

Teaching + 45 People to improve job conditions



1 Introduction: work conditions and ICT-knowledge above the age of 45

The emergence of the knowledge society implies that every citizen must be digitally literate in order to be on a better footing in terms of equal opportunities in a world in which digital functions are proliferating. In the knowledge society, those who can use the new media are more advantaged than those who do not. While the possession of basic ICT skills is now taken for granted in the younger age groups, it is often the starting point for the elderly, especially those who did not use the new media in their profession. In today's society these persons are disadvantaged.

The Lisbon Agenda set out a number of clear-cut objectives and stated that education and training are crucial factors to enhance economic growth, social integration and greater competitiveness. More and more member states acknowledge the importance of adult-age learning in their national reform programmes. In addition to this, adult education plays a vital role in personal development and self-fulfilment. However, little has been done to implement lifelong learning projects. Most educational and training systems still focus on training young people and few changes occurred to transform educational systems to reflect the need for lifelong learning.

Recent findings provide evidence that investment in adult learning is worthwhile. Social and individual benefits include greater employment, higher productivity and better quality jobs, while less money will be spent on unemployment benefits, welfare systems and early retirement schemes. At the same time, there is a higher social return on more active citizenship, better health, less crime as well as increasing individual prosperity and self-fulfilment. Research carried out among the elderly suggests that individuals engaging in adult education enjoy better health. As a result, the costs of medical services will also decrease.

2. The goal of teaching ICT for people above 45

In Bulgaria and Hungary, as well as in the whole of the EU, there is a lasting tendency of population ageing. It is visible that countries of the former Soviet Union are more effected by the consequences of the aging population than Western Europe. Without higher level of participation of the elder population in employment, and without better tailored and more effective health and social care services, these trends will put serious pressure on the social models and public finances in Europe, and particularly in Bulgaria and Hungary.

The majortiy of the active people above 45 years have higher education, professional skills and experience, but a lot of them have no computer literacy and knowledge needed. State institutions, the business and the whole society face serious challenges towards the integration of these people on the labour market (LM).

Most of the 45+ employed has never worked with computer and had no ICT-training at all, and they are often averse from computers. Nowadays it is nearly impossible to get a job without at least basic computer skills (MS Office, internet, e-mail), so elderly citizens must be trained to be able to work with computer. ICT is a core component of the knowledge society nowadays, a tool for modernisation and improvement. Many large companies have invested heavily in e-learning and content management systems who need workforce able to use and develop these innovative methods for a more effective and productive result. Online societies and networks ensure a core part of our social and leisure-time opportunities which has the opportunity to provide more satisfaction with later life due to connections and self-realization.

ICT thus is also a good way to make new social contacts and improve life quality. With an advanced ICT-knowledge, better educational opportunities open up, better opportunity for exploiting their potentials and thus find a job they find more satisfying and that can lead to not only less unemployment rate, but the feeling of self-realisation and well being as well for the individuals.

3. Policies and strategies in relation to teaching and learning ICT in Hungary and Bulgaria

The Bulgarian and the Hungarian government tries to meet these challenges by elaboration of measures and programs as a part of the active labour market policy, which prevents their social exclusion and their early stepping out of the labour market. The Hungarian situation is the same this way. A consecutive and purposeful policy for enhancement the training quality of these persons from higher-age groups is carried out. Courses for acquiring knowledge in the sphere of information technologies are organized. The accordance of the proposed training with the necessities of the employers is improved. In addition, measures are undertaken for raising the readiness, capacity and possibilities of the occupied and unemployed, disadvantaged persons and groups to search and use the services of the information society. ICT enter also into elderly people's life in order to improve their everyday activities like shopping, banking, communication, access to health services.

Hungary is currently placed in the middle to lower end in most aspects of information society development. The results show that broadband connectivity and internet access are below average. Due to insufficient growth rates, Hungary is being overtaken and falling in EU rankings. However, the broadband to narrowband ratio is above average, which suggests that users are going directly to broadband. Use of advanced internet services among citizens is also higher than average, except for banking.

