

# ECOM+45 questionnaire analysis: local results

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# STATISTICAL ANALYSIS FOR THE SPANISH CASE:

CHART OF DATA	
The total group under study (N)	144
Participants (n)	100
Percentage of population having or lacking the characteristic under study (p = q)	0,5
Reliability	95%
Units of standard deviation in the normal distribution (Z)	1,96
Standard error (SE)	

#### **GENERAL DATA**



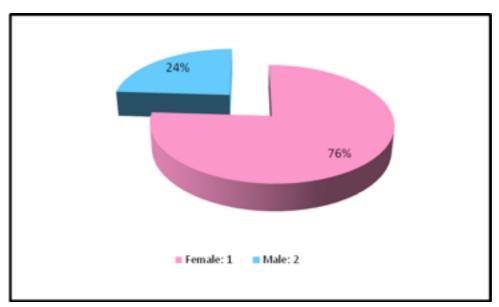
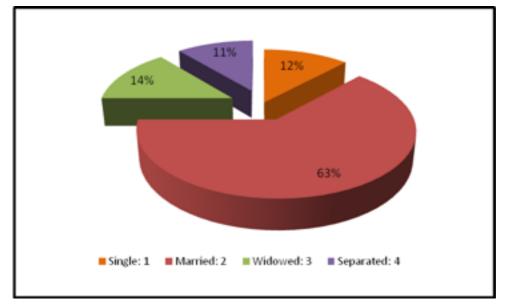


Figure 1. Sex (Aula de Mayores, Málaga University)

The results obtained show that a vast majority of people participating in the study are female, an aspect that correlates the reality of the population attending the University for the elderly in Málaga, most of whom are women. And, in this regard, it is interesting to note that when observing the attitude that the learners tend to exhibit in the practical workshops, lectures and other kinds of academic activities offered to them, female students are not only more, quantitatively speaking, but also more ready to take a more active role and to engage fully in the tasks set. This may be either due to the fact that women (not only housewives, but also those who have also enjoyed a professional career as well) are accustomed to perform more than one activity and they do not see it as something challenging or awkward, but, on the contrary, it is a circumstance that has long been a defining characteristic throughout their whole life. On the other hand, most men are familiar with having had their working hours during their working life, in which they were focused in the job to do, and then went back home and found that everything there had been arranged by their wives. Any task may be too demanding for some of them, who believe that attending the University is, in itself, a hard task, so they are more reactive than women, who, as we have already anticipated, show a fully committed attitude and are pro-active, meaning invaluable for the effective development and low-anxiety atmosphere of the classes. Women usually do their homework more often and also more acurately than men (women devote much more time and show more interest in true learning), ask more questions in class and volunteer more easily.

Interestingly to note, however, is the fact that when a male student has a high self-image as a learner and is really interested in learning, his participation in class is not only more sound and frequent that those by women, but more outstanding. Women tend to avoid to call other's attention. Men, when participating actively, seem to show a need to be praised and congratulated. It is as if a kind of leadership (naturally emerged or induced somehow) were inherently linked to men in this social group. We cannot neglect the fact that, despite the meaningful progress that has already taken place in the last decades insofar as the equality among men and women, however the prevailing social atmosphere in which our students, all of them over 55, were brought up did not resemble at all such equality.

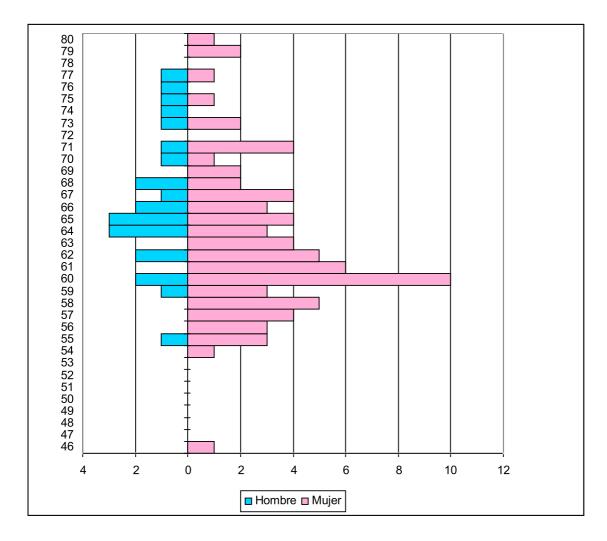


#### 2) Marital status

Figure 2. Marital status (Aula de Mayores, Málaga University)

By looking at the graph we immediately notice that the group of learners who live alone is almost half in size than those who are married. An interest in meeting new people and socialising, apart from an interest in developing academic skills and gaining contents in certain areas, is undoubtedly one of the major causes of initiating this type of actitivy at the University. In personal interviews, many students have reported how hard it was to have whole days ahead with nobody else to be with and without any serious responsibility once they got retired. They needed the contact of people, they wanted to meet people who were under their same life circumstances, with plenty of leisure time, and with common likes and interests.

