production count. It means how many children one woman gives birth. Past hundred years the Finland's fertility rate has been descending (Picture 4). There is a one spike in the graphs and that is in the 1940's, time after the Second World War. After that spike fertility has declined between 1,5 and 2 children per woman.

Those people who were born in the 1940's are now the age group who are beginning to start their retirement days. That 1940's spike in the fertility rate and present (1, 86) fertility rate equals non renewing population. Modern population requires fertility rate of 2, 1 to renew itself. (Ilmarinen 2006, 229.) Finland's fertility rate has risen slightly in past few decades.

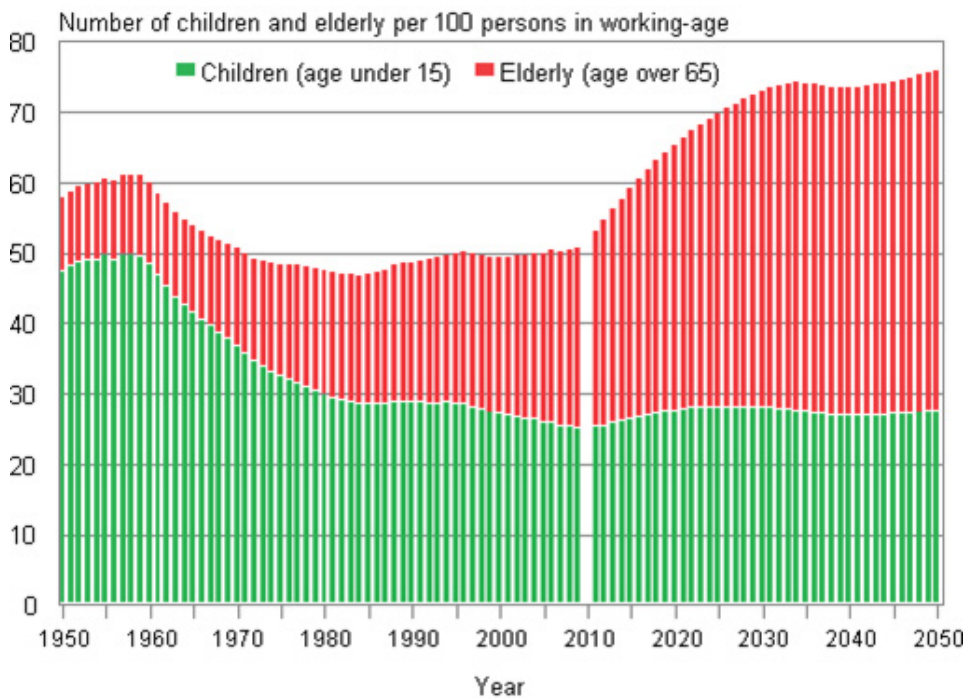


Picture 4. Total fertility rate in 1900–2009 (Tilastokeskus 2010a).

2.2 Dependency ratio

Dependency ratio tells us how many working-aged persons there are towards every under 15 and over 65 years old persons. Finland's low fertility rate combined with constantly increasing life expectancy, means that our dependency ratio will change dramatically in following years. (Ilmarinen 2006, 74.)

Picture 5 shows us that current dependency ratio is about 50 to 100, but in the following years especially the number of people aged over 65 will increase rapidly. It is predicted that in year 2050 Finland's dependency ratio will be about 75 to 100.

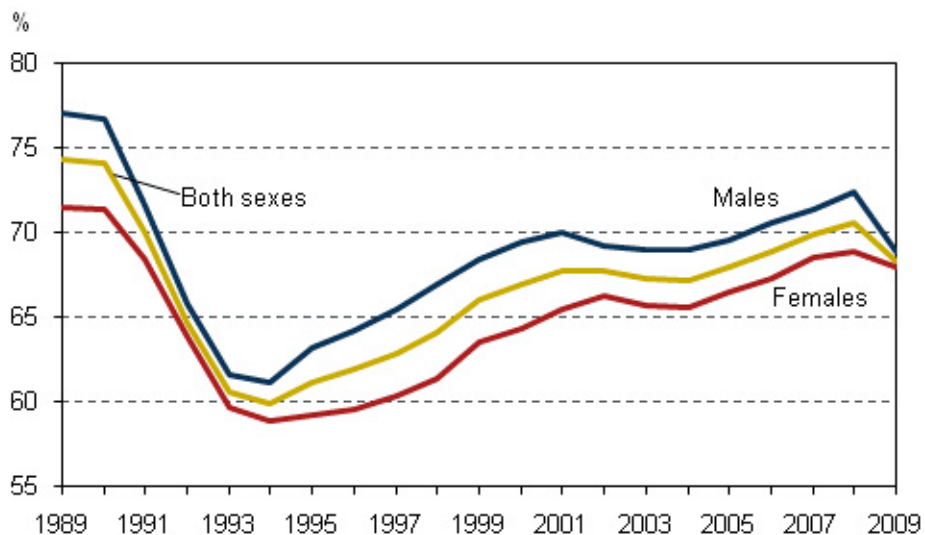


Picture 5. Demographic dependency ratio in 1950-2009 and projection for 2010-2050 (Tilastokeskus 2009e).

3 LABOUR

There were 2 457 000 working people in Finland in 2009 (Tilastokeskus 2010b). One way to improve our coming situation is increase our employment rate, that there are more pension payers. Finland's employment rate was 68,7 % in 2009. Compared to EU15-countries average 65.9%, Finland is above it. (Eurostat 2011.)

As seen in picture 6, Finland's employment rate surged at the time of 90's recession and were at the worst in 60%. After the recession economy bloomed and the employment rate were over 70% at the highest.



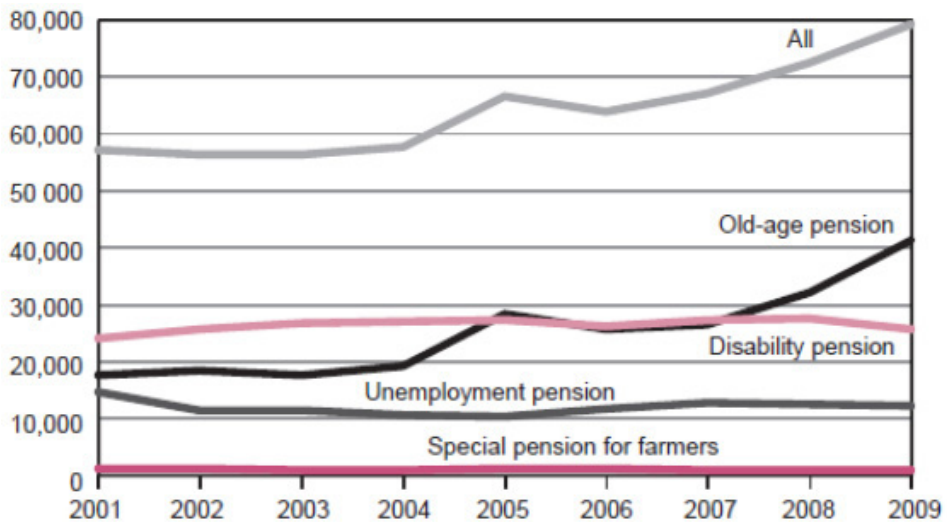
Picture 6. Employment rate by sex in 1989–2009, persons aged 15 to 64, % (Tilastokeskus 2010b).

Our employment rate should be higher especially in the future. The number of retired people is increasing so rapidly that we need every one of the work aged people to work.

3.1 Retiring

Another way to improve the future situation is to improve our elder peoples working conditions so that they would continue working for longer time. In the year 2009 the average age of retiring was 59,8. (Kannisto 2010.) Picture 7 shows clearly that our number of retirees has started increasing and is predicted to continue rising.