Availability of public online services for citizens is about average while service supply for enterprises is relatively low. Use of eGovernment services is below average for citizens and very low for enterprises. Hungary has a relatively high number of broadband connected schools, thanks to initiatives aimed at infrastructural development of schools (School Net and Public Network Programmes), but the number of students per PC is high, and the actual use by teachers in class is amongst the lowest in Europe. As regards enterprises, their connectivity is low and

the use of eBusiness and online services is one of Hungary's weakest points. The usage of eCommerce is better but still below EU average, despite Hungary having a fairly large ICT sector share of GDP and employment, and solid basic skill ratios.¹

The latest figures from July 2007 show that national broadband penetration in Hungary, measured as the number of broadband lines per 100 population, was 11.6 % compared with and EU27 average of 18.2% thereby giving Hungary a relative low ranking as number 20 of 27 countries according to the European Commission/ COCOM report on broadband access in the EU published on 15 October 2007. The table below shows in actual terms the development in Hungarian and EU27 figures in the period since July 2004, but it is interesting to see that the EU27 average is up 3.3% since July 2006 (then 14.9%)²

Table 1: Retail broadband lines in the EU 2004-2007

	July 2004	July 2005	July 2006	July 2007	Rank
Hungary	257,016	457,557	760,271	1,172,067	20
EU27	29,871,57	48,350,0	68,651,57	90,207,12	
	1	12	9	2	

Source: European Commission/COCOM – Communications Committee 2007.

With the number of broadband lines having more the quadrupled since July 2004 the rapid growth is also illustrated by European Commission figure published in the March 2007 in the “i2010 – Annual Information Society Report 2007” which highlight by the fact that 85% of the population were covered by DSL in 2005 (see table 2 below) although this is not reflected by the number of actual connections (i.e. lines outlined in table 1 above) outlined above. Unfortunately the “i2010 – Annual Information Society Report 2007” only contain data till.

¹ i2010 - Annual Information Society Report 2007 : p39

² European Commission/COCOM – Communications Committee, 2007 *Broadband access in the EU: Situation at 1 July 2007* European Commission, Brussels, pp 5-12

Other interesting data related to ICT in schools, internet usage, employment and skills is included in the table below.³

Table 2: Aspects of ICT use in Hungary, 2003-2006

	2003	2004	2005	2006	EU25	Rank
Broadband						
Total DSL coverage (as % of total population)	58.0	70.0	85.0		87.4	18
DSL coverage in rural areas (as % of total population)			76.0		65.9	12
Broadband penetration (as % of population)		2.9	5.1	8.6	15.7	21
DSL penetration (as % of population)		1.9	3.3	5.3	12.8	19
ICT in schools						
Number of computers connected per 100 pupils				8.6	9.9	14
% of schools with broadband access				77.0	67.0	11
% of teachers using PC in class during the last 12 mths				42.8	74.3	25
Internet Usage						
% population who are regular internet users		21.3	33.6	41.7	46.7	17
Employment and Skills						
% employees using computers connected to the Internet		26.3		20.6	36.1	25
% of persons employed with ICT user skills,	19.5	19.9	20.0	20.1	18.5	5
% of persons employed with ICT specialist skills	3.2	2.9	2.6	2.9	3.1	15

Source: European Commission 2007.

According to the Eurostat 2007 results concerning digital literacy and ICT skills, 51% of the Hungarian residents aged 16 to 74 do not regularly use the Internet and 39% have never used a computer. Compared to the EU27, where the figures are 49% and 34%, respectively, Hungary is lagging behind most European countries in digital literacy. Figures in 2006 were 66% and 57% in 2006 showing steady progress in this regard.⁴

³ Demunter, C. Eurostat, 2006 *How skilled are Europeans in using computers and the Internet?* Luxembourg, Office for Official Publications of the European Communities, pp 22

⁴ Source: Community survey on ICT usage in households and by individuals, in Eurostat 2006 : p2
Notes: Data on computer use is not available for Belgium (percentage not regularly using the Internet: 47%) ; no data available for France and Malta.

As regards the distinction between different groups of individuals, we find that in the EU25 as well as in Hungary, more men have high level ICT skills than women, who rather have medium or low skills level. In Hungary the difference between men and women is not so significant though, compared to the European average. Taking into account age, the younger generation has better ICT skills than the older population, which is not surprising. However, in Hungary, still a great proportion of young people have no basic ICT skills, which is not true for any other EU-countries. Manual workers score much worse than unemployed people in Hungary, and both have lower skills level than students, non-manual workers or employees, which corresponds to the EU27 results.⁵

Table 3: Individuals' level of basic computer skills (2007) - % of individuals aged 16 to 74