According to the idea previously stated, one may wonder why it is then that so many married people chose the University activities as well, if, obviously, they are not looking for new people to enter into their life as they already have got a family and not much free time. However, in informal talks with the students, two situations clearly differentiated stand out, namely: (1) those marriages in which they get along with each other so well and both members of the couple attend the University and (2) those other kinds of people who, though remaining married, they do so simply because from the perspective of someone at their age, it is easier that obtaining a divorce; but, in reality, they share almost nothing with their couple and are eager to meet new people and make friends to share trips, walks, or other free time activities with. After all, for people at the range age (55 and over in the case of our University), marriage is still an important institution and most of them got married when they were very young.

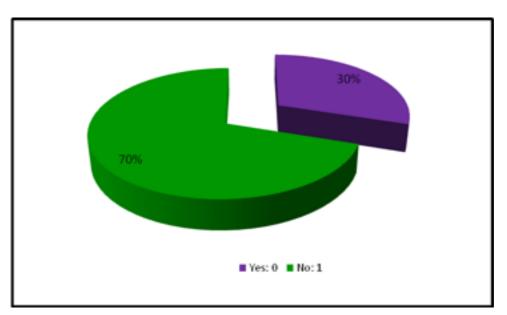


## 3) Age

Figure 3. Age (Aula de Mayores, Málaga University)

The scope of the age of the participants in the study ranges between 46 and 80 years old, the vast majority being in their fifties and sixties. Reasons for this being so could be found in the quality of life of people above that age (basically, the ability to drive by themselves that gets significantly reduced with the passage of time plus the possibility of personal manoeuvre and moving around, which also gets considerably reduced as time goes by and people get older) and in the fact that people may get retired in Spain with certain jobs at the age of 55 and onwards, whereas the majority retire when they are 65 or over.

Interestingly, it should be noted the extent to which (1) the social nature of human beings and (2) the interest in going on learning and learning remains untouched till the very last moments of our life. Though quantitatively speaking, the group of people above 70 and 80 who participated in the study is not meaningful, from a less scientific, more holistic perspective, their attendance to class is absolutely enriching as (1) they have a wide life expreince that they offer to the rest of participants and from which everybody may raise awareness on several aspects of life, (2) their attitude proves that human beings have an inherent ability and wish for growing on learning endlessly and (3) they teach how you can overcome the limitations that constrained your life in the past and learn to use any kind of machine or device simply by maintaining an open and flexible mind. Impossible is nothing, as they put it. Teachers and trainers should be careful and sensitive to cover the needs of this particular group of students so that their motivation to learn does not decrease.



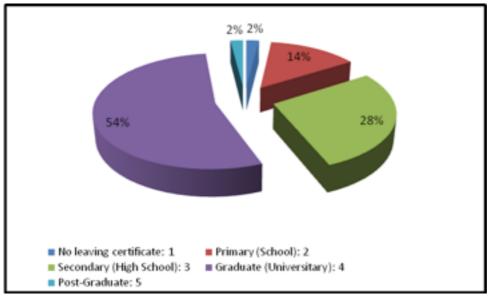
#### 4) Do you live alone?

Figure 4. Living alone (Aula de Mayores, Málaga University)

It is strikingly remarkable that whereas in item 2, in which we asked the students to indicate their marital status, a majority of 63% stated being married, now we are faced with a group of 70% of the students who declared living alone, a percentage that

undeniably clashes with the one referred to just before. A potential explanation for this is, as we anticipated above, that many of them are still legally married, however they share hardly anything with their couple. So they feel *as if* they were reallistically alone. Hence their interests in attending the University as a meeting point for people who share likes and hobbies.

Whatever the explanation underlying the fact, the thing is that an ample part of the students are happy with the opportunity of meeting new people and making friends that the University offers for people at that age range.