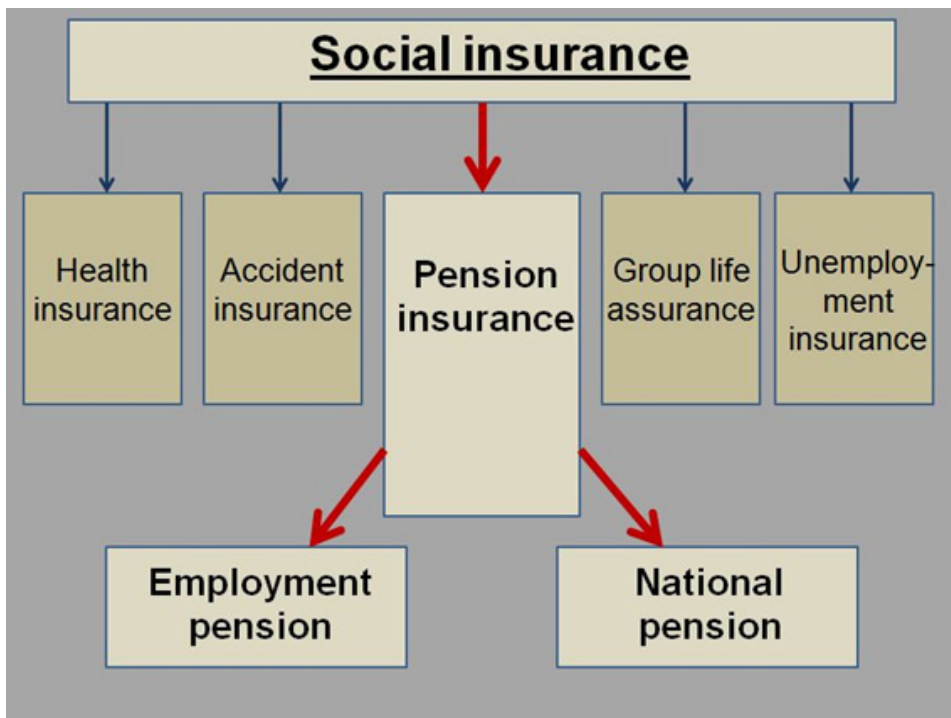
EU's goal was to get the employment rate of people aged 55-64 to level of 50% by the year 2010. Verified numbers are from year 2009 and then the EU27-countries average employment rate for 55-64 was 46,0 %. Finland's employment rate for same group was 55,5%. (Eurostat Press Office 2010.)



Picture 7. New retirees in 2001–2009 resident in Finland by pension benefit (Eläketurvakeskus 2010).

4 PENSION SYSTEM IN FINLAND

The purpose of Finnish social security is to ensure the living of all individuals. When person's livelihood cannot be provided by working, living is covered by the social security. Some of these situations are predictable, such as ageing. Some may come surprisingly such as incapacity for work or unemployment. Social security is funded from general tax revenues or in addition from separately inherited payments. Following things are included in Finnish social security: social insurance, family benefits, health care compensation, social services, subsidizing for inhabitation and studying. (Korpiluoma ym. 2006, 13.)



Picture 8. Social insurance in Finland (Korpiluoma ym. 2006, 15).

In Finland employee pension scheme is statutory and mandatory and it covers all of the people who are working. The purpose of employment pension is to maintain moderate livelihood level of the person after retirement, disability to work or in case of death of a provider. National pension is based on living in Finland. The amount of national pension is in relation with the employment pension. The bigger the employment pension the smaller is the national pension. If the employment pension is high enough the national pension is cancelled for that person. The basic purpose of national pension is to secure the minimum livelihood. (Korpiluoma ym. 2006, 16-17.) From March 2011 retirees will get a guarantee pension if total pension before taxes is less than 687,74 euro per month. A guarantee pension is paid in addition of national pension with no earnings-related pension for about 120 000 recipients. (Kela 2011.)

The Finnish pension law orders that the person who has lived three years in Finland after 16th birthday is justified to get national pension. Disability pension may be grant without any specific living time permits to a person who became disabled when living in Finland before 19th birthday. (Eläketurvakeskus 2010.) Overall 95 % of the Finnish pension scheme is composed by statutory retirement plan. The importance of supplementary pension benefits is rather small in Finland, because the statutory pension scheme is considered to be extensive. (Eläkkeensaajien keskusliitto EKL ry 2011.)

4.1 The 2005 pension reform in Finland

Finnish pension system was reformed comprehensively on January 1st, 2005. Before the reform every employment was calculated separately and the pension was based on the salaries of the latest working years by each employment. After the reform pension is determined by all merits. Significant changes were also abolition of some early stages pensions and changing the terms of retirement age. In addition, the earning regulations were also changed in order to motivate people to continue their careers longer. The 2005 pension reform is considered the largest change in the 40-year old pension history in Finland. (Hakola & Määttänen 2007, 9.)

The goals of pension reform (Eläketurvakeskus 2006)

- Add 2-3 working years before retirement
- Adjust pension scheme to the prolongation of average lifetime
- Create conditions to connect and simplify the employee pension laws of private fields

Why longer careers? (Uusitalo 2011)

- The amount of people near retirement age is getting bigger in Finland
- Life span is getting longer
- Ensuring labour accessibility
- Return of public finance balance

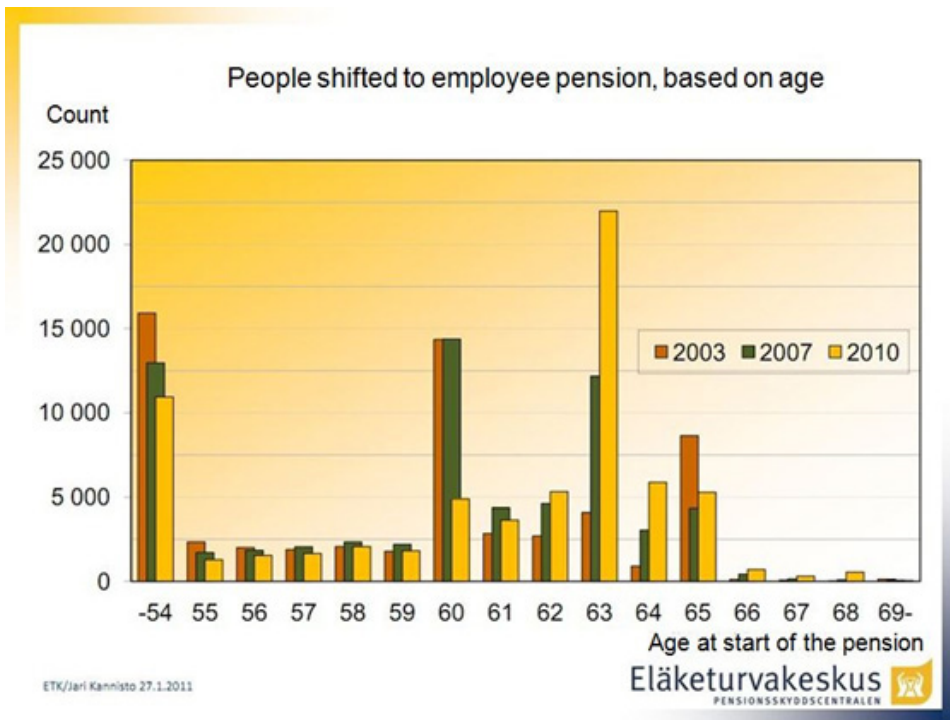
The main changes (Eläketurvakeskus 2006)

- The possibility to shift to old-age pension more flexible within the age of 63-68
- Pension is determined by all employments
- Studying and childcare also increases pension
- Incentive bonus supports to work longer
- Old-age pensions are cut and age limits are upraised

