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Using ICT by elderly students - theory and practice in the European context

Introduction

The Internet offers new flexibility for adult learners, educators and policy makers to support novel ways of taking information and being in touch with others. We appreciate that further education of older people must not be limited to forms of passive receipt of information. The abilities of older people ought to be enhanced not only by attending lectures of UTA but also by learning through the Internet. At many Universities of the Third Age in Europe computer courses and access to the Internet are on offer, but there are still some which don't arrange any computer courses for the elderly. Because of this reason, the members of European Federation of Older Students (EFOS) decided to apply for a new Grundtvig project EFOSEC (European federation of older students Enlargement and Cooperation)

Aims of the project EFOSEC

The European federation of older students (EFOS) decided to focus on using ICT by elderly university students in the common research realized in accordance with the goals of the project EFOSEC. The project started on 1st August 2006 and was funded by the LLP Grundtvig, of the European Union.

The main goals of the project were aimed at improvement of the quality in the education, and at research in teaching and learning needs of elderly.

We focused on:

- the conditions and possibilities of education and their comparison,
- searching appropriate learning forms and methods by using ICT,
- encouraging access by everybody to learning and using ICT .

The project results and experience of the participated seniors and institutions were published on the homepage of the project: <http://www.efos-europa.eu/efosec-d/>, which offers more details. For dissemination and summarizing of the findings the EFOS federation publishes its EFOS News, the internet newspaper in German and English language.

Target learner groups in the survey

The following institutions have carried out the survey with a different number of participants: University of the 3rd Age of Comenius University in Bratislava, Slovakia; University of the 3rd Age at the Technical University in Brno, Czech Republic; Dresdner Seniorenakademie Wissenschaft und Kunst in Dresden, Germany; Senioren Akademie at the University in Groningen & Drenthe, Netherlands; former students of the University in Holzen, Germany; Kontaktstudium nach Beruf und Familie at the Christian-Albrechts-University in Kiel, Germany; Otto-von-Guericke University in Magdeburg, Germany; senior students of the University in Wien, Austria; University of the 3rd Age at the Wroclaw University, Poland. The personal information includes the number of respondents, average age and average length of study. The total number of

participants is not the same in each institution, but we can count each university separately with the share of female (66%) and male (34%) totally.

University	Total / female	Average age	Average length of study
Bratislava	133 / 109	64,2	3,9
Brno	193 / 152	66,2	3,8
Dresden	39 / 22	69,1	7,3
Groningen	175 / 84	67,1	6
Holzen	17 / 10	70,4	7,2
Kiel	91 / 41	67,1	3,9
Magdeburg	86 / 44	67,8	8,2
Wien	8 / 5	between 64 and 83 years	between 1 year and 15 years
Wroclaw	99/89	71,2	3,67
Together	841/556 F= 66% M= 34%	67,4	

Table 1: Number of respondents,
Source: EFOS News, <http://www.efos-europa.eu/efosec-d/>