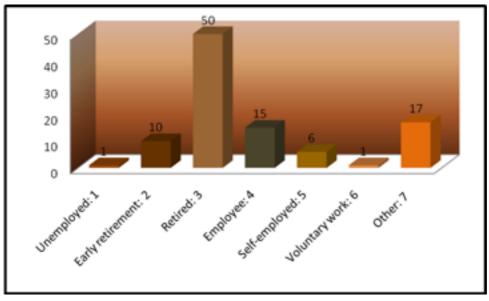
# 5) Qualifications

Figure 5. Qualifications (Aula de Mayores, Málaga University)

People from very different educational backgrounds attend the "Aula de Mayores". In fact, there are no requisites in this regard. There is a slight majority of graduated people, 56% vs 44% of undergraduate. This makes a very heterogeneous class which becomes even more if we take into account their fields of specialization, for those who had one. With this scenario, it is of uppermost importance that the teachers and trainers working with these students are always prepared to change whatever necessary in class so that everybody can really engage in what is being delivered there. Avoiding exclusion at all costs is a must. Things will have to be repeated at times, and almost nothing should be taken as already known by them. Also, the variety of activities should be comprehensible enough so that people with different cognitive styles and also with different learning skills and previous (or no) learning experiences may all go at the same pace. Often, peer learning means the solution to the different rhythms for learning; learners working together may benefit from something their mates have already grasped, and equally true, those who are supposed to have already learned something

may test their true degree of learning &/or reinforce what's been previously learned by explaining the issue in question to the person sitting next to him/her.

Whereas having a heterogeneous class is always known to be an extremely challenging experience in the world of teaching, in the particular case of teaching adults, their maturity, degree of commitment, motivation to learn, sense of humour, the attention devoted, their sensibility and respect towards the teacher, their pertinacy ... all make a class atmosphere so nice and inviting that teachers working with them find their task twice as motivating and enriching than teaching any other target students.



#### 6) Current occupation/job

Figure 6. Current ocupation (Aula de Mayores, Málaga University)

In agreement with what has been analysed so far, we can observe at this point that a group of 61% are retired or unemployed. The remaining 39% have got a job or cooperate in voluntary tasks. All in all, there is still a predominant group of students with lots of free time to devote to learn whatever interests them, a reason powerful enough to attend classes at the University in a very positive mood. The variable "having free time" together with "learning something that is not compulsory but optional" makes an effective team of circumstances that self-drive learners to attain their pursued goal, the learning of certain contents or the development of certain skills.

#### **USE OF TICs**

#### 7) Need to learn how to use ICTs

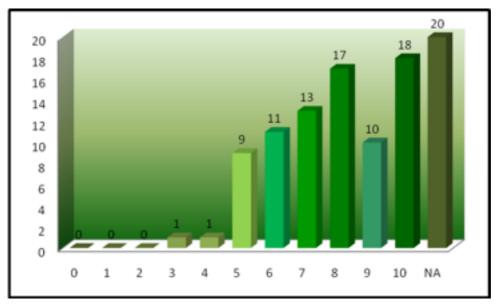


Figure 7. Need to learn ICTs (Aula de Mayores, Málaga University)

The need to become competent to use the ICTs has scored high in the students system of preferences. There is a group of 78% who value it to a different degree. The need to do something in life is as powerful a drive as any other personal circumstance such as motivation, desire, want and so on. Those learners who need to learn something, regard it as important, so they do not mind having to invest great doses of effort and time to make their target feasible. They simply pursuit the learning in question and make everything possible to obtain the best result. So they learn better and more than the other average students who lack such need. We can expect a good performance on the part of our students after the period of instruction and training partly because of their stated need to learn.

#### 8) Interest in ICTs

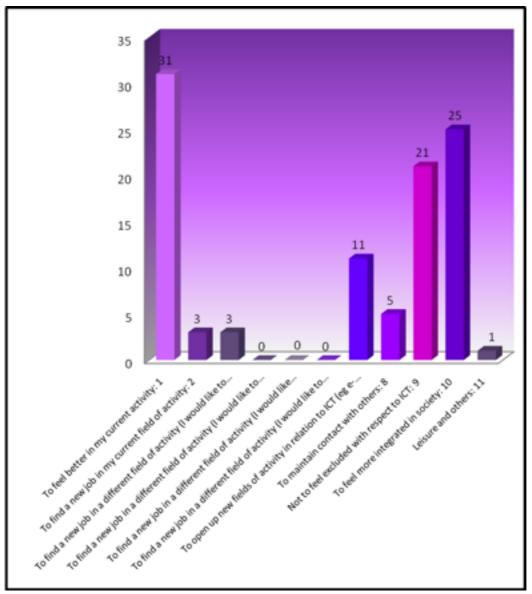
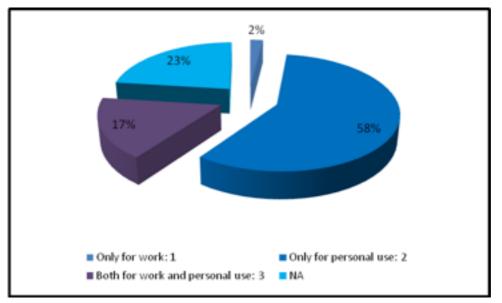