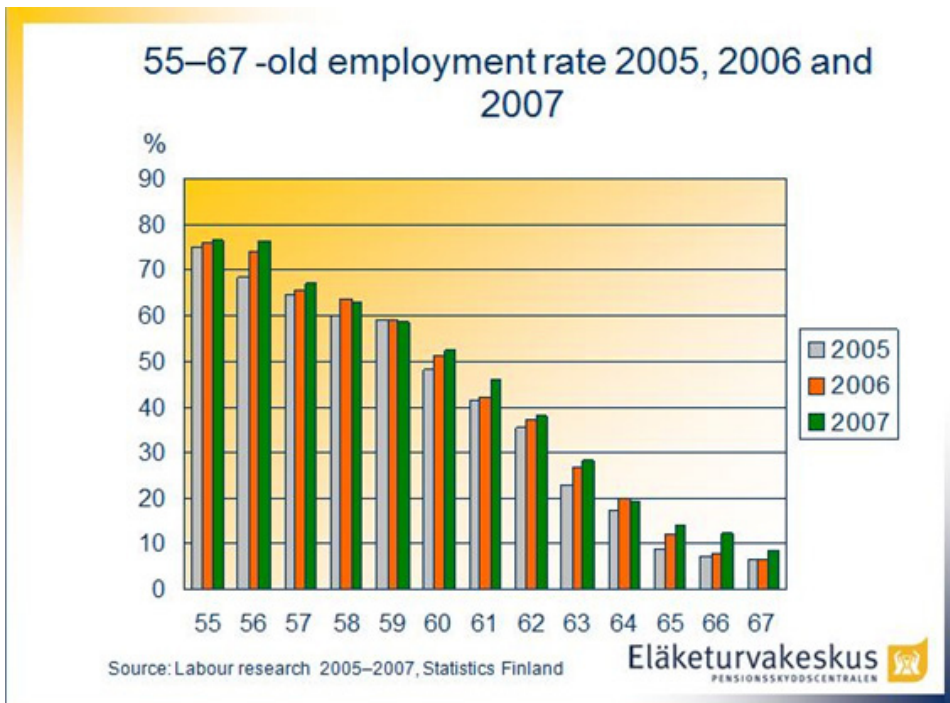
Main three age-based pensions in Finland (Keva 2010a)

- **Old-age pension.** Requires sufficient age, end of employment and applying for pension (Keva 2010b).
- **Earlier pension.** Gives the possibility to retire on the age of 62. Earlier pension will reduce the future pension constantly by 7,2 % per year (Keva 2010c).
- **Part-time pension.** Requires age between 58-67. In part-time pension, the work times and earnings will reduced 35-70% from the original settled amount (Keva 2010d).
- Note: People who will continue working even after the age of 68 will get 4,8 % raise to their yearly incomes.

4.2 The results



Picture 9. Shifting to employee pension (Kannisto 2011).



Picture 10. Employment rate for people age 55-67 (Eläketurvakeskus 2008).

According to Finnish Pension Security Center retirement is going in line with the estimates. Employment rate for people over 55 has risen especially among people over 60 year old. 17 000 people aged over 63 year old who get pension, are also still working. (Uusitalo, Kannisto & Tuominen 2008.)

Finnish Pension Security Center also announced 27.1.2011 that the average retirement age is getting higher. Year 2010 pension statics shows, that the expected retirement age for 25-year old people is 60,4 year. Compared to last year's statics, there is over than half a year positive difference. (Eläketurvakeskus 2011.)

71 000 people shifted to pension in the year 2010. The amount decreased over 10 percent since last year, which means almost 10 000 persons. Last year average estimated retirement age for people aged 50 was 62,3. That number has risen half a year as well. (Eläketurvakeskus 2011.)

Before the 2005 pension reform people had the chance to shift to old-age pension by the age of 65. Nowadays people have the possibility to retire or continue working on their own will between ages 63-68. People aged over 18 years will accumulate 1,5% from their yearly earnings to their pension. For people 53 year old or more that percent is 1,9. For people between 63-68 that percent is even 4,5%. Having a child or other breaks to the career doesn't affect the employee pension. Before the year 2005 pension started to grow after the age of 23. Now it starts to grow after the age of 18. (Eläketurvakeskus & Työeläkevakuuttajat TELA 2011.)

Before the 2005 pension reform pension was the average salary of the last 10 work years. After 2005 pension is calculated by each year's incomes and accumulate percent. The new pension system is more favorable to people who may have more short-time employments, or have gotten better salary at younger age.

Pension types and age, where pension can be granted (Huikuri 2009)

- | | |
|---|----------|
| • Old-age pension | 63-68 |
| - earlier | 62 |
| - postponed | 68- |
| • Full- and partial disability pension | 18-62 |
| • Part-time pension | 58-67 |
| • Unemployment pension
(for people born before 1950) | 60-61 |
| • Family pension | |
| - child | 0-17 |
| - widow/widower, if children | no limit |
| - widow/widower | 50 |
| • Vocational rehabilitation | 18-62 |

5 CHARACTERISTICS OF FINNISH AGEING WORKERS

Growing old brings many problems for individuals, companies and society. In individual level many of these problems focus on health, workability, motivation, strength and know-how. Some people seem to resist ageing better than the others. They keep up with younger ones and they have vitality and energy to stay at work longer. But in general years appear more or less visible after fifth decade. However middle age doesn't mean you're past it. But what does it mean then? What kind of changes ageing workers have to face when time goes on?

5.1 Concept of ageing

In general ageing workers are defined to be over 45 years and older workers are over 55 years according to the Finnish committee surveying the prerequisites for ageing and older employees. Health and functional capacity begin to weaken soon after 45 years and they have direct influence on work ability. People cannot change the course of time or interfere in the chronological ageing but by improving their living habits like eating, exercise, rest and stimulation they are able to slow down the process of growing old. Growing old is an individual process also affected by heritage, environment and work life. People are individuals and individual differences increase along with growing old. Therefore individual solutions are needed at work communities in order to organize the work of ageing workers effectively.

5.2 Welfare

Welfare of the society can be divided into health, material welfare and experienced welfare. Finnish welfare and its differences are sized up in the National Institute for Health and Welfare. The current issue is to be able to control or even reduce socioeconomic differences of society.

Ageing increases risks of chronic or acute diseases and accidents when organs and functions of an ageing person begins to deteriorate indisputably. In 2009 in the age group of 45-54 years 73 % considered their health pretty good. 63 % of the people aged 55-64 and 53 % of the people aged 65-79 shared the same opinion. 49 % of people over 65 years had some long-term illness but older people were healthier than in 2004 when that portion was 57 %. (Vaarama, Moisio & Karvonen 2010, 30-32.)

High blood pressure and elevated blood cholesterol are main problems of ageing workers in Finland. 25 % of men over 45 years and approx. 35 % of men over 55 years suffer one or other or both of these illnesses. In same age groups women have percentages of 16 % and 34 %. Diabetes begins to bother more above 55 years in both genders. At the same time only 5 % of Finns over 54 exercise sufficiently according to recommendation for health-enhancing physical activity by UKK Institute. (Helakorpi, Laitalainen & Uutela 2010, 18-19, 44.)

Even though attitudes and legislation in Finland have converted to antismoking smoking is still a major avoidable health risk in our society. 30 % of the men aged 45-54 years smokes daily and in older age groups that portion is about 20 %. Ageing women smoke little bit less. (Helakorpi etc. 2010, 10, 74.) Smoking is the main cause for chronic bronchitis, which occurs in about 10 % of Finns.

Other major health behavior risk is increased obesity in both genders and in all age groups. In 2009 58 % of all men and 42 % of all women were overweight (BMI ≥ 25 kg/m²). (Helakorpi etc. 2010, 2.)

Alcohol consumption has decreased a little bit. However in men aged 45-64 years consumption of strong alcohol is 5 % bigger than in younger age groups. Beer drinking of men increases after 35 years so that 7 % of men over 35 years drinks beer daily and daily consumption stays in that level also in older age groups. (Helakorpi etc. 2010, 15, 127-132.)

80 % of Finnish people think that their quality of life is good or better until they are 70 years old. Then this portion begins to decrease at the same time when illnesses begin to increase. In addition of physical elements quality of life has strong connection to mental elements like energy and ability to enjoy life.

Work is a significant element of quality of life, both mental and physical. Increasing of earned income protects from weak physical quality of life. Major risks for lower quality of life are low subsistence, poor health and activity (both social and physical). These risks are often encountered in older age after retirement but also in the case unemployment or disability to work. Best elements to protect quality of life are good health and work ability, job, sufficient income and family.

