



## Training Course Development Activity 1, Analysis

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## Abstract

This is a desktop research into Slovenian older adult education and ICT training, the state of art in the field in 2017. The aim of this research is to establish whether, and to what extent if at all, teaching coding to older people or learning coding in older people have been present in this country. The first chapter offers a country profile. Different aspects of Slovenia are approached. The second chapter is about the state of art in education of older people in the field of ICT and the third part describes a survey conducted on older people, their ICT skills and coding abilities.

## Keywords

*Older people, ICT skills, digital divide, coding, older adult education, Slovenia, Slovenian Third Age University.*

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## 1. PROFILE OF THE REGION / COUNTRY

Population	2 000 000
Population in 2010 (projection)	2 000 000
Mean age:	41.8.
Fertility rate	1.31
Share of people over 65	17.9%
Area	20,273 sq km
Language:	Slovene
Major religion:	Catholic
GDP	18.400

### 1.1. History

To many still *terra incognita*, once one of the lands of the Habsburg monarchy, and later from 1945 to 1991 one of the six Yugoslav republics, Slovenia is today categorised either as *Southern Central European* or *Eastern European* country. Slovenia has been transformed quite noiselessly from a communist to a democratic country. In 1989 the old communist leadership assumed itself this reform movement. In June 1991 Slovenia became the first Yugoslav republic to declare its independence. The military confrontation lasted only ten days.

### 1.2. Geography

Slovenia borders on Italy in the West, Austria in the North, Hungary in the North and East and Croatia in the South and East. The country's dimensions are roughly 300 km from East to West and 200 kms from North to South. The capital Ljubljana is the country's geographic centre. Practically all of the country's transportation structure intersects in the capital.

### 1.3. Economy

The course adopted by the Government was less market oriented, than Social Democratic in nature and it included strong labour union influence and a large measure of government involvement in the economy. Today, however, like many European countries Slovenia is indebted (in 2007 27% of the GDP) and the government has been withdrawing its presence from large companies including banks due to the fact that they were sold out and passed into "private hands".

*GDP per capita* was in Slovenia 18.400. (Source: EUROSTAT)

The GDP in 2016 the level of GDP per capita was between between 10 % to 20 % below the EU-28 average.

*Its price level* is 20% below the average of the 28 EU countries. (Source: Eurostat-OECD Purchasing power parities)

Thanks to the high productivity and know-how of its workers Slovenia has attracted German, French, Austrian, Croatian and other companies and some 300 German companies market their products in Slovenia. Germany is still Slovenia's the most important partner.

*The employment rate of older people* is still among the lowest in EU-28 due to cultural reasons and limiting labour legislation.

## 1.4. Population

Besides its population of 2. 000 000 Slovenia has also large minorities in Austria, Italy nad Hungary.

Slovenian people do not marry easily, the number of married couples is around 30% and the lowest in EU. The fertility rate has always been low (now 1.36) even in the baby boom era in 1950 it never rose above 2.6. The Slovenes tend to be very sedentary, and since 1990 there have been no major outward migration flows.

The population is growing older: the mean age of the total population was 38,8 years in 2000, in 2011 it increased to 41,8 years, the mean age has increased by 3 years over last eight years. In 2011 the mean age of men was 40,2 years; of women 43,4 years (Slovenia in Figure 2012). Population older than 65 accounts for 17.9%.

*Life expectancy at birth* is getting higher, due to improved health and social conditions. A female born in 2011 can be expected to live 82,9 years, a male born in the same year can be expected to live 76,6 years. A man who was 65 years old in 2007 could expect to live for 16.0 years more (Older people in Slovenia 2011; Prebivalstvo 2008-2060, Prebivalstvo 2012)

*Immigration form the South* used to compensate for low fertility and the natural population losses (more deaths than births. The area around Ljubljana has been experiencing high levels of immigration.