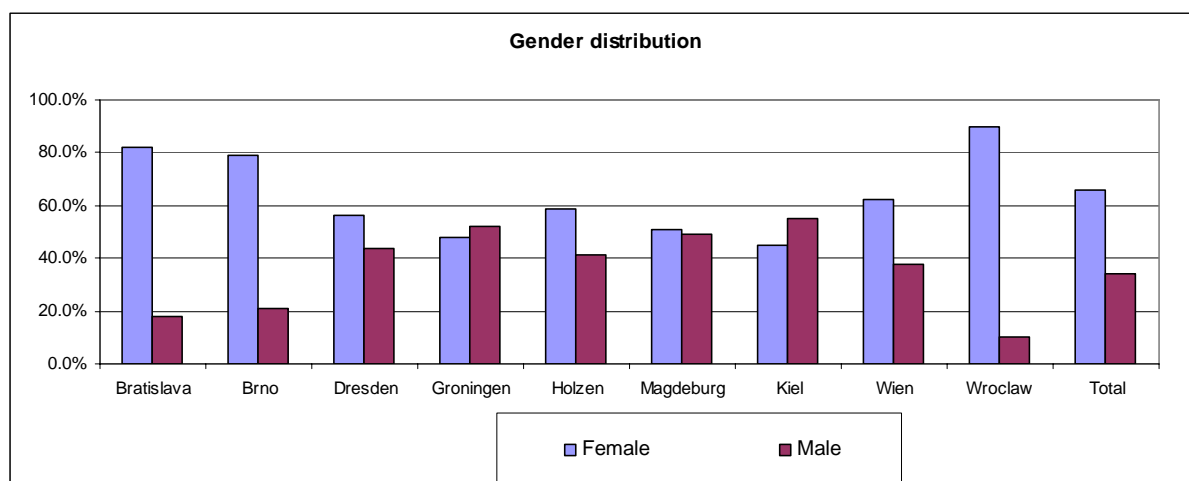


Figure 1: Structure of respondents
Source: Hrapkova,N: 2007 EFOS News, <http://www.efos-europa.eu/efosec-d/>

It is interesting that in the structure of respondents from Eastern European universities there are much more women included in the research and the learning activities than men.

Barriers for learning and using ICT

Courses of Computers and Information technology and work with computers as well as access to the Internet are sometimes limited and modified by the number of available rooms at the university. Often (especially in the Eastern Europe), it is the only possibility for older people to gain access to the computer. Use of computers owned by our seniors is comparatively rare. The greatest difficulty lies in the **high cost of the necessary equipment**. Seniors are sometimes helped by their children who provide them with computers at home, as a way of contacting them and communicating with them. Often such children live and work abroad. Another possibility may be acquiring less powerful computers when children or grandchildren up-grade theirs.

Another factor influencing access of seniors to the Internet is the **high cost of connection to the internet**. If problems with financing were solved only one other would remain and it is the **language problem**. Such a barrier between individual seniors from Europe significantly affects

mutual communication and the use of information available on the Internet. We are (Slovakia is) a small country where most inhabitants speak only their own language - Slovak.

If we want to see the problem of barriers fully, we have to also include the general view of the learners to this point. When we have focused on the factors which influence their access to and participation in the learning programs we have found out in the research report (Andry Anastasiou, 2006), that the “Barriers in taking part in learning activities are:

- the venue, with local provision being preferred to central provision
- related to the above point, ease with which the venue can be reached by public transport
- there was a range of views on cost, but paying full cost in the future would definitely be a problem
- other commitments, principally related to caring and visiting family
- reluctance to go unaccompanied.”

In the EFOSEC research (2007, EFOS News, <http://www.efos-europa.eu>), we were interested in the most important barriers for taking part in the learning activities.

The students answered:

Category	%
a/ the venue, too far away	25%
b/ the venue, difficult to be reached by public transport	16%
c/ course fees too high	16%
d/ other commitments, e.g. caring for and visiting family members	28,5%
e/ reluctance to go unaccompanied	5%
f/ others:	9%

Table 2: Barriers for learning, Hrapkova,N: EFOS News 2007, <http://www.efos-europa.eu/efosec-d/>

Here are some opinions on the other reasons:

Personal reasons: low self-confidence, social shyness, lack of time, focus on the work and family problems, apathy, fatigue, difficulties to get to U3A, especially in winter time, some of the classes start too early, few places, steps, wrong programme, motivation, health, personality,

Social reasons: orientation of the society on the finances, profits and lack of interest in education, any value of education. Elderly are seen as a burden, lack of interest of the society, too many people, crowd, noise

Financial reasons: average pension 200-300 E,

Conditions for study: Interests of elderly are limited by lack of rooms (waiting time for the acceptance is somewhere 2 years)

Senior students as well as each user of computer have to accept the basic rules for using ICT and the Internet to achieve the highest success in their work. The team of the Technical University in Prag (Kolek, Vavra, Zlatnik, 1995) defined various ways of the communication between people and computers. To gain didactical applicability, they have suggested levels of human-computer communication systems, from the point of both information flows, and activities which have to be done; and qualified them as:

- level of demonstration (person demonstrates information which was taken from the Internet)
- level of handling, manipulation (person is well skilled in a computer system)
- level of using (user view)
- level of transformation (person exchanges files according to the goals and tasks)
- level of programming (person solves problems by using computer language)
- level of simulation (person solves the problem and tasks step by step)

In the EFOSEC project research, next to the other questions, we focused on using learning technologies during the learning process by teachers.