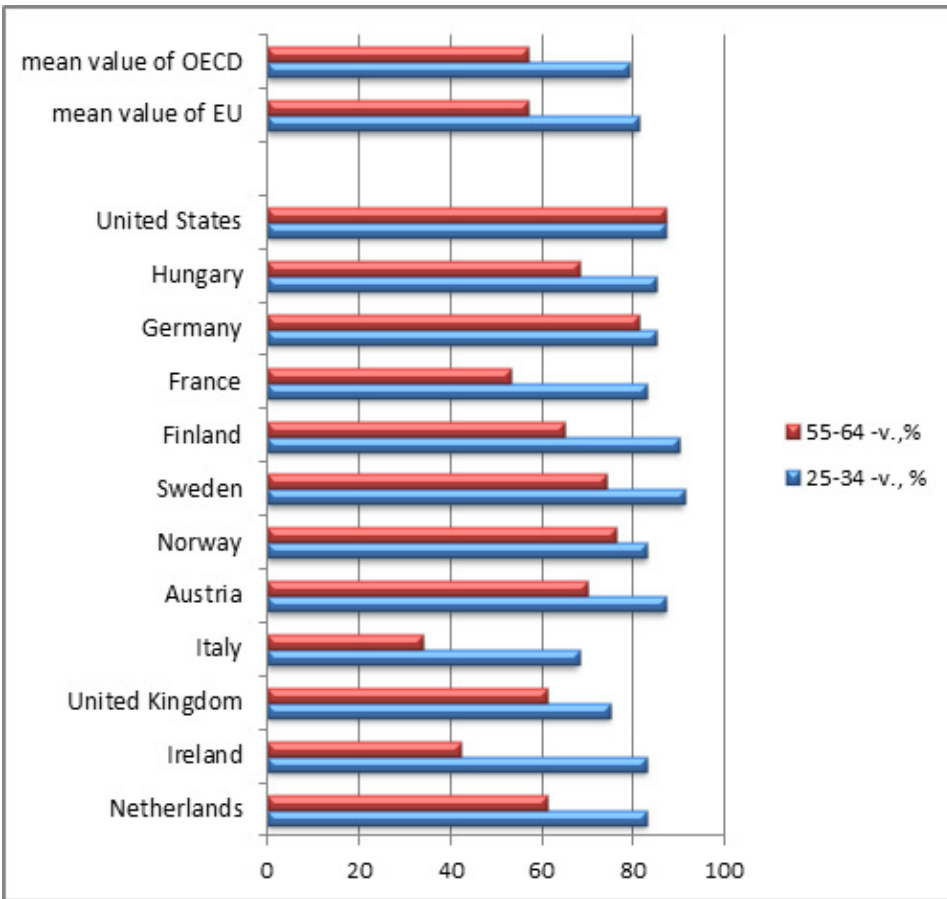
For young people it is important to experience the significance of life, for middle aged to cope with work, workday and economical stress, for ageing people to be able to retire in good health or to be able to continue at work and at last in older age to have normal health, friends and a good night sleep. In the age group of 60-69 people value good mobility, energy to cope with everyday life and concentration. In order to keep them working longer it is needed to organize work and retirement more flexible. Early rehabilitation, support for physical exercise and cultural interests are cost efficient ways to support health and welfare. (Vaarama etc. 2010, 135-143.) Work environment, practices and methods have to fit to different individuals, genders and generations. That is responsibility of supervision. Workers need to take care of their own personal health and living habits body and soul. Retirement should not be an age based solution but flexible system that makes it possible to find individual solutions. (Ilmarinen 2006, 412-430.)

5.3 Education and learning ability

Fast technological development creates pressures for ageing and older workers to step aside when retirement becomes possible. Workers with lower education might retire earlier than those with higher education. Lifelong learning and adult education are implements of society to improve competence and know-how of an individual. Ageing is no excuse to stop developing skills and knowledge. This might be rather stressful for those who just do not have that right enthusiasm for studying or learning. They might find it useless to start to practice new skills or develop new knowledge. And they have a right to think that way. Still, the idea of lifelong learning has spread all over our society. (Paloniemi 2007, 224.)

Learning does not depend on age but personal interests, motivation and skills. Pensioners are graduating and learning foreign languages even though these accomplishments do not improve their living standards any more. They consider education as a mental capital. And they have a chance to study just for fun without any external pressure or need. This might be the reason why some old people start to train new skills or take degrees - they don't need to but they can. And they also know that old dogs can learn new tricks! (Paloniemi 2007, 224.)

Educational differences between different generations are slowly becoming even but this generation gap still exists. So called all-round education (upper secondary school education) was five times more common in age group 20-24 years compared with people over 65 years. Internationally educational level of older Finnish workers (55-64 years) is in the middle level when in other age groups Finns are above the average of OECD (Picture 9). One solution to this lower educational level of older workers is occupational adult education. There are also quite remarkable regional differences in educational level in all age groups. South of Finland has significantly better educational level but also other university regions attract educated people. (Opetus- ja kulttuuriministeriö 2010.)



Picture 11. Share portion of people with secondary degree education or higher in 2007 (OECD 2010).

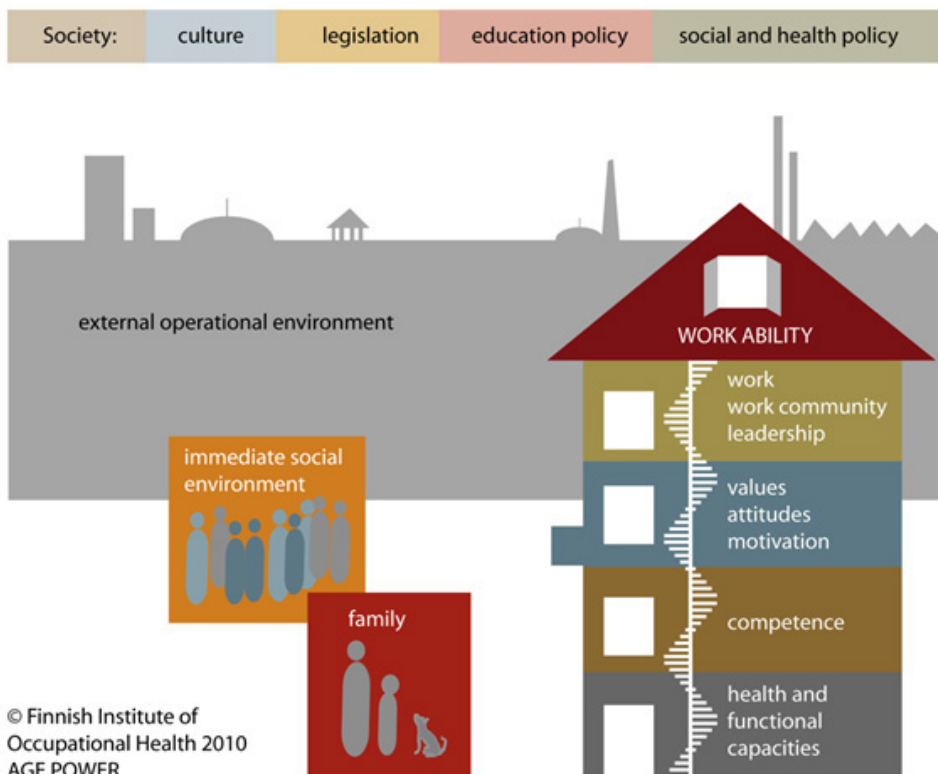
For ageing workers professional education might bring new work opportunities and tasks or more variable content of work. Personal and logical professional skills are replaced by potentiality formed by learning and readjustment. (Ilmarinen 1999, 270.) Those, who choose to work after retirement are mostly well-educated ageing men in good health. Among pensioners between 55-62 years, those who keep working are more likely in service or municipal sector. In that age group those who stay at work are more likely working in the industrial or in the private sector. (Palomäki & Tuominen 2010, 17.)