Figure 8. Interests in ICTs (Aula de Mayores, Málaga University)

Many and different are the reasons given by students for their high degree of interest in learning to cope with the ICTs successfully, but there are 4 which stand out distinctively, namely: (1) Feel better in whatever they do, 31% of the group; (2) Avoid a feeling of exclusion concerning the ICTs, 25% of the group; (3) Socialise and keep contact with other people, 21% of the group; slightly lower, but pointing to the social sensitivity of our students, is their interest in applying their ICTs skills to co-operate with different NGOs –a group of 11%.

Our informants' motives have essentially a twofold nature:

(a) because society progresses and new advancements have come to change our life for the better, our students are aware that it is neither helpful nor constructive to get frightened of not being able to cope with them successfully and neglect them as if they did not exist. On the contrary, it proves a much more mentally-healthy attitude to do one's best to learn step by step how to use them and get progressively familiar with their benefits in one's daily life. (b) as we could foresee in previous items, our students acknowledge the social dimension of ICTs. This viewpoint reinforces the idea anticipated above that the social constituent of human beings is highly appreciated by people regardless of their age. People assess their social links as invaluable. In fact, psychologists claim that a person could scarcely survive if s-/he is poorly nourished, whereas a person without love from others or isolated would sooner or later hopelessly die of sadness. Maintaining social contacts is vital for everybody.



## 9) What do you mainly use ICTs for?

Figure 9. Uses of ICTs (Aula de Mayores, Málaga University)

The prevailing answer to this item is that which underlines that the potential of ICTs enhance the possibilities of a much better quality of life. You may find almost everything if you know how to search successfully, people often say. From getting information about a topic of our interest, to finding news, directions, music, instructions on how to do something, e-learning, visiting a museum virtually or getting into contact with someone, ... everything is on the net. 58% of the group affirm being aware of the advantageous position that being competent at using PCs brings you and consequently that they use them for different personal aspects of their life.

10) State those ICTs that you have at home and use regularly

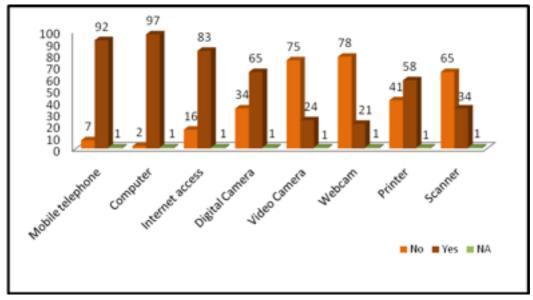
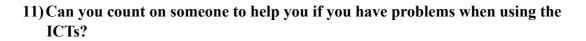


Figure 10. ICTs at home (Aula de Mayores, Málaga University)

These are the ICT devices that our students have got and enjoy most frequently:

- (a) a PC, a group of 97%,
- (b) a mobile phone, a group of 92%,
- (c) access to the internet, a group of 83%,
- (d) a digital camera, a group of 65%,
- (e) a printer, a group of 58%,
- (f) a scanner, a group of 34%,
- (g) a digital videocamera, a group of 24%, and
- (h) a webcam, a group of 21%.



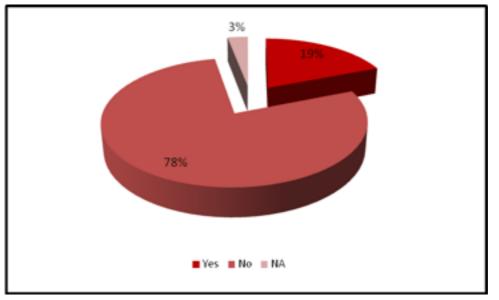
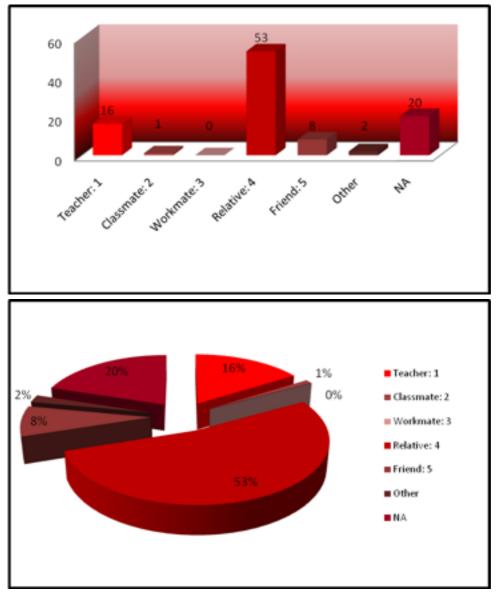