## 1.5. Education

Slovenia will have to take a path of knowledge based society. More will have to be invested in education and research. Having ranked highly in the past, alongside the Scandinavian countries, Slovenia cut its investment in education significantly in 2014. The employment rate of tertiary educated graduates , at 84.4 % is around the EU average of 84.1.

The tertiary education attainment rate has continued to grow in Slovenia: in 2015 43.4% of 30-34 year-olds had obtained a tertiary-level qualification, this being above the EU average of 38.7 in the same year and the national Europe 2020 target of 40%. (Canadian rate is 75%!) Access to higher education in Slovenia is helped by the absence of tuition fees, but nevertheless there are structural differences in participation in higher education. Women are much more likely to have graduated from higher education than men. The gender gap is the second widest in the EU, with 56.4% of women but only 44,6 % of men attaining tertiary education degrees.

### Participation in adult education

Participation in adult education, in 2015 at 11.9% , is above the EU average of 10.7 % , but it has been gradually declining since 2010 when it was 16.4%. There is a substantial discrepancy in the participation rate between high and low qualified adults.

During the Slovenian Presidency Slovenia suggested that relationships among generations should be supported in European Union. Later *Euro Flash Barometer On Solidarity Between Generations* revealed that relationships among generations *were* a problem in European Member States, older generations being considered as a burden to younger generations. Nevertheless, the concept of intergenerational education and the concept of intergenerational learning have been in existence and researched in Slovenia for at least two decades and intergenerational relationships were dealt with in legal documents due to the efforts made mostly by the Anton Trstenjak's Institute in Ljubljana. Intergenerational learning has been recently supported by governmental decision.

Table 1: Proportion of inhabitants involved in adult education, formal and non-formal or both types

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Country	LFS - 2011			AES-2011			PIAAC-2011		
	Formal + Non-formal	Formal	Non-formal	Formal + Non-formal	Formal	Non-formal	Formal + Non-formal	Formal	Non-formal
Austria	13.4	3.8	10.3	48.2	5.9	45.5	47.8	6.3	45.5
Belgium	7.1	2.4	4.8	37.7	7.4	33.1	48.3	7.8	45.5
Bulgaria	1.3	1.2	0.2	26.0	2.4	24.4			
Croatia	2.3	2.0	0.4						
Cyprus	7.5	2.0	5.7	42.3	3.7	40.9	37.8	5.9	36.6
Czech Republic	11.4	2.2	9.5	37.1	3.7	34.9	51.5	11.8	52.7
Denmark	32.3	6.1	27.9	58.5	12.6	52.7	65.6	14.1	61.0
Estonia	11.9	4.7	7.8	49.9	6.6	48.0	52.1	9.2	49.9
Finland	23.8	8.6	16.7	55.7	12.0	51.3	65.4	15.1	61.0
France	5.5	0.7	4.9	50.5	3.5	49.1	36.8	7.4	35.3
Germany	7.8	3.0	5.1	50.2	3.8	48.5	52.4	6.6	49.7
Greece	2.4	1.5	1.0	11.7	2.6	9.6			
Hungary	2.7	1.8	1.0	41.1	6.5	37.6			
Ireland	6.8	4.0	3.0	24.4	6.7	18.7	50.8	15.5	45.2
Italy	5.7	2.6	3.2	35.6	2.9	34.3	27.5	11.4	27.3
Latvia	5.1	2.1	3.1	32.3	4.3	30.0			
Lithuania	5.7	2.1	3.7	28.5	4.0	25.9			
Luxembourg	13.6	2.6	11.4	70.1	9.9	68.0			
Malta	6.4	2.1	4.8	35.9	4.4	34.2			
Netherlands	16.7	7.1	9.6	59.3	12.3	54.8	63.9	14.3	59.9
Poland	4.4	2.8	1.8	24.2	5.4	21.0	35.0	7.6	32.0
Portugal	11.0	5.8	5.9	44.4	10.4	39.6			
Romania	1.6	1.1	0.5	8.0	1.4	6.9			
Slovakia	3.9	1.8	2.1	41.6	5.8	38.3	32.9	5.8	30.7
Slovenia	15.9	7.1	9.8	36.2	2.3	34.7			
Spain	11.0	2.9	8.3	37.7	7.0	34.1	46.0	12.5	41.8
Sweden	24.9	6.5	20.2	71.8	13.5	67.0	64.9	12.7	60.5
United Kingdom	15.8	5.2	13.4	35.8	14.8	24.2	55.7	15.5	50.8