In the future ageing workers will be more educated. Lifelong learning is an integral part of European social well being and education is one way to improve employment in general. Even so, some employers in Finland are already worried that employees might get too educated. (Ilmarinen 2006, 165-166.) Also ageing workers might get tired of the flip-side of the continuous additional qualifying if that reveals accusatory and demanding atmosphere (Ruoholinn 2009, 300). Ageing may slow down the process of learning. Yet, learning is not dependent on a worker's age. An ageing worker can substitute deficiencies of speed and precision for higher motivation, experience and wisdom. (Ilmarinen 2006, 196.)

The risks of memory failures and problems increase by ageing but not only because of ageing. Learning and memorizing are complex cognitive processes where basic cognitive mechanisms are combined with motivation, goals and emotions and memory abilities may vary significantly between different individuals. By practicing cognitively demanding activities, physical exercise and developing stress coping strategies it is possible to maintain memory abilities and preserve crucial brain strategies though you are growing old. (Hess 2005, 400.) Older employees are able to learn new worklife skills if methods, motivation and atmosphere are appropriate. Actual and essential changes in learning occurs approx. after 75 years if one doesn't have any illness that affects on cognitive functions earlier. (Paloniemi 2007, 235.)

5.4 Work ability

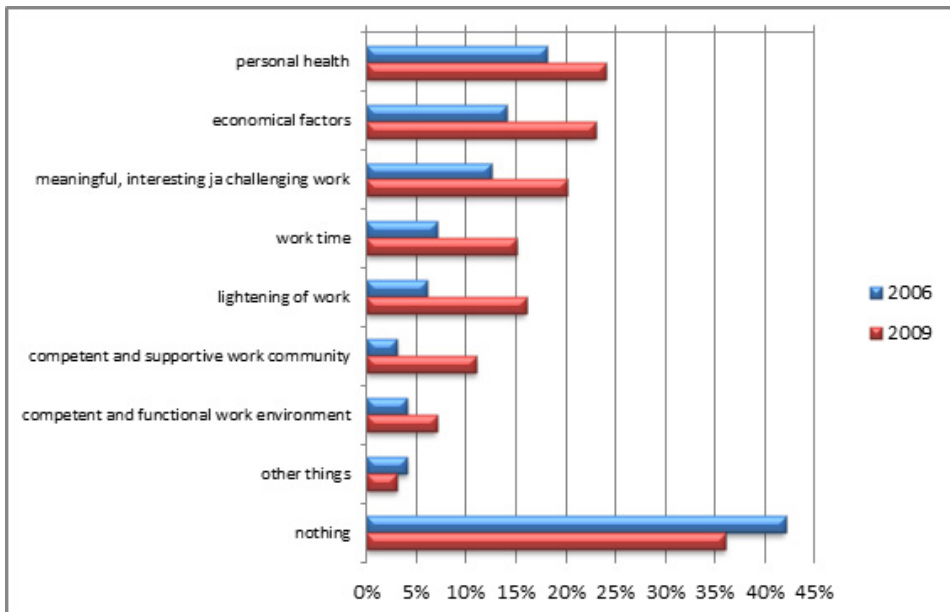
Workability is a feature of an individual but it includes all relevant factors of work. It is built on the balance between resources of a person and work demands. Workability is often described in the form of a building with several floors (Picture 10). Groundfloor is based on health and physical, psychological and social functional capacity. Developing professional knowledge and competence create the next floor. The third floor is formed by values, attitudes and factors that affect on work motivation. The fourth floor is formed by work, work community and leadership. The roof is formed by work ability. The building is situated in an external operational environment. The building is connected to the immediate social environment, family and society. Society is formed by culture, legislation, education policy and social and health policy.



Picture 12. Workability building has four floors that are connecting and interacting like staircase (Ilmarinen 2010).

Work and its related factors are situated on the fourth floor. As biggest and heaviest floor it applies pressure all the other floors. Lower floor are described as floors of resources and they need to be in balance with the work floor. Supervisors are responsible for the fourth floor and they can organize, develop and change workplace and work that needs to be done. Worker takes care of the resources floors. All the factors interact and continually change. Also factors outside of work affect workability. Family, community and even society reach to person's workability. (Ilmarinen 2006, 79-81.) Workability index is composed of total value of seven different parts and it can be classified as excellent, good, moderate or poor. Workability index can be used as an indicator of person's ability or disability for work. (Tuomi, Ilmarinen, Jahkola, Katajarinne & Tulkki 1998.)

Attitudes towards extension of a career are changing. Absoluteness of retirement is turning to consideration of staying at work longer bit by bit. Ageing workers seem to value matters related to content and flexibility of a work (Picture 11). Most optimistic are superior officials and entrepreneurs (Työterveyslaitos 2010, 269).



Picture 13. Things that would make ageing workers over 45 years to stay at work after 63 years. Most common prerequisites were personal health and economical factors. (Työterveyslaitos; Perkiö-Mäkelä etc. 2010.)

Turku University dissertation study in 2009 was examining the changes in the work and the work organizations of employees in the fields of health care and retail trade who have turned 45 and their experience of change. The interviewees felt that society favors the young. Older workers were transferred to other tasks or forced to be retired especially in the retail trade sector. Older employees valued meaningful content of

their work. Self-fulfillment is important for all of us and if it cannot be realized at work, it needs to be done off duty. That is one important reason why free time is so appreciated among older people. And more free time one gets through retirement or by developing various types of workplace flexibility. Only by developing the quality of working life it is possible to improve job satisfaction and get people to stay at work longer. (Ruoholinna 2009, 310-311.) Also attitudes towards ageing process itself and ageing workers need to change (Ilmarinen 2006, 400-402). Ageing is not just regression and giving up but also development, changes and possibilities. This needs to be realized by societies, work communities and ageing workers themselves.

6 AGE MANAGEMENT

Age management is a leading style that pays attention to whole human resources not only to older workers. The employer observes special needs of younger and older employees in different life situations. Organizations have created that kind of work culture where every employee can feel himself valuable based on observations made in everyday management. (Ilmarinen, Lähteenmäki & Huuhtanen 2003, 8.)

Both young and older employees can become exhausted but older workers need more time to recover. Weaknesses in management and frustrating work increase exhaustion in work. Distribution of a suitable work load is a very important task of a management in organization with workers of varying ages. (Ilmarinen etc. 2003, 66, 67.)

Route to well-being is based on strong, inner personal resources and challenging job which is guided with supportive work atmosphere. Organizations that want to support employees in work ability invest on management and cooperation between human resources. Increasing feedback and appreciation by management and superiors help employees get more experiences of success in working life. (Ilmarinen etc. 2003, 66, 67.)

6.1 Learning

Ageing is not a barrier for learning but it has an effect on ability and a way to receive and handle new information. When organization is educating older people it should pay attention to the things that are listed to table 4. (Ilmarinen etc. 2003, 130.)

Table 2. The main points when supporting older people's learning (Ilmarinen etc. 2003, 131).

Attitude	Connection to former information
Progress in own speed	Testing
Self-reflection	Consideration
Allowance of mistakes	Peaceful environment
Active learning style	Good atmosphere

Learning ability is affected largely by personal ageing and learning prejudices. Employer and colleagues should encourage one to participate in education and

also give support in learning situations. Criticism and competition are not suitable teaching tactics whereas relaxation is good for learning. A worker has to have enough time to learn and progress even if it means that work tasks need to be reorganized. In self-reflection man tries to understand experiences more deeply in order to get new perspectives of himself, his actions and work habits. (Ilmarinen etc. 2003, 131-133.)

In learning mistakes are acceptable and natural but it is also important to teach how man can avoid them. Active learning style means that an adult learner can experiment, discuss and communicate with others. By connecting new information to former knowledge and experience organization gets tacit knowledge for general use. (Ilmarinen etc. 2003, 131-132.)

It is important to test the learned information in work situations because with practice and experiment man gets reliability and trust to his know-how. Also peaceful, ergonomic environment and good atmosphere help especially older people to concentrate and pay attention. Avoiding uncomfortable experiences especially at the beginning reduces anxiety, and good review in the end of the education closes up the main subjects. (Ilmarinen etc. 2003, 132-133.)