	HU	EU27	Difference (%-points)
No basic computer skills	41	40	1
Low level	10	13	-3
Medium level	22	24	-2
High level	27	23	4

Source: Eurostat 25 January 2008

4. Motivation of people – improving working opportunities

The latest research in learning theory, supported by psychological evidence, shows that physically and mentally healthy adults are assumed, regarding the connection of cognition and age, to demonstrate normal learning performance until the start of old age – moreover, social psychological studies show that old-age learning performance can be maintained on an average level, depending on the quality and intensity of

⁵ Source: Eurostat, Community survey on ICT usage in households and by individuals, in Eurostat 2006 : p5

Note: (i) Data not available for BE, CZ, ES, FR, IE, MT, NL and FI. (ii) 'No basic computer skills' includes individuals who have never used a computer

social relationships. In contrast with the progressive international practice and the old-age learning programs created in many countries, stereotypes in Bulgaria hold firm, and the conservative concept which claims that the learning process has to be maximized in the early course of life still persists. The following is an example of this idea. In countries where the learning environment is developed in a broad sense and for the benefit of the whole society, social stability and coherence is famously high together with an above-average economic development. Based on data from 2010 about the rate of adult participation of (25-64 year old) in formal and non-formal education and training, the EU average varied between 7% and 20%. In the case of Bulgaria, these rates are 5% and 7%, which are particularly low. Participation in education and training by sex also reveals interesting connections. According to the study results, women's motivation to participate in training is higher than men's. The fact that less and less young employees are present on the labour market, and only every third of the 55–64 population has a paid job, indicates the obvious need to make maximum use of adult-age learning in order to increase the rate of young labour force, and the old-aged can have a wider range of opportunities of paid work. Efforts should be made to improve the knowledge and adaptability of unskilled people over 45 and encourage them to obtain at least one level higher education. In Bulgaria, similarly to the other EU member states, this part of the society with the lowest basic skills are the old, the villagers and the disabled who are involved the least in adult education. According to the study results 17% of 25-34 years old are involved in some training, and only 5% of 55-64 years old are involved.

Those groups of the society that are particularly affected by the digital divide are middle-aged and elderly people, the poor and those with only secondary schooling or less. The internet is practically unknown to the latter two groups. Though the unemployed are beginning to use ICT, their numbers constitute less than half the number of employed users. Surprisingly, IT involvement declines sharply in the population from the late twenties. The Internet is a student and youth phenomenon in most Central Eastern European countries, to a much greater degree than in the rest of the European Union. Advanced computer skills are rarely found outside the younger generation and university graduates. Even those middle-aged workers who

will be driving the economy for at least the next decade or two, lack to a significant degree the skills needed in a computerized economy. The middle-aged are likely to be replaced in their positions by the younger generation which has much better ICT skills, and this will affect their productivity and competitiveness on the labour market. At the same time, there is a risk that the skills of older generations will be devalued. This development in itself could create a new, generational divide. The situation therefore resembles a vicious circle for those out of the production process, and a virtuous circle for those within it. Work is an agent, if not the main one, in acquiring ICT skills. According to the statistics the majority of the unemployed people both in Bulgaria and Hungary have low ICT skills.

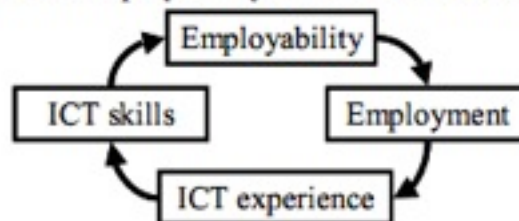
5. The importance of ICT skills training

- ICT skills significantly enhance employability. Unemployment is to a large degree low skill unemployment.
- ICT can significantly contribute to skills acquirement (both ICT and non-ICT skills).
- ICT can significantly enhance access to and outcome of education and training.
- ICT can be used to give access to otherwise barred labour markets.
- ICT can be used to enhance labour market information and thus reduce frictional unemployment.
- ICT can be used to improve the ability to draw on public services

People at work have a much higher propensity to be ICT users than unemployed or inactive people.

It is widely accepted that ICT skills enhance employability significantly. On the other hand, many learn most of their ICT skills through learning-by-doing at their workplace. Vice versa, unemployment hence disentitles those concerned of a major source of skills acquisition which would in turn be one factor to increasing their employability. Employability and internet use seem to be in a circular relationship, but the arbitrariness of viewpoint already hints at a dilemma of causality here.