Figure 11. Help in ICTs (Aula de Mayores, Málaga University)

Only 19% of the students are straightforwardly helped in case they find obstacles when using the ICTs. On the contrary, a group of 78% have nobody to help them when this occurs. This variable has a critical effect on the process of learning. As it may happen to any of us when trying to learn something, at the beginning of a new learning process, learners are usually highly motivated at the realization of the meaningful avenue of new possibilities which is about to open for them. They want to practice as much as possible, both inside and outside class. But our motivation may increase, or, on the contrary, decrease depending on the conditions that support (or prevent) our accumulation of practice. If we can easily find someone to assist us, if we find something that stop our progression, we get happy and go on in an untroubled way. Contrarily, if we want to practice but the PC does not work and we do not know why, or there is something that we do not understand and still we can't continue with what we were doing, we may easily get demotivated and get somewhat reluntant to continue practicing on our own. That is why we reckon it of uppermost importance the development any system of consultation by means of which the learners could feel supported as regards their daily uncertainties concerning the effective use of ICTs. An example of this could be the settlement of a body of technological volunteers that should perform as either as on-line or present tutors or consultants, as they already do in other different institutions.

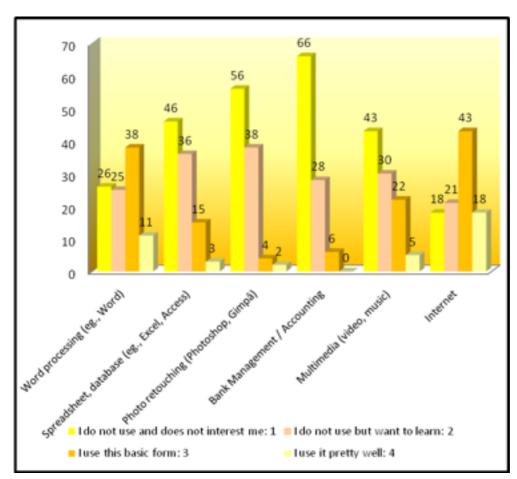


12) Who helps you when you find difficulties in using ICTs?

Figure 12. People helping in ICTs (Aula de Mayores, Málaga University)

When difficulties emerge while using the ICTs, most of our informants (a group of 53%) report resorting to a relative or someone in their family to help them solve the problem. For a group of 16%, the class is of vital importance, not only in giving sequenced guidelines for progressing in their learning, but also when they can turn to their teacher and s/-he explains the trouble in question. For this group, it is the teacher who is crucial in finding out a solution to what they were unable to do when being faced

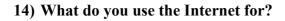
with the ICTs on their own. Once again, as we suggested before, counting with some kind of assistants to support the teachers' task would be invaluable.



## 13) What do you use your PC for?

Figure 13. Uses of a PC (Aula de Mayores, Málaga University)

The myriad of reasons for the use of the PC may be countless. Yet, most of them do not show interest in learning many of the possibilities that the use of PC does offer (such as database, accounting, multimedia, photograph retouching, and so on). Only 43% of the students claim to enjoy the most essential skills to surf the net basically and another group of 38% of them affirm to be able to cope with word processor. In the case of our students, the internet and the use of word processor stand quite ahead if compared to any of the many possibilities that PCs have.