## Older people's completed formal education and skills

According to the data from 2004, 35,2% of *older adults* had completed primary school, 27,2% had completed vocational school studies, 22,1% high school and 15,5% completed university studies. (ibid).

Their skills however are not age related but are more related to the social roles they have played lifelong, to their life transitions, normative and non-normative events they have had to cope with, to the problems and issues they have had to resolve, to their marital status, etc. They may have more social skills than younger generations, more and different communication skills, more skills related to domestic situations, etc.

According to EUROSTAT data Slovenia ranks second in Europe as concerns *older adult education* and has many educational providers: NGO's , public institutions, cultural institutions, private companies, municipalities. Slovenian Third Age University introduced non-formal older adult education in 1984, the first of its kind on the territory of ex-Yugoslavia and particularly in Slovenian. The same year older students' computer skills started being developed.

For some older people it is difficult to cope with the modern way of living with the widely spread use of all kinds of constantly changing sophisticated technical equipment (from cars and computers, to mobiles, audio-visual equipment and all kinds of automata in public places). Ownership of cars and of audio-visual equipment (besides colour TV) is among the dimensions which discriminate best between employed persons and pensioners (Novak, 1998). As a consequence, in their everyday life, they turn to simpler ways, thus excluding themselves from the mainstream of society.

## ICT skills: enhancing digital competencies

The OECD Survey of Adult Skills (PIAAC) showed that the youngest generation (16-24) had significantly higher numeracy and literacy skills than any other generation. It also revealed the difference between the skills levels of the youngest and the oldest is one of the widest across the OECD countries (39.3 score points in numeracy against 27.7 across the OECD) (OECD 2016).

Enhancing digital competences to exploit the potential of information and communication technologies (ICT) is a key priority under the Europe 2020 strategy. In its flagship initiative 'Digital Agenda for Europe' the lack of digital literacy and skills is seen as 'excluding many citizens from the digital society and economy. It is also holding back the large multiplier effect of ICT take-up on productivity growth'. An analysis of European citizens' computer and Internet skills is provided in the 'R&D and innovation' article. Key objective of all educational systems is to equip people with a wide range of skills and competences. This encompasses not only basic skills such as reading and mathematics, but also more transversal ones such as information and communication technology (ICT) and entrepreneurship.

In January 2016 the Ministry of education RS developed a new *Strategy for information and communication technology (ICT) in education up to 2020*. The document covers all levels of education and was harmonised with the Government's broader ICT strategy, Digital Slovenia, adopted in March 2016. Priority goals include developing didactics using ICT and e-material, increasing the use of platforms and cooperation in learning; developing e-competencies: computerising educational institutions including ICT support in administrative management; e-studying in higher education and adult education ; and evaluation of digitisation.

## 2. OVERALL SITUATION AND TRENDS IN DIGITAL INCLUSION

### 2.1. Introduction

If older people are not included in society, if the level to which their lives are interconnected with the lives of others is low, they are said to be socially excluded. If older people do not use new technologies on a daily basis while others do, they are said to suffer from *digital exclusion*, though they have access to broadband internet at home or in public places. In both cases they are out of the social mainstream.

There is no clear agreement in this country as to *what social inclusion/exclusion and digital inclusion/exclusion really are*. Researchers, however, who are interested in the modes of social participation, have to be necessarily interested in the phenomena of social and digital exclusion. It is not enough that older people are knowledgeable and have computer skills, if older people are not technologically interconnected with the lives of others.