ICT experience and employability. A virtuous / vicious circle



Employment is an important outcome in the context of basic computer training because it represents a concrete contribution to economic well-being and quality of life. Employment can provide predictable income and is sometimes accompanied by other benefits associated with work in the formal economy such as social security,

health insurance, and legal protections. Intellectl VTC is working hard to encourage the development of both employers and employees in their neighborhoods. The combination is important for healthy, sustainable labor markets and improved livelihoods.

We have computed from survey data the unemployment rates of people with and without internet skills. The unemployment rate for people with more than basic skills exceeds 4 %. While altogether the unemployment rate for people without internet skills is 18%, this drops to 8% for people having basic and 3% for people with advanced internet skills.

Unemployment risks are statistically predicted by the factors age, educational attainment, gender and health status. Being an Internet user reduces the unemployment risk by 74%. Employability hence significantly increases with ICT skills – and vice versa. This strongly supports evidence for ICT's potential to overcome exclusion. It can be argued that there exists a circular relationship between labour force participation and the attainment of IT skills. Internet skills for the time being are a major factor to reduce individual unemployment risks. This might be due to a current relative scarceness of IT skills. As long as this scarceness prevails, IT skills are a significant competitive advantage in the labour market. But even if this competitive advantage was lost as skills become more widespread in the future, IT skills will still probably be a necessary basic condition of employability for many jobs.

6. Pedagogical dimensions

The fear to the unknown is an intrinsic characteristic of the human being. That's the first barrier that one can find working for the first time with new technologies. Newcomers are often paralyzed by the idea to use a computer: how it works? Why I've to use it? The fearsome "delete" option... I can't do it! This feeling is not related to an age question, it happens everyday to everybody: first day at the nursery school –or at job-, first date, first driving class, etc. Every emancipation process requires a certain degree of self-confidence. It means not only to have the competences for doing it, but also to believe that you have got those competences. The only difference between an over 55 man and a teenager when they sit in front of a computer is that, while for the younger it should be an ordinary ritual, extremely likely, for the older it is his first time. On that sense, it doesn't seem a secret that in order to obtain a good pedagogical approach a teacher or a tutor may understand that people often bring these frightening thoughts to their first session. While educating older people, pedagogical approaches should make use of their life experience. Ways should be sought to identify, acknowledge, value, use, share and build on this experience for the benefit of both individuals and groups of older learners. It has proved to be the case that successful learning for older people is informal, social and fun. Strict direction and formal evaluation should be avoided to make the feeling relaxed and thereby the situation not scary for participants.

Learning to use a computer it's a practical skill process that involves a series of repetitive moves that are assimilated by practice until they become automatic. Nevertheless, learning to include ICT on the classical pedagogical paradigms implies a whole mental structure reorganization. More than "how" to use a computer, what really stops older people is a motivational problem based on the "why" to use a computer. Meaningful learning is a key point on this process. As far as new technologies are fundamentally a tool, they need to be filled with content. This is a good opportunity to transform the ICT learning process into a really reciprocal

intergenerational learning action. Meaningful intergenerational learning means to work on determinate topics where older can return this teaching to younger.

The selection of content is not only important, but also it becomes essential from a methodological approach. A teaching learning process based on a suitable content allows elder to feel more comfortable on their new adventure through ICT, and so, more willing, more useful and less afraid to learn. The role of the teachers or tutors starts with the aim to show beginners (since most of the adult learners attend beginner level ICT courses) that they are capable of making a start and that using a computer is something they will enjoy and find valuable. However, their role should be, as well, founded on the disposition to learn from elder about those specific topics that engage each generation. Hence, the staff for intergenerational courses must be specially trained not only methodologically but also psychologically.

7. Good practices

'iCentres' project (*I-център*)

The 'iCentres' Project (*I-център*) is a national project established as a response to the Lisbon Strategy and the i2010 Strategic Framework at European level to bridge the digital divide and to contribute to the establishment of Information Society in Bulgaria. The project started in 2003 and became operational in the year 2004. Within the framework of this project a constantly developing network of telecentre facilities has been established in local communities in Bulgaria. Currently, there have been 106 telecentres established within the framework of this project in Bulgaria (Status: April 2010). Intelktl VTC is the regional iCentre (also called Telecentre) for Central Northern part of Bulgaria established in 2007 as a result of the UNDP project. The project was aimed at facilitating access to information and ICT education to virtually every citizen, regardless of gender, wealth, race, age, or physical disadvantages.