University	Bratislava	Brno	Dresden	Groningen	Holzen	Kiel	Magdeburg	Wien	Wroclaw	Total	%
PC	23	128	28	40	4	32	23	4	25	307	36,5%
Overhead	48	54	9	70	5	49	29	2	27	293	35%
Slide proj.	46	105	8	58	3	40	32	0	19	311	37%
Beamer	25	111	21	87	4	24	17	1	0	290	34,5%
Camera	1	7	2	1	2	1	2	0	6	22	3%
DVD, video	3	22	4	52	4	7	7	2	17	118	14%
Microphone	22	150	11	37	4	47	20	0	41	332	39,5%
others	17	2	0	2	0	0	0	2	13	36	4%
No answer	9	0	0	21	4	0	0	0	23	57	7%

Table 3: Using of learning technologies in the learning process,
Source: Hrapkova,N: 2007 EFOS News, <http://www.efos-europa.eu/efosec-d/>

We can see that new media at the universities in Eastern European countries are used on the same level as at the institutions in the Western Europe.

When we focused on using of ICT by students for learning at home, the survey showed us results which we compared to the research from 3 years ago. Our findings documented the increasing of using of ICT by seniors from the Eastern Europe. For example in Bratislava, there are 65% and in Brno 67% of the respondents who own PC at home. We remember the situation, when we started Project EuCoNet in 2002 and in Bratislava we had only 18% of the seniors who owned PC at home.

University	BA	Brno	Dresden	Groningen	Holzen	Kiel	Magdeburg	Wien	Wroclaw	Total	%
PC	86	129	28	132	14	75	49	8	25	546	65%
Fax	4	6	4	4	6	6	2	1	1	34	4%
Phone, mobilphone	28	54	10	17	8	19	16	1	34	187	22%
Digital camera	16	26	8	10	5	6	4	0	3	78	9%
Camera	4	8	1	4	3	3	1	0	2	26	3%
others	16	10	0	10	2	0	0	0	29	67	8%
No answer	9	0	4	36	2	0	0	0	24	75	9%

Table 4: Using of learning technologies at home, Source: EFOS News, <http://www.efos-europa.eu/efosec-d/>

For learning at home, the seniors also use other technologies such as CD player especially for learning languages, TV and video recorder, satellite TV.

Principles of using the Internet

In the current PC courses for seniors, the emphasis is on learning to use a range of applications and developing the learner's confidence. This often reflects the learner's desire to understand how to word-process or use the Internet.

The lecturers at the PC courses explain the principles of using the Internet and encourage the elderly learners:

1. to work without other qualification,
2. to use the internet if they have the opportunity, no matter the speed limit,
3. to use it for their own interest with an emphasis on enjoyment, as a prime motive.
4. to be active recipients, often finding themselves actively participating in an interest group

Source:Trindade A.R.(1993)

Advantages of learning through the Internet

The Internet is open:

1. for using in a most convenient time and place
2. to realize the talents, skills and knowledge
3. with a wide variety of subjects of self-education
4. to help people in overcoming the problem of loneliness
5. to disseminate ideas, to offer advice, if it is required and to collect examples of interesting practice.

Disadvantages of the learning via Internet

1. technical problems
2. lack of personal contacts
3. lack of communication
4. any advisor for learning
5. any control of knowledge

Internet usage in Europe

A number of sources predict that the majority of people will shortly be working with ICT regularly in one form or another. There is clearly a need for ICT's relevance to be demonstrated to many elderly and we noticed, that demand of senior students for PC courses is still higher. However, there is still a significant proportion of elderly who do not use ICT, have access to computers or are interested in learning about them.