There is a growing *digital divide* among generations and social groups. The more digital support younger generations get, the greater is the digital divide among generations, which is exactly what we would like to alleviate in this Silver Code project.

### 2.2. Older adults (60+) and Internet. Access to Internet

Ever more households have access to the Internet. Reasons for this are mainly younger members of the household. Young people daily use Internet for social networking, entertainment, education etc. Data show that many older people, especially 74+, neither have a computer, nor do they have access to the Internet (Information Society 2012).

Table 2: Reasons for households being without an Internet access from home (Information Society 2012)

Households without an Internet access from home	2011	2012
Access to Internet from somewhere else	14	15
Not feeling the need of Internet	62	70
Equipment costs exceedingly high	49	53
Access costs too high	50	48
Lack of skills	63	57
Privacy or security concerns	26	28
Broadband Internet connection not available	12	8
Physical disability	3	9

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Other reasons

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Source: Information Society 2012

## 2.3. Alternative access to Internet

Older people have a lot of other public possibilities of access, especially in libraries, seniors' clubs, the third age universities, lifelong learning centres and self-study centres. They could use the Internet daily in these organisations. In third age universities, lifelong learning centres and self-study centres older people have also technical and expert support.

## 2.4. The use of Internet

Thomas et al. (2007) introduced the concept of "trans-literacy", which is defined as "the ability to read, write and interact.« There is a growing belief that e-skills are crucial for individual's education, work, (and society in general), and for accessing to e-government services (e.g. e-government, e-banking, e-shopping, e-learning). An e-literate citizen is capable of digital communication, using modern technology and digital tools, in particular, quickly and efficiently locating, processing and using information. (E-kompetentni državljani Slovenije danes in jutri 2011).

Slovenia ranks average among EU countries as concerns the use of the ICT services. RIS research has shown that in 2010 the Internet was used by 72 % of the population, but Slovenia is far behind the EU average in Internet use by the retired and inactive. (E-kompetentni državljani Slovenije danes 2011).

"Data for Slovenia have shown that there are 68 % regular Internet users in the age category 16 -74 years. Data for some specific groups are significantly lower. Among the retired and other inactive people there are only 24% regular Internet users. "(E-kompetentni državljani Slovenije danes, 2011: 13).

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Table 3: Last use of Internet (pensioners and unemployed people; in %; Eurostat)

		Pensioners and other inactive persons	Unemployed
In the last 12 months	EU-27	40	69
	Slovenia	24	65
In the last 3 months	EU-27	41	65
	Slovenia	21	59
More than 1 year ago or never	EU-27	60	31
	Slovenia	76	35
Never	EU-27	57	27
	Slovenia	74	33

Among persons aged 10-74 years, 72% were regular computer users (in the age group 10-15 years regular users were 99%, and among elderly 65-74 years only 11%). The results of the research into the use of ICT among older people show that approximately 80% of the population older than 65 years, have never used Internet.

Table 4: Comparison of the population structure and the structure of Internet users by age group, in % (data source: SURS 2008)

Age group	Share of Internet users in %	Share of Population in %
10-15	6,18	6,52
16-24	11,92	12,73
25-34	15,43	18,36
35-44	12,89	18,17
45-54	7,62	18,68
55-64	3,89	14,55
65-74	0,47	10,99

Use of the Internet for specific activities observed in relation to age and education group (data for EU-27 and Slovenia presented in the following table), the difference in the rate of use is obvious. Especially elderly use Internet for searching information related to health and the goods or services, and to send and receive e-mails. Persons with no education or low education (completed primary school) for all activities use the Internet less.