- 1. Age user groups** comprising children (including orphans), young people, adults and seniors;
- 2. Minority user groups** including ethnic minorities (persons of Roma, of Turkish origin, etc.) and disadvantaged groups (including physically disabled persons);
- 3. Activity user groups** comprising students, unemployed and employed persons, as well as administrative employees.

Intelktl Vocational training centre provides ICT training and other employment services primarily to elderly students – 45-65 years old. The role of Intelktl VTC is increasingly important as an intermediary that enhances labour market information, skills, and social connections for disadvantaged groups, hence these groups are given the chance to improve their job prospects. ICT training programs are diverse in kind and scope, reflecting the needs of our target learners. The Centre employs a wide range of approaches to establish relationships with employers, government agencies, and donors. Intelktl VTC offers access to training programs that are free or affordable in an environment that promotes lifelong learning.

8. Recommendations and suggestions

Having considered the outcomes of the research on teaching ICT to people +45, we recommend the following steps be taken into consideration:

1. A powerful start-up system with the 'buddy' way of learning is needed. The one-to-one relationship between the teacher and the trainee helps the latter begin pleasurably using the PC, emails and internet in a hands-on way.
2. The contents of the training should be attractive and meaningful to the learner. It's necessary to promote older learners' motivation to start to use ICT. Elder's expectation has to be checked out by asking encouragingly what she/he hopes to gain, so the session has to be tailor-made.
3. The contents of the training should be immediately transferable and applicable to the trainee's everyday life: the usefulness of the contents learnt should be self-evident.
4. The learning process should combine the one-to-one teacher-trainee relationship, based on the concepts of scaffolding and empowerment, with a collaborative learning approach.
5. The training path should provide the trainee with new possibilities/tools to establish/maintain contacts with other people: these elderly people should in the end not only be able to use Internet and e-mails to maintain contact with family and friends, but they also should be able to develop new contacts with peers through net-based facilities for contact and dialogue.
6. Specific strategies and activities must be made to ensure that people continue to use computers and Internet on their own after the course, so that the knowledge and experience gained during the course will not be lost.
7. Most successful and effective initiatives and teaching programs seem to be those targeted and tailor-made specifically for older people. It's fundamental to take into account their background, previous experiences, learning speed, special needs and social context.
8. More efficient public services, tailored to meet the specific needs of elderly learners can maximize their potential contribution and their opportunities to express their roles of social and economic agent. In addition, targeted awareness-raising

campaigns could do much to promote the opportunities that technology offers for self-employment, entrepreneurship, and commercial initiatives. Related initiatives could emphasize the importance of lifelong learning and could open channels for dialogue with public agencies.

Clearly, we need a new model of innovation in ICT for ageing, one which is needs-oriented and puts users in the centre of ICT systems. New solutions are needed across all aspects of older people's lives, wherever in the private sphere, the public sphere or at work. It is no longer a question of helping the old and frail to cope with daily life. Rather it is about enhancing quality of life by enabling older people to take part in a full range of social, economic and cultural activities.

9. Conclusions

There is a strong need and demand to support seniors in their e-inclusion. Seniors, contrary to adopted stereotypes, want to learn about ICT and use it in a daily basis. The key is to provide them with the opportunity. Seniors are active and do not want to be left behind. They appreciate the role of technology, and are extremely grateful for the support offered to them.

There is a great value of the ICT courses for participants and society. The courses stimulate personal development, build self-esteem, allow for more efficient communication, and reduce loneliness. Developing ICT skills, especially in combination with the training experience itself, can as well advance 45+ people's employability in several ways. In addition to developing basic digital competence, the training helps to expand and reinforce their social networks while imparting confidence in their ability to continue to learn. ICT training can also help in overcoming language barriers, a significant factor in finding employment. It helps older people improve their quality of life, stay healthier, live independently longer, and counteract reduced capabilities which are more prevalent with age. Developing ICT skills enables them to remain active at work or in their community.

Thus, Internet is a great tool for linking generations, through (1) bringing seniors together, (2) building bridges and relationships, (3) strengthening the role of seniors in families (seniors are slowly losing their positions in today's world of technology), (4) helping form vibrant communities and (5) to find stimulate a meaningful and productive time during retirement.

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