In collaborative learning people try to understand or explain something together. Then they bring up new information that is their common discover. Vital issues in collaborative learning are for example same destination, shared expertise, knowledge building and problem-based learning where group of people changes the problem that they are solving to questions which they start to explore. (Collin, Korhonen, Penttinen & Vakiala 2003.)

Learning together in meetings and other discussions brings faster comprehensive picture and often helps learning. However this style of learning demands interaction and convenient atmosphere. One can learn from another and new employees can learn from workers that have been longer in organization and vice versa. (Toivonen & Asikainen 2004, 34-35.)

7 WE KNOW MORE THAN WE CAN TELL

People study and learn consciously in school and different kinds of courses. Many things can also be learned without actual studies for example important skills in working life like interaction skills, decision-making skills and ability to motivate. Un-conscious learning happens through work, experience, testing and reactions to different situations at work and by following experienced workers. In this way the learned skill goes to the tacit knowledge of an expert. Also the consciously learned skill is automated and comes to a tacit knowledge quickly. A person can do something without being able to explain how. (Toivonen & Asikainen 2004, 15-16.)

Philosophy Michael Polanyi started to build up an idea about a tacit knowledge in the 1940s. He searched for a meaning to the part of expertise which man can't describe to others. Polanyi's motto was "We know more than we can tell" and he invented a term tacit knowledge. (Toivonen & Asikainen 2004, 13.)

7.1 Flow of information

When communication between employees is fluent anyone can ask advice from other and man doesn't need to act anything. Communication in the organization is important so that the know-how for the tasks is not only in one employee's mind. Otherwise the service ability is not at its best and operations are not as flexible as they should be. The data transfer of know-how should be constant acting especially in the state of change or when employee leaves his job or his tasks are reorganized. Some methods in practice for the data transfer of know-how are listed to table 5. (Valtiokonttori 2007; Toivonen & Asikainen, 40.)

Table 3. Methods to transfer tacit knowledge and know-how (Valtiokonttori 2007).

Recruiting	Documentation
Mentoring	On-the-job learning
Development discussion	Person rotation
Exit interview	Participation to different kinds of projects

When the current employee is leaving the workplace, it is important to recruit new person early enough. Recruiting is also the way to reform the know-how and knowledge in organization. New persons bring new information and they get information from older workers. Mentoring means that the mentor transfers knowledge, visions and know-how to the new employee. He also supports in networking and making companionships. (Nygren 2003; Virtainlahti 2009, 130; Valtiokonttori 2007.)

In interviews and discussions employer gets a lot of information about employees and possible problems. Development discussions help evaluating the level of know-how, and in this way it's easier to make development plans. When the employment relationship is ending, it is also important to collect the valuable information about employee's experiences and opinions of work and organization in exit interview. (Virtainlahti 2009, 92; MRINetwork 2011.)

Documentation means that the stages and methods in work are documented so that anyone can read and learn about the task. On the other hand documentation is quite time-consuming thing to do. However by writing the tacit knowledge can be open both to its maker and to other members of organization. (Virtainlahti 2009, 94.)

On-the-job learning means that we learn actually much better by doing the job than by reading about it or watching a how-to video. In person rotation, employee moves to certain time in different mission which helps flexibility in work tasks and gives more professional experience. Employee can also learn much from others when participating to projects. Same courses of action and the same target support the flow of information. To achieve the target group needs everyone's knowledge and know-how. (Dexter 2004; Valtiovarainministeriö 2011; Virtainlahti 2009, 119.)

8 AGE-FRIENDLY WORK COMMUNITY – CASE ABLOY

Abloy Oy is one of the leading manufacturers of locks, locking systems and architectural hardware and the world's leading developer of products in the field of electromechanical locking technology. Abloy Oy has been a forerunner among industrial companies in developing its quality and environmental systems. (Abloy Oy 2010.)

Abloy serves customers in more than 70 countries in all continents worldwide. Abloy's vision is to be an attractive company to its employees, and there are several areas of action within this commitment. (Abloy Oy 2010.)

Abloy has a program for occupational health and safety, and the risks are strictly controlled. The program is led by Abloy's own health clinic and security and safety manager together with a designated working group. All new employees undergo a training program, which includes the Code of Conduct. Abloy has a program for equality between male and female employees. (Abloy Oy 2010.)

8.1 The background for The Age Masters program

Finland had an exceptional baby boom after the Second World War. With fewer young people entering the workforce, looming labor shortages and no tradition of immigration Finland tries to extend working lives. (Krohns & Hirvola-Kostamo 2010.)

Organizations find themselves in a situation where they don't have enough young people to replace over 50-year-old workforce and their skills and knowledge. This becomes a challenge for several companies. In order to address the issue, Abloy Oy has developed a program called The Age Masters. (Krohns & Hirvola-Kostamo 2010.)

8.2 Abloy's Age Masters program

The starting point to this program was to control the challenges of aging in working life and assignment of professional experience. In year 2000 the age structure in Abloy was like a two-humped camel, employees were both young, 25-30 years old and elderly people, 50-60 years old. But there were evidently less employees between those ages. (Krohns & Hirvola-Kostamo 2010; Miettinen 2010.)

In 2001 was started The Age Masters program. It is aimed to keep employees sounder and longer in working life. The goal is to improve the working ability and well-being, to reduce sick days, to raise average age of retirement and to enhance the respect of age masters. The program is also meant to assure the transition of experiential tacit knowledge to younger employees. (Krohns & Hirvola-Kostamo 2010; Miettinen 2010.)

The standard practice is that after employees are 55, they get into The Age Masters program. Within the program is arranged collective education and recreation. Ageing seminars, for example about healthy lifestyle and free use of special fitness clubs for older people are also part of the program. After 59 age masters start to receive additional days off as long as they have done their personal fitness tests offered by Abloy. At the beginning there are six days off per year. The number of day-offs increases with the age. The maximum number is fourteen days off per year. (Krohns & Hirvola-Kostamo 2010; Miettinen 2010.)

8.3 Results of the Age Masters program

Abloy's Age Masters program is an excellent example of the fact that an aging employee is dignified to work community. The results of this Age Masters program have been very convincing. The age of retirement in Abloy has climbed from 59,5 years to over 62 years in this period. Abloy's company doctor has heard from age masters that they feel that their control over their own life has improved. The time that the aged employees spend outside work isn't totally spent on resting. They also have energy for hobbies. In other words the quality of working life and the quality of personal life has improved. (Krohns & Hirvola-Kostamo 2010; Miettinen 2010.)

In Abloy they think that it is not just the case of the days off. The employees experience that they are respected when they are given this kind of attention. All this improves professional self-respect and thus it is easier to share knowhow. Through the Age Masters program Abloy has also received positive international media coverage, for example in newspapers, such as The Financial Times. (Krohns & Hirvola-Kostamo 2010; Miettinen 2010.)

In the future, one important target for the Age Masters program is to improve the transfer of tacit knowledge. Older employees have accumulated knowledge and skills through their working experience and transferring that knowledge to their younger colleagues will be a crucial success factor for the company. (Krohns & Hirvola-Kostamo 2010; Miettinen 2010.)

9 SUMMARY

Finland is going through a change of population structure. Change is inevitable and all must carry their load, the Finnish people themselves, companies and organizations and also the politicians. As a welfare country Finland is committed to make sure the economy is in balance and growing. The age structure obligates to make changes in Finland that in the future working generations can succeed. Although many things are on the right path more major changes need to be done to avoid financial and employment issues. Unemployment and skills that are required to be able to work efficiently must be passed on to the next generation of workers. The Finnish board should support aging workers if an organization cannot handle the situation.

Ageing workers wellbeing could have a common guide for employers how to cope and how to handle different situations in small businesses and in large organization. Human resources management could make changes in ageing workers welfare to gain most efficient work results. Providing a better system to pass on knowledge and know-how to those workers who are lacking the necessary experience in work life is important.

Finland needs workers to keep on working without compromising the wellness of ageing workers. Occupational healthcare, co-operation among workers and employers, healthy and positive encouraging working environment, social relationships, financial benefits for longer work life and good salary can help elderly people want to work longer. Balancing work and free time, hobbies, family and their support can also be a source of motivation.