Table 5: Use of the Internet according to the specific activities (%) (E-kompetentni državljani Slovenije danes, 2011)

		AGE			FORMAL EDUCATION		
		16-24 years	25-54 years	55-74 years	Low or no education	Secondary education	Tertiary education
Individuals using Internet in the last 3 months	EU-27	93	78	41	48	74	92
	Slovenia	97	80	28	42	69	94
Searching information about education and courses	EU-27	46	26	7	14	23	37
	Slovenia	45	30	9	13	23	53
E-learning	EU-27	8	6	1	2	5	9
	Slovenia	9	4	1	3	3	8
Searching for information related to health	EU-27	35	40	21	19	36	52
	Slovenia	51	54	18	16	44	71
Sending or receiving e-mails	EU-27	84	69	35	39	64	88
	Slovenia	92	67	22	38	55	91
Searching information about services or the goods	EU-27	69	65	32	35	60	81
	Slovenia	75	68	24	30	57	85
Searching the job or sending applications for the job	EU-27	27	19	3	9	16	22
	Slovenia	22	18	2	6	15	21
Reading or downloading online news, magazines, newspaper	EU-27	42	40	19	17	36	57
	Slovenia	59	49	16	23	39	69
Listening to web radio or watching web TV	EU-27	48	29	10	17	27	40
	Slovenia	71	46	12	29	37	60
Sending messages in social networks or instant messaging	EU-27	75	33	8	24	33	41
	Slovenia	87	37	8	30	33	51

Slovenia is above the average (as seen in the EU-27 average) as concerns the use of the Internet to search for information about education and courses (SI 39%, EU-27, 34%), searching for information related to health (SI 64%, EU-27, 49%), reading or downloading online news, newspapers, magazines (SI 62%, EU-27, 50%), listening to web radio or watching web TV (SI 59%, EU-27, 38%) and uploading texts created by themselves to any website (SI 42%, EU-27, 32%).

The following table shows that the percentage of users is low in the group of retired and other inactive people, compared to the average EU-27. Unemployed persons are slightly more likely to use the Internet, but still generally below the EU-27.

Table 6: Use of Internet among retired and other inactive persons and the unemployed (Eurostat; in %)

		Retired and other inactive persons	Unemployed persons
Individuals using Internet for searching information	EU-27	39	68
	Slovenia	24	65
Individuals sending e-mail with attachments (photos, folders)	EU-27	30	55
	Slovenia	15	49
Individuals sending message to the web-chat, forums or web groups	EU-27	10	33
	Slovenia	4	24
Individuals using Internet for phone calls (Skype)	EU-27	9	21
	Slovenia	5	14
Individuals using peer-to-peer exchange of music, movies, etc.	EU-27	3	16
	Slovenia	1	19
Individuals designing web page	EU-27	3	11
	Slovenia	1	12

Older people are an extremely important target group as concerns promotion and spreading of e-skills and the use of ICT.

To the greatest extent adults (16-74 years old) gain e-skills through autonomous learning, learning by doing, trial and error learning and by means of informal help of others (colleagues, friends, relatives). Less than one third of individuals have also gained their knowledge through self-education on the basis of books or CD-ROMs, and in formal education.

Table 7 : Ways of gaining e-skills (Eurostat; % of individuals aged 16-74)

		Age			Education		
		16-24	25-54	55-74	Low or no education	Secondary education	Tertiary education
In formal educational Institutions (schools) and courses (but no at request of employer)	EU-27	7	13	8	6	12	18
	Slovenia	10	15	5	2	11	31
Self-study with books and CDs	EU-27	32	29	13	15	25	42
	Slovenia	41	34	10	15	27	56
Self-study with practical work	EU-27	72	57	23	33	53	74
	Slovenia	84	61	17	28	55	84
Informal help by colleagues, relatives and friends	EU-27	64	53	25	32	50	66
	Slovenia	78	60	19	25	55	80
Other ways	EU-27	2	2	1	/	2	2
	Slovenia	0	0	0	/	0	0

Young Slovenes in all categories have the edge over the EU-27 average, while in the older group Slovenia ranks lower than the EU-27 average. The same paradox appears in the analysis of the level of education, highly educated acquiring e-skills better than in the EU-27 average, lower educated worse. It leads to a conclusion that education in this country is getting very polarized. Those who are already educated are getting more education and low educated are being skipped in our social educational efforts. Also education, ICT skills included, is an important factor of social mobility. The more educated are being challenged in all fields which is not the case of the low educated. Many other tentative conclusions could be made here. They all have to do with social expectations towards individuals and their social roles.