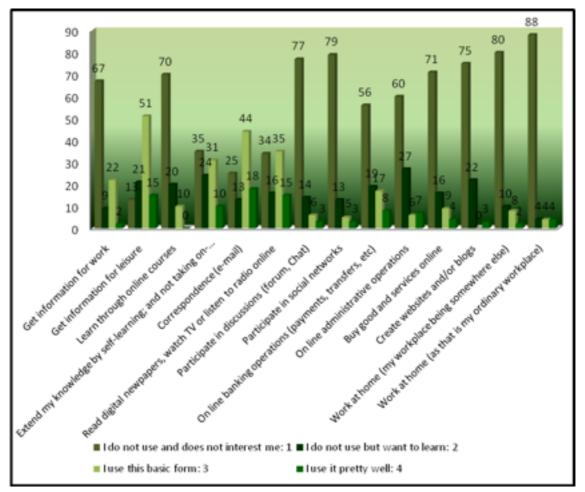
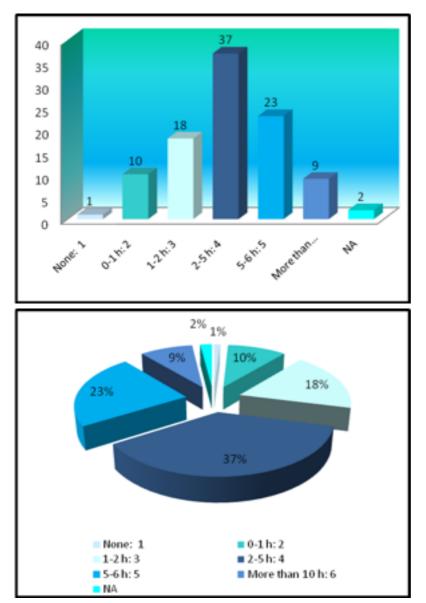


Figure 14. Uses of Internet (Aula de Mayores, Málaga University)

Exactly the same as it happens with the manifold possibilities that an effective use of the PC may provide the user with, being good at using the internet efficiently may avail the user of multiple advantages. Still, our students do not seem to be very interested in knowing in depth many of them. They are happy with being able to send and to receive e-mails (a group of 18% agree on this), to obtain data related to leisure time activities (a group of 15% say so) and to access to the news on-line, such as reading newspapers, watching TV or listening to the radio (a group of 15% feel so). Other minor cohorts of students value the opportunities for self-learning (10% of them) or for getting access to the data regarding their bank account (8% of them).



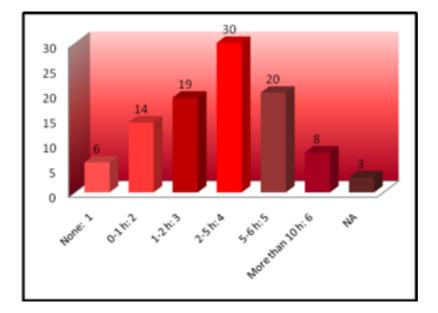
## 15) How many hours a week do you usually use your PC?

Figure 15. Hours a week using a PC (Aula de Mayores, Málaga University)

In order to get familiar with something, a great amount of time, together with systematicity, is generally required. At the beginning, the situation may surpass the

learner, yet the accumulation of practice makes the student's self-image and selfconfidence progressively grow and thus the improvement becomes apparent in most cases. Every learner can assume this. Yet not all of our learners devote hours on end to become skilled users. The majority of them (37%) estimate in 2 to 5 hours the time spent in practicing per week. There is a group of 23% who spend more, 5 to 6 hours, and another group of 9% of the learners who even spend longer than that, i.e.: more than 10 hours a week, as they put it. Though 18% of them spend only 1 or 2 hours a week and 10% of the learners just one hour or less.

It is advisable to remark at this stage that our role as teachers should not confine itself to imparting instruction or giving explanations in the sense of presenting theoretical contents, as if knowledge could be miraculously inherited by learners at the hearing of them. Our task as responsible teachers should comprehend as well and most importantly to provide our students with meaningful doses of helping them to learn successfully. Actually, training learners to learn to learn is critical. Particularly with adult students, who may lack strategies for effective learning or bring with them certain unrewarding learning habits from the past that should be necessarily removed. Teachers should devote class time to guide them in reflecting upon what they do in order to grasp what it is to be learned and help them find out learning techniques, strategies and habits that lead to successful learning.



#### 16) How many hours a week do you usually surf the internet?

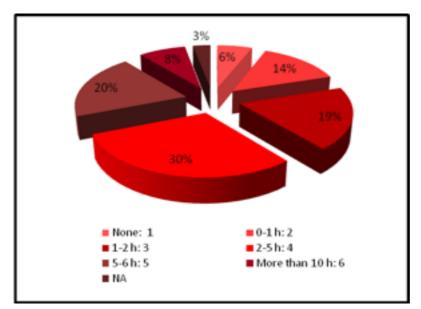


Figure 16. Hours a week using Internet (Aula de Mayores, Málaga University)

As was indicated above, familiarising with something is just the result of accumulated time and experience in doing it once and again. For our students to become good users of the internet, many hours of practice are needed, so that they lose the initial fear that may derive when one faces something unfamiliar or unknown and has to cope with it.