Age programs as in Abloy Oy should be more common in work life and individual human resources should be respected and developed throughout work life to make sure that from the beginning of career one is be able to sustain strength, interest and learning ability. Extra days off after a certain age limit could help some people to carry on working harder and longer. An individual himself should also take care of his own wellbeing, health and strength both mentally and physically. Nutrition, exercise, rest, social life and emotions are essential parts of one's wellbeing and endurance both in private and working life.

A successful working environment is able to provide individual solutions for workers in their different phases of life. Workers should be treated as individuals who have different strengths and weaknesses not as a crowd where everyone is similar to others. Everyone should have an opportunity to work in his own level with his own abilities. Possible problems related to ageing could be avoided with general and individual responsibility and effective actions. And there we need cooperation and devotion of employers and employees, management and subordinates, young and old. It is in all our interest that we are healthier, feel better and stay active a bit longer. Then we can turn the problem into a solution.

Conclusion

This multidisciplinary intensive program on ageing in Europe has brought together students and lecturers from several countries and disciplines. The common goal of the MEP- group has been to study the phenomena of ageing in Europe. In addition we wanted to review and analyze the solutions that have been used to tackle the problems that a rapidly ageing population is causing in various European countries.

The material of this book has been presented at the Lille Intensive Program to the participants. The participants came from France, Portugal, Spain, Belgium, Latvia and from Finland two Universities of Applied Sciences; North Karelia and Kemi-Tornio.

The Finnish social systems, especially the pension system, received a lot of interest and were praised for their effectiveness and sustainability. Those who have difficulties in financing their normal needs have a right to have a guarantee pension of 680 euros. This enables the Finnish citizens to a life of dignity. They have a right to receive indispensable subsistence and care.

The intensive program proved out to be very educative and enlightening. We learned about the social security and health care systems in the participating countries. In the oncoming years as the program continues we shall deepen our knowledge about the basic and human rights and about the basic values generally accepted on a constitutional level in the participating countries.

REFERENCES

- Abloy Oy. 2010. About Abloy. <http://www.abloy.com/en/abloy/abloycom/About-ABLOY/>. 22.1.2011.
- Collin, J., Korhonen, K., Penttinen, L. & Vakiala, V. 2003. Yhteisöllinen oppiminen. <http://www.tutkiva.edu.hel.fi/yhteiso.html>. 30.1.2011.
- Commission of the European Communities, 2008, Commission Staff Working Document Demography Report 2008: Meeting Social Needs in an Ageing Society http://www.libertysecurity.org/IMG/pdf_Full_report_Annex__Demo2008.pdf. 31.5.2011
- Dexter, R. 2004. Learning on the Job. http://www.rondexter.com/film_business/learning_on_the_job.htm. 28.1.2011.
- Eläketurvakeskus. 2006. Yksityisen sektorin työeläkeuudistus: keskeiset muutokset ja arviointia niiden vaikutuksista. <http://www.etk.fi/Binary.aspx?Section=4210&Item=25720>. 30.1.2011.
- Eläketurvakeskus. 2008. Eläkeuudistuksen kolmas vuosi. <http://www.etk.fi/Binary.aspx?Section=40904&Item=61655>. 21.2.2011
- Eläketurvakeskus. 2010. Tilasto Suomen eläkkeensaajista 2009. <http://www.etk.fi/Binary.aspx?Section=42108&Item=64972>. 24.1.2011.
- Eläketurvakeskus. 2011. Eläkkeellesiirtymisikä nousi yli 60 vuoden. <http://www.etk.fi/Page.aspx?Section=40904&Item=65122>. 30.1.2011.
- Eläketurvakeskus & Työeläkevakuuttajat TELA. 2011. Fakta eläkkeen laskemisesta. <http://www.etk.fi/Binary.aspx?Section=41246&Item=19382>. 1.2.2011.
- Eläkkeensaajien keskusliitto EKL ry. 2011. Eläkeläisten tulotaso ja toimeentulo Suomessa. http://www.elakkeensaajat.fi/elakepolitiikka/elakejarjestelma/elakelaisten_tulotaso_ja_toimeen/. 13.2.2011.
- Eurostat. 2011. Employment rate by gender. <http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&language=en&pcode=tsiem010&tableSelection=1&footnotes=yes&labeling=labes&plugin=1>. 22.1.2011.
- Eurostat Press Office. 2010. Labour Force Survey. http://epp.eurostat.ec.europa.eu/cache/ITY_PUBLIC/3-04082010-BP/EN/3-04082010-BP-EN.PDF. 22.1.2011.
- Hakola, T. & Määttä, N. 2007. Vuoden 2005 eläkeuudistuksen vaikutus eläkkeelle siirtymiseen ja eläkkeisiin: Arviointia stokastisella elinkaarimallilla. Helsinki: Hakapaino Oy.
- Helakorpi, S., Laitalainen, E. & Uutela, A. 2010. Suomalaisen aikuisväestön terveyskäyttäytyminen ja terveys, kevät 2009. Terveystieteiden tutkimuskeskus ja hyvinvoinnin tutkimuskeskus. <http://www.thl.fi/thl-client/pdfs/ce5ee5c1-6df4-44c2-bcd7-c3b735019570>. 28.2.2011.

- Hess, T. 2005. Memory and Aging in Context. American Psychological Association. <http://www.ncsu.edu/psychology/graduate/conc/develop/adultdevelopment/docs/research/pubs/moodmem/Hess-%282005%29.pdf>. 13.2.2011.
- Huikuri, N. 2009. Suomen työeläkejärjestelmä. Eläketurvakeskus. <http://www.etk.fi/Page.aspx?Section=40896&Item=63645>. 26.1.2011.
- Ilmarinen, J. 1999. Ikääntyvä työntekijä Suomessa ja Euroopan Unionissa : tilannekatsaus sekä työkyvyn, työllistävyyden ja työllisyyden parantaminen. Helsinki: Työterveyslaitos.
- Ilmarinen, J. 2006. Pitkää työuraa! Ikääntyminen ja työelämän laatu Euroopan unionissa. Jyväskylä: Gummerus Kirjapaino Oy.
- Ilmarinen, J. 2010. Towards a longer Worklife! Ageing and the quality of worklife. Finnish Institute of Occupational Health. <http://www.blikopwerk.nl/wai/Work-Ability-Index/Kennis-delen/Kennis-delen-Publicaties/Conferentie-De-Kracht-van-Werkvermogen/presentatie-professor-Ilmarinen---FIOH.pdf>. 6.3.2011.
- Ilmarinen, J., Lähteenmäki, S. & Huuhtanen, P. 2003. Kyvyistä kiinni: ikäjohtaminen yritysstrategiana. Helsinki: Talentum Media Oy.
- Kannisto, J. 2010. Vuonna 2009 uusia eläkeläisiä ennätysmäärä. Eläketurvakeskus. <http://www.etk.fi/Binary.aspx?Section=40904&Item=64576>. 22.1.2011.
- Kannisto, J. 2011. Eläkkeellesiirtymisikä vuonna 2010. Eläketurvakeskus. <http://www.etk.fi/Binary.aspx?Section=40904&Item=65118>. 21.2.2011.
- Kela. 2011. Takuueläke. Kansaneläkelaitos. <http://www.kela.fi/in/internet/suomi.nsf/NET/230810102229HN>. 27.2.2011.
- Keva. 2010a. Eläkkeet iän perusteella. http://www.keva.fi/fi/elakkeet/elakkeet_ian_perusteella/Sivut/Default.aspx. 28.1.2011.
- Keva. 2010b. Vanhuuseläkkeelle joustavasti 63–68-vuotiaana. http://www.keva.fi/fi/elakkeet/elakkeet_ian_perusteella/vanhuuselake/Sivut/Default.aspx. 28.1.2011.
- Keva. 2010c. Varhennettu vanhuuseläke. http://www.keva.fi/fi/elakkeet/elakkeet_ian_perusteella/varhennettu_vanhuuselake/Sivut/Default.aspx. 28.1.2011.
- Keva. 2010d. Osa-aikaeläke. http://www.keva.fi/fi/elakkeet/elakkeet_ian_perusteella/osa-aikaelake/Sivut/Default.aspx. 28.1.2011.
- Korpiluoma, R., Alaluusua, A., Heinonen, R., Kaarre, S., Kekäläinen, J., Kouvonen, K., Lilius, S., Mustonen, P., Perälehto-Virkkala, A., Takanen, M. & Tuomikoski, J. 2006. Työeläke. Sulkava: Finnreklama Oy.
- Krohns, S. & Hirvola-Kostamo, E. 2010. Abloy's Age Masters program. Abloy Oy.
- Miettinen, A. 2010. Ikämestarin opissa. Viikko Pohjois-Karjala. <http://www.demari.fi/content/view/13374/344/>. 30.1.2011.
- MRINetwork. 2011. Lähtöhaastattelu – arvokas tieto talteen. <http://www.mriselect.fi/index.php?id=94>. 21.1.2011.