Discussion about older people using ICT would otherwise require more in-depth research approach to measure the use and methods of application and the interests of this specific group. Aging is accompanied by a variety of important social consequences, for example altered social interaction, altered interests and activities, changes in the financial position (which is important in terms of access to ICT equipment and Internet). Of course, a group of older people is not a homogeneous group. Young old people are more connected with the development of technology; perhaps they use it for work and want to maintain their activity. On the other hand, older older people may have never even come in touch with new technology and even nowadays they don't have this opportunity. With the field of the innovation and technologies enabling older people to improve the quality of their life is now engaging gerontechnology. Jenko and others (2007) have found that older people are not enthusiastic about new technologies, if it requires too much learning and / or excessive financial cost. Therefore it is important to adapt the technology to their expectations, as not to subordinate human beings to technology but rather vice versa. Devices must be user friendly.

At the level of ICT literacy three groups have been identified (E-kompetentni državljan Slovenije danes, 2011):

Low level ICT literacy – retired low educated people, women (30%): This group use ICT very rarely. The group mainly consists of pensioners (54%) and low educated respondents. Nearly seven-tenths of the respondents of this group are older than 50 years. In this group, in comparison with others, the respondents less frequently use cell phone, ATM, 75% have never used a personal computer, 89% have never used a DVD player. The average index of computer skills of this group is low. 76% of respondents do not use Internet in this group.

Medium level of ICT literacy –secondary to tertiary level of education, employees (59%)

High level of ICT literacy - young in school, male (11%)

With the union of the two levels of general literacy and ICT literacy have been identified four categories (ibid):

- low level of ICT literacy and medium general literacy: low educated older women (26%);
- low level of ICT literacy and low general literacy: low educated older men (18%);
- medium level of ICT literacy and high general literacy: educated women in middle age (30%);
- high level ICT literacy and high general literacy: educated, younger, students (26%).

Computer skills seem to be decreasing with age, this being due, probably, to the changing structures of challenges and to the decreased scope of challenges. The highest index of computer skills reach a group of respondents aged 20-24 years, significantly lower is in the group of respondents aged 30-39 years, and the index of computer skills is extremely low in the group of respondents aged 50 to 59 years old.

The main factors impacting the participation of older people in relation to ICT use (ibid):

- level of formally completed education;
- profession;
- living environment;
- health and special needs;
- access to the Internet and ICT, use of cell phones and smart phones;
- awareness;
- personal needs;
- fear of the unknown;
- accessibility of contents.

The environment in which they live, diseases and disabilities that may accompany older people after they go beyond the expected healthy age (62 for Slovenia) are important factors that affect the participation of older people. When older people live in open social networks the likelihood that they will get support if

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needed is increased, which means for them easier integration in the information society. Older people in their after professional phase who live alone or because of health or other reasons, cannot engage in activities (ICT, LiLL) are the most disadvantaged group. But ICT can be an important contact with the world, relatives, friends and hobbies for them.

Older people are not aware of the importance of ICT and of changes which ICT might bring to their everyday life. In this context we mean the conceptual changes of lifestyle, as well as the specific disadvantages and advantages that technology can bring to the life of an individual.

The existing services are mainly targeting younger generations and employees. This represents a significant barrier to greater participation of older people in learning ICT skills. A prerequisite for overcoming obstacles is to improve experience of older people in e-services.

At the same time it would be necessary to investigate what are the reasons that bigger operators and e-service providers do not address older people, especially in relation to their number (E-kompetentni državljan Slovenije danes, 2011).

## **2.5. Case studies**

There have never been any coding courses for older people in this country, courses for older people's gaining different computer skills, however, are getting less basic and encompass Internet, e-mails, Skype, social media, photo-shop etc. Most of the providers organise courses occasionally, over a limited period of time, while Slovenian Third Age University considers computing classes as any other and training and educational format delivered year-long and most of the times the same groups of learners go on and on learning on condition their mentor is a lovable and skilled person and the group dynamic is encouraging.