In this sense, the most important group of students (30% of them) reserve 2 to 5 hours a week to use the net for different purposes. Then, there is a group of 20% who spend about 5-6 hours in doing so whereas an ellite of 8% report spending more than 10 hours per week engaged in doing different tasks on the net. A group of 19% can only access the net for 1 or 2 hours per week, and, even worse, 14% of our students –maybe those who do not have an internet connection at home— can only practice for an hour or less, an amount of time which is clearly insufficient to become a skilled user.

As we said earlier with other aspects previously analysed, it is noticeable once more at this point, every now and then we see that one of the most outstanding characteristics of this kind of teaching situations with adult learners is the fact that the class is always heterogeneous, with students with differring levels of skill or knowledge, different rhythms for learning, and not always with the same availability regarding their free time, something which undeniably poses a challenge for the teachers responsible for them, as the situation becomes absolutely stimulating, though extremely complex at the same time.

#### PERSONAL PERCEPTION

## 17) Range from 1 to 5

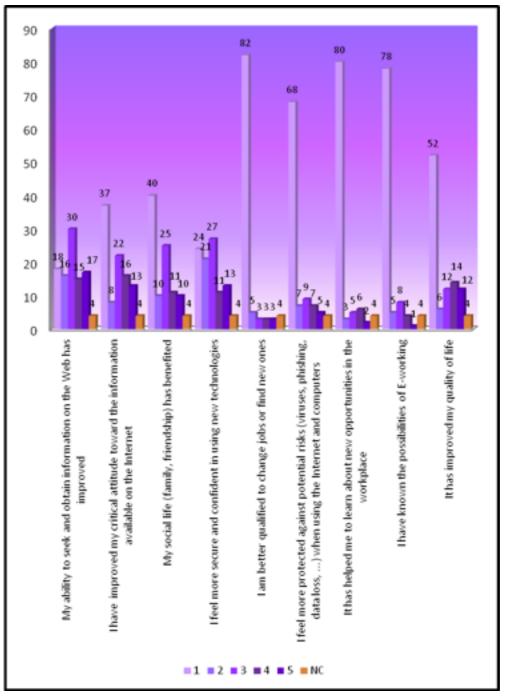


Figure 17. Range from 1 to 5 (Aula de Mayores, Málaga University)

When considering the impact that having received instruction on ICTs has had on the life of our students, the first thing that calls our attention is the fact the most outstanding percentages of people all point to a lack of noticeable changes in their own perceptions of improvement. For example, they can't appreciate meaningful changes in their quality

of life or in the knowledge they are supposed to have acquired as regards possibilities in the world of work. Concerning this, important is to note that the age range of our students entails that they are not particularly interested in promoting professionally, but, quite on the contrary, most of them are already retired and others are about to retire in the immediate future. Thus, their interest for learning these aspects may be very low.

Leaving aside what they do not deem as fundamental or indispensable for their lives, let's now focus on what they consider as invaluable:

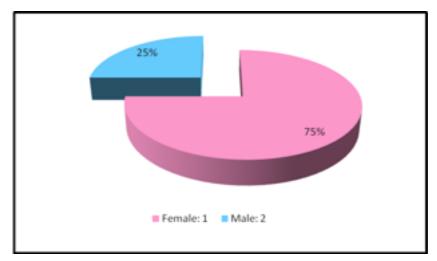
- (a) a group of 17% of our students express how they recognize the improvement in their capability to search information on the net effectively,
- (b) a group of 13% of our students state that they have undoubtedly developed critical reading skills. From the huge amount of information available on the net, they now know what may interest them and disregard what is biased or simply lacks any real interest.
- (c) another group of 13% of our students also declare the extent to which they notice the self-confidence they have gained. They now feel themselves much better prepared to face the real thing.
- (d) a group of 12% of our students voice that their quality of life has improved in general: multiple and varied are the advantages that the internet has brought to their life.
- (e) a group of 10% of our students specify that it is their social life in particular that has benefitted most, as they can easily contact family and friends by using the ICTs.

All in all, we have been able to verify that the Internet is by far our students' most appreciated issue for learning, regarding the ICTs. They are pretty aware that developing the skills for an effective use of the net will certainly avail them of multiple advantages, not only concerning the on-going search for information which our current society pursues but also as regards the improvement of our social relationships in our immediate environment as well.