In the project EFOSEC we were interested in the reason of using PC. Seniors use the PC more for searching information (57%) and using Internet (54%) than for the special reason of learning (30%). Also mailing is on a high level (36%). It is interesting that meeting people and chatting has got minimum answers, and we can deduct that seniors still prefer the personal contact instead of contact through the new media.

University	BA	Br no	Dres den	Gron ingen	Hol zen	Kie l	Mag debu rg	Wi en	Wroc law	Total	%
Learning	59	56	10	54	9	26	23	3	10	250	30%
Searching inform.	71	116	26	135	10	58	39	6	21	482	57%
Internet	61	117	22	122	12	60	38	6	13	451	54%
Communication	25	40	12	79	8	15	4	2	7	192	23%
Internet banking	12	79	10	93	5	15	6	0	4	224	27%
Mailing/send emails	33	35	19	126	9	40	25	5	10	302	36%
Shopping	4	45	2	28	1	9	5	0	0	94	11%
Meet people, chat	4	12	2	6	2	3	3	1	1	34	4%

Read books, news	26	27	2	25	6	4	5	4	12	111	13%
Watching TV	6	20	0	5	3	1	0	1	1	37	4%
others	9	6	2	4	2	1	5	0	6	35	4%
No answers	12	0	0	19	2	0	0	0	51	84	10%

Table 5: Reason of using PC by seniors, Source: Hrapkova,N: EFOS News, <http://www.efos-europa.eu/efosec-d/>

Other reasons: watching gallery of photos and old postcards, games, selection of the best solutions

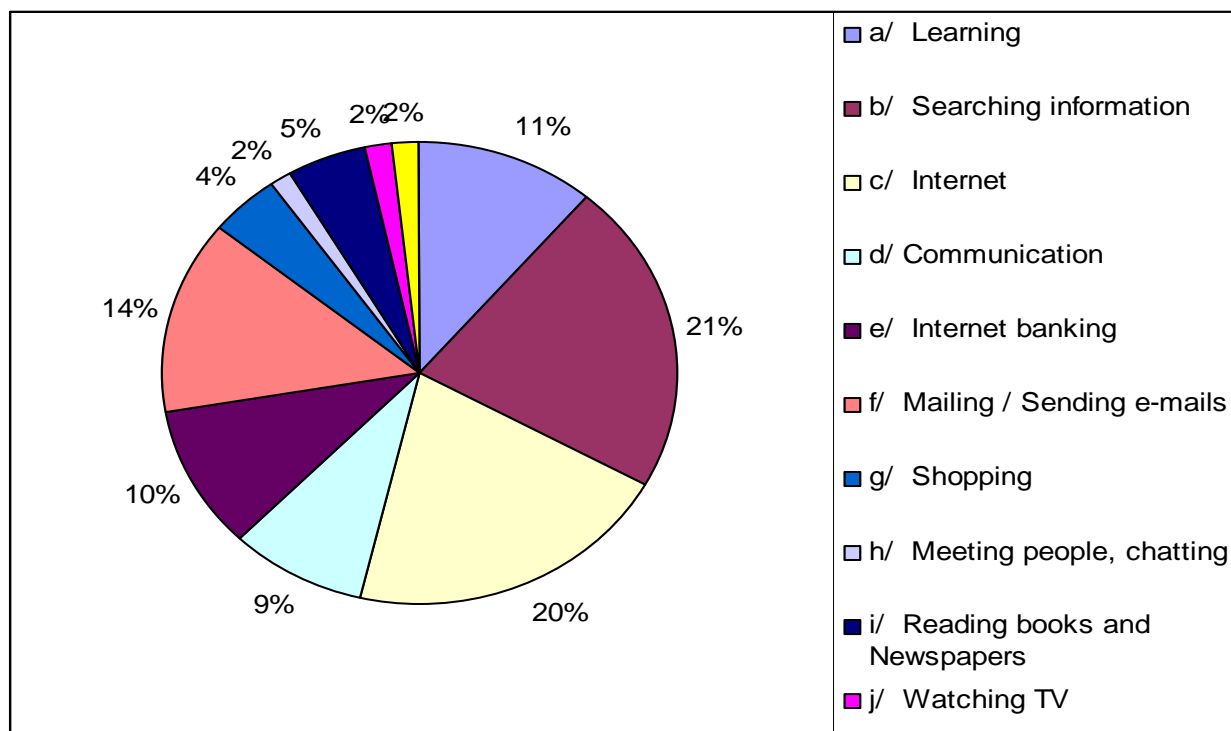


Figure 2: Reason for using PC by seniors, Source: Hrapkova,N: EFOS News, <http://www.efos-europa.eu/efosec-d/>