### ***Basic ICT skills short training for older people within municipalities***

The Municipality of the City of Ljubljana started a wide spread project meant to increase computer literacy in older people. Its is free of charge and takes place in different town areas. Courses for acquiring basic computer skills are run by volunteers, corporate volunteers and companies. Annually roughly 200 course participants make the first steps in the digital world. Besides these courses there are also others related to the use of tablets and smart phones. Unfortunately, those who monitor these courses do not attend training in the field of andragogy, didactics, geragogy, psychology of old age etc.

## ***Slovenian Third Age University. ICT groups***

There are courses for beginners and advanced learners for whom learning for acquiring computer skills has become a way of life and some of them have been meeting each week for two hours for seven years now. Computer skills are a universe and it is possible to go on learning for years. The courses prepare older people for e-governance, e-learning, e-shopping, e-health, e-finances, etc.

## ***Slovenian Third Age University. Each-One-Teach-One***

Each-One Teach-One; computer literacy in pairs: The extensive job of making each individual an e-competent citizen, with access to e-communication, e-health, e-education, e-economy etc. cannot be left entirely to public authorities. At Slovenian Third Age University the movement "Each -one, teach-one" promoting acquisition of computer literacy skills in pairs has been started. The idea is to spread and improve computer knowledge and skills among people in later life by making them pass on the knowledge they gain or possess. The network of the tandems is being developed by Slovenian Third Age University and, S&T Company, a partner in the project. The project got support of the European Social Fund and the Ministry of Public Administration of the Republic Slovenia.

In lifelong learning the two functions, mentor and learner, are exchangeable. Each-one-teach-one is a basic principle and mentors can be learners and vice versa. These functions and roles are always temporary and they accompany other social roles learners take on. Today mentoring is a frequent, if not the most frequent format of education. When we need to know, we immediately think about who could be our mentor. Most of the times a mentor is the only source of knowledge. Learners and mentors add from time to time other sources. For good mentoring some starting condition are to be fulfilled. Mentor and mentoree have to have an affinity, have to be attractive to each other. Each-one-teach-one for gaining computer skills was modelled on the example of literacy campaigns in developing countries. In a short period of time millions of people gained basic literacy and numeracy skills. The principle is simple. Slovenian Third Age University is a structure the third excluded partner, supporting tandems of mentors and learners, collecting feedback, organising consultations, group meetings.

## ***Anton Trstenjak's Institute- Intergenerational companionship while acquiring computer skills***

In October 2007 they launched the program *Intergenerational companionship while acquiring computer skills*, offering older people the opportunity to acquire basic computer skills or upgrade their computer skills. With students wanting to make gift of their free time to older people and granting them their computer knowledge, this form of partnership has become very popular.

Both students, as well as older people participate in a shorter course, where students learn techniques of how to talk to older people and learn about the characteristics of the third age. This helps them later on to encourage older people acquiring computer skills whereas older people learn how to talk with younger people and how to be empathetic. After the course, the older person learns computer skills together with

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his or her young companion, one hour per week. Mostly, they meet at the the Institute Anton Trstenjak. Their companionship lasts one academic year. The Institute stages a cultural event at the end of the school year, where participants receive a certificate to commemorate the teaching/learning of computer skills and their pleasant companionship. Over four years, about 160 pairs have been involved in this kind of companionship.

Through common learning stereotypes of older people are dismantled as young people get the opportunity to appreciate older people.

<http://www.inst-antontrstenjaka.si/institut/>.

## 2. SURVEY

### 2.1. Introduction

This survey was developed in partnership, but mostly by Slovenian Third Age University on the basis of our studying literature and our experiential knowledge.

A survey questionnaire was developed in partnership and translated into national languages by each partner. We used the tool [OneClickSurvey](#) for processing the survey.