# STATISTICAL ANALYSIS FOR THE BULGARIAN CASE:

CHART OF DATA	
The total group under study (N)	30
Participants (n)	28
Percentage of population having or lacking the characteristic under study $(p = q)$	0,5
Reliability	95%
Units of standard deviation in the normal distribution (Z)	1,96
Standard error (SE)	

#### **GENERAL DATA**

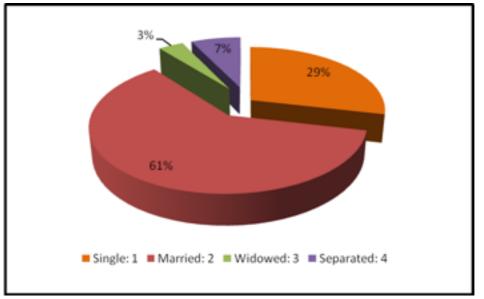


1) Sex

Figure 1. Sex (Intelekti Ltd., Bulgaria)

The majority of students, who took part in the survey, are over 45 and not older than 59, so they have not retaired yet. This age group attends computer courses primarily for job reasons and less for leasure. Most of them are unemployed or employed who seek to improve their skills or acquire new ones. As it is shown on Figure 1, the majority of our students are women. This fact has its explanation - in most cases women occupy positions that require computer literacy, i.e. good computer skills. Given the age, which

is subject to our study, women over 45 lack IT knowledge or it is rather insufficient. For that reason, most of the women whose job requires computer skills seek to come abreast with the latest performance requirements of the job and look for IT training courses. Men over 45 usually occupy positions which do not require computer skills. Many of them do not want to improve in this area because they feel they do not need it, because they are already in the age in which such knowledge is unnecessary. Those who are interested and are more active in using the computer as a tool for work and entertainment usually learn from each other and rarely attend courses.



# 2) Marital status

Figure 2. Marital status (Intelekti Ltd., Bulgaria)

More than half of the students participating in the study are married, which is normal, given that most of them are of age at which they are supposed to have made a family. Apart from the nature of their work - present or future, another large group of students attend ICT courses to communicate with their children living abroad. In view of the situation in Bulgaria, thousands of young people have left the country to work around the world for the last decade, so internet proved to be one of the most efficient and cheapest ways of maintaining a relationship and exchanging information between people. The share of the unmarried is relatively big. This can be explained by the fact that in contemporary society living together does not necessarily mean being legally married, as well as many divorced or living alone for one reason or another, more often indicate their marital status as "single" rather than "divorced" or "widowed".

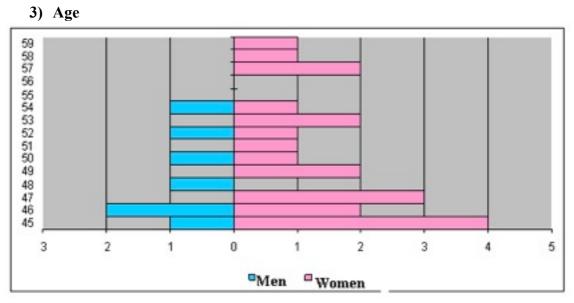


Figure 3. Age (Intelekti Ltd., Bulgaria)

The age of our students is in a relatively small range 45-59. Elderly people in Bulgaria do not easily accept modern technologies not because they do not understand them or do not want to know how to use them; the reason is this age group believes they no longer need IT due to their age. It is really difficult to convince them in the need of lifelong learning. This problem should be given special consideration in order to be dealt with. The largest group consists of people at the age of 45 - 50. They are very active in studying ITC. Most of them work or seek work which requires them to acquire more knowledge and study constantly. In support of the facts given at Figure 1, on this Figure it is shown that the largest group of men is at a relatively low age - 46 years, i.e. they do not believe that further study is unnecessary.

#### 4) Do you live alone?

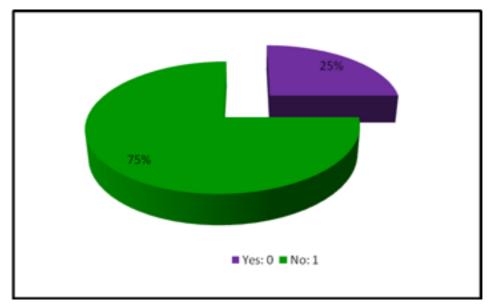