In the Figure 2 and Table 5 we can see that from the 841 respondents only 10% didn't answer. It means that 90% of respondents use PC, and in the most cases the Internet too.

The next table 6 documents the Internet usage in Europe.

Internet usage in Europe <i>Internet User Statistics & Population for the 27 European Union member states</i>					
World region	Population 2007 est.	% pop. of world	Internet users latest data	Penetration (% population)	% Usage of world
European Union	490,430,321	7,4 %	273,234,619	55,7 %	21,7 %
Rest of world	6,116,539,845	92,6 %	988,798,078	16,2 %	78,3 %
Total world	6,606,970,166	100 %	1,262,032,697	19,1 %	100 %

Table 6: The European Union Internet Statistics were updated for November 30, 2007
Source: <http://www.internetworldstats.com/stats9.htm>

From the same source we took the European Union Top 10 Internet users. The numbers of users are presented in millions of users.

European Union Top 10 Internet users (2007, in millions of users)

1. Germany	55
2. United Kingdom	40
3. France	35
4. Italy	33
5. Spain	23
6. Netherlands	15
7. Poland	11
8. Portugal	8
9. Romania	7
10. Sweden	7

Source: <http://www.internetworldstats.com/stats9.htm>

It is interesting that Poland is 7th in using the Internet, with 11 millions of users (29,6% of the population). In spite of this, in the comments from the senior students of the university of the third age, the students miss the computer courses and courses for learning ICT (presented in the EFOSEC research). Comments to the educational process:

In Bratislava:

- Extend the duration of the lectures and always have the break in the middle.
- Offer study material (electronically or written) in each lecture.
- Use more visual and graphical materials and IT during the lectures.
- Manage after each lecture the seminar and discussion at the end of lesson.
- use interactive communication (teacher and students) with a reaction. Senior student doesn't want to be a passive receiver.
- To settle more strict requirements for students at the end of semester (written thesis and exams) because of aspect of transmission their knowledge to the young generation.

In Wroclaw:

- to learn to use computer, Internet - computers' courses
- to learn to use the mobile phone, digital camera
- to change the topics of lectures, seminars - more actual topics e.g. about art., history of art, culture, literature, social life, not only about illnesses and age - more modernity and interesting topics - the wider range of lectures
- to receive sheets after lectures or seminar which would help us with the process of learning

Seniors suggested:

- more professional rooms e.g. photography studio, room for learning languages
- more rooms with good equipment
- to have a computer laboratory at the U3A

A survey published in the one of Slovak daily in November 2001 stated:

" Among the Slovak population older than 18 years, only 28,5% work with the Internet." But at the present we know that the number of the people is increasing and there are 33,8% of inhabitants in Slovakia connected regularly to the internet. The survey was conducted by the Institute of public opinion in Slovakia which interviewed, face to face, 1365 respondents. (2005). According to another survey from <http://www.internetworldstats.com/stats9.htm> Slovakia with the population of 5,447,502 had in November 2007 2,500,000 users of the Internet, which is 45,9%.

Conclusion

According to our conditions and possibilities we should integrate more older people into the informative society and on the Internet. We have to focus on the cognitively challenging activities for older people and encourage them to learn from each other. For this reason, we will try to use internet learning methods for gaining information about self-education, correspondence education, buddy learning, self-help groups, online courses, E-learning and online newspapers. Also, the possibilities of internet methods for making contacts like building bridges (between isolated older adults), participation at the projects and writing stories for the e-learning platform.

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