### 2.2. Reaching out to potential respondents

In order to carry out this survey we used Slovenian Third Age University's data base comprising 4000 addresses of older students, professionals in the field of adult education, andragogy, social work. In the data base there are also addresses of NGOs active in our field or reference fields. There are names of researchers, journalists etc.

We introduced the project and the survey to students of andragogy, participants in our conferences (Lifelong learning, work and development-foundation of silver economy, 2017). We further invited potential respondents through Moja Občina, a local magazine.

The link to the survey was distributed through Epale, our official webpage, FB page, personal FB pages, our Newsletter, e-mails (database of students, mentors and organisations). The audience of different events was introduced to the Slovenian version of the questionnaire.

The most outstanding of these events was the 4<sup>th</sup> International Festival of Knowledge and Culture in Later life of which we are organisers. It took place in Šmarje. 52 Slovenian Third Age Universities were present and many other stakeholders and participants from different countries.

### 2.3. Response rate

In the first days we received more than 200 completed questionnaires; the total number of the respondents being 574, out of which 243 fully completed the questionnaire and 124 respondents expressed their desire to participate in the Silver Code Course.

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## 2.4. Description of the sample

In the age category 65-69 corresponding to the largest share of U3A students were 33% of the total number of the respondents

In the age category 70-74 were 21% of the total number of the respondents and in the age category 75-79 were 11% etc.

In today's changing society there is an increased rejection of novelties and changes and there is also an increased ageism. Therefore we didn't expect encouraging results. It can be deduced that older people are interested in coding and more generally in improving their computer skills.

The majority of the respondents, that is 86% ,live in towns, 65% live in a household with a partner/husband/wife, 26% of the respondents out of 243 live alone and 1% are in institutional care. Our hypothesis was that the majority would be from urban areas where digital inclusion of older people is more important and digital inclusion more obviously needed. Urban areas are namely more social meeting more needs ( also digitally).

The majority of the respondents (61%) hold a university degree, 7% hold the scientific master degree and 5% a doctorate. Amazingly, we also got some positive reactions from people who completed only elementary school. From these results it can be deduced that the level of formal education is important as concerns the readiness to take part in computer and coding training, but probably also the professional and other social roles the respondents had had during their career.

Out of 243 respondents who fully completed the questionnaires 39% were basic users, 49% independent users and 11% proficient users . According to these data it can be deduced that reaching the level of independent users greatly encourages older students and other older people to get involved in the training to get coding skills.

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**53% of the respondents argue that coding is interesting to them. 124 are interested in joining the Silver Code training**

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## 2.5. Significance of the study

Coding seems to be intimidating for all generations and mostly thought of as being relevant exclusively for professional programmers. Moreover, it is generally believed that most applications have already been developed and, consequently, there is no use for older people to learn coding and all the necessary algorithms.

We further approached coding for older people and developing the survey through our own stereotypes (they never die away!). So we thought learning coding to be time consuming and too difficult to learn. As a result of it, we thought older people who do not need computer skills for professional work, would not be attracted to it.

Having received many positive responses from older people saying that "coding was a wonderful idea", we found out that this project would probably be another breakthrough, alleviating stereotypes of older people and old age. Not only will it enable older people to understand what they already know or have come across, to speak the language of computer programmes, older people will also learn how to define a problem, search for a solution and apply it. In genuine co-operation with other generations, they will learn to be creators, builders, developers and makers. The survey has shown

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once again that all too often the needs of older people are imposed on them top-down. Why don't we consider older people simply as equal members of society being in equal social interaction with all others? In the coming decades our societies will need all people; people who are older, people who have immigrated in the country, nationals who are members of minorities living in neighbouring countries etc. We will lack capable people and workers. So, why don't we start preparing our common near future by educating older people in most advanced technological fields be in the field of coding or other fields! Moreover, the knowledge and skills of older people do not stay with them, they are passed on others.

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### List of Abbreviations

U3A	Third Age University
ICT	Information Computer Technology