- Nygren, K. 2003. HKR-Tekniikan ikäohjelma 2004-2006. HKR-Tekniikka. www.hozen.fi/aineistoa/Ikaohjelma.doc. 28.1.2011.
- OECD. 2010. Tertiary education entry rates. http://www.oecd-ilibrary.org/education/tertiary-education-entry-rates-2010_20755120-2010-table2. 11.1.2011.
- Opetus- ja kulttuuriministeriö. 2010. Suomen väestön koulutustason vahuudet ja heikkoudet. http://www.minedu.fi/export/sites/default/OPM/Julkaisut/2010/liitteet/okmpol03.pdf_1924203533.pdf. 11.1.2011.
- Palomäki, L-M. & Tuominen, E. 2010. Työssä käyvät eläkeläiset - erot muihin työssä käyviin ja eläkkeellä oleviin. Eläketurvakeskus. <http://www.etk.fi/Binary.aspx?Section=42845&Item=64711>. 28.2.2011.
- Paloniemi, S. 2007. Ikääntyneiden oppiminen ja oppimisen ohjaaminen. In Collin, K. & Paloniemi, S. (toim.) Aikuiskasvatustieteessä ja toimintakenttänä. Jyväskylä: PS-Kustannus, 221-236.
- Perkiö-Mäkelä, M., Hirvonen, M., Elo, A-L., Kandolin, I., Kauppinen, K., Kauppinen, T., Ketola, R., Leino, T., Manninen, P., Miettinen, S., Reijula, K., Salminen, S., Toivanen, M., Tuomivaara, S., Vartiainen, M., Venäläinen, S. & Viluksela, M. 2010. Työ ja terveys -haastattelututkimus 2009. Työterveyslaitos. http://www.ttl.fi/fi/verkkokirjat/tyo_ja_terveys_suomessa/Documents/tyo_ja_terveys_haastattelututkimus_2009.pdf. 12.2.2011.
- Ruoholinna, T. 2009. Ikääntyvät työelämässä: Päihittääkö nuoruus ja koulutus aikuisuuden ja kokemuksen? Turun yliopisto. <http://www.doria.fi/bitstream/handle/10024/50502/AnnalesC288Ruoholinna.pdf?sequence=1>. 28.2.2011.
- Sutinen, L. Assembler & device locking. Abloy Oy. Interview 24.1.2011.
- Tilastokeskus. 2009a. Väestö iän ja sukupuolen mukaan 2010, ennuste 2009. http://www.stat.fi/til/vaenn/2009/vaenn_2009_2009-09-30_kuv_001_fi.html. 20.1.2011.
- Tilastokeskus. 2009b. Väestö iän ja sukupuolen mukaan 2030, ennuste 2009. http://www.stat.fi/til/vaenn/2009/vaenn_2009_2009-09-30_kuv_002_fi.html. 20.1.2011.
- Tilastokeskus. 2009c. Väestö iän ja sukupuolen mukaan 2050, ennuste 2009. http://www.stat.fi/til/vaenn/2009/vaenn_2009_2009-09-30_kuv_003_fi.html. 20.1.2011.
- Tilastokeskus. 2009d. Väestä ikäryhmittäin koko maa 1900–2060 (vuodet 2010–2060: ennuste). http://www.stat.fi/til/vaenn/2009/vaenn_2009_2009-09-30_tau_001_fi.html. 20.1.2011.
- Tilastokeskus. 2009e. Väestöllinen huoltosuhde 1950-2009 ja ennuste 2010-2050. http://www.stat.fi/til/vaerak/2009/01/vaerak_2009_01_2010-09-30_kuv_002_fi.html. 20.1.2011.
- Tilastokeskus. 2010a. Syntyvyys korkein 40 vuoteen. http://www.stat.fi/til/synt/2009/synt_2009_2010-04-15_tie_001_fi.html. 20.1.2011.
- Tilastokeskus. 2010b. Työllisyys kääntyi laskuun. http://www.stat.fi/til/tyti/2009/17/tyti_2009_17_2010-12-03_kat_002_fi.html. 20.1.2011.

- Toivonen, V-M. & Asikainen, R. 2004. Yrityksen hiljainen osaaminen - kehittämisen uusi taso. Helsinki: ai-ai OY.
- Tuomi, K., Ilmarinen, J., Jahkola, A., Katajarinne, L. & Tulkki, A. 1998. Työkykyindeksi. Helsinki: Työterveyslaitos.
- Uusitalo, H. 2011. Työurat pidemmiksi - miksi? Eläketurvakeskus. <http://etk.fi/Binary.aspx?Section=40904&Item=65119>. 1.2.2011.
- Uusitalo, H., Kannisto, J. & Tuominen, E. 2008. Eläkeuudistuksen kolmas vuosi. Eläketurvakeskus. <http://www.etk.fi/Binary.aspx?Section=40904&Item=61655>. 26.1.2011.
- Vaarama, M., Moisio, P. & Karvonen, S. 2010. Suomalaisten hyvinvointi 2010. Helsinki: Terveyden ja hyvinvoinnin laitos.
- Valtiokonttori. 2007. Osaamisen siirtäminen. <http://www.valtiokonttori.fi/public/default.aspx?nodeid=16586>. 21.1.2011.
- Valtioneuvoston kanslia. 2004. Väestön ikärakenteen muutos ja siihen varautuminen. Helsinki: Valtioneuvoston kanslia.
- Valtiovarainministeriö. 2011. Henkilökierto ja virkamiesvaihto. http://www.vm.fi/vm/fi/12_Valtio_tyonantajana/15_Henkilostovoimavarojen_johtaminen/05_Henkilokierro_ja_virkamiesvaihto/index.jsp. 21.1.2011.
- Virtainlahti, S. 2009. Hiljaisen tietämyksen johtaminen. Helsinki: Talentum Media Oy.
- Voutilainen, J. Tester & construction locking. Abloy Oy. Interview 24.1.2011.

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Lifelong Learning Programme



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MEP
MULTIDISCIPLINARY EUROPEAN PROGRAM
BY A LILLE 1 UNIVERSITY YLLERREVE (FRANCE)



NORTH KARELIA
UNIVERSITY OF APPLIED SCIENCES

This publication has been written by the Finnish student group that participated in an Erasmus funded intensive program, Multidisciplinary European Program, in Lille, France in spring 2011 with the guidance of lecturer Pertti Laitinen. The book includes the main issues of the program, ageing, from the perspective of the Finnish economy and working life from a wide perspective. The populations of most European countries are becoming predominantly populated by elderly people. The European states and municipalities face many types of challenges, which range from economical to social and ethical. Starting from a multidisciplinary and multicultural basis, the aim of partner institutions has been to review the current ways of dealing with ageing in order to try and work out a distinctly European approach of the subject-matter, which would be based on sustainability and active citizenship.

The program has included students of different disciplines, belonging to different types of curricula, coming from a variety of countries. The working methods used during the IP have been student-activating methods. Problem-based learning is used for the definition of the problem, for the review of the different approaches, and for the gathering of relevant data. The work of students and lecturers continue in the participating Universities and in the intensive program workshops in Portugal in 2012 and Finland in 2013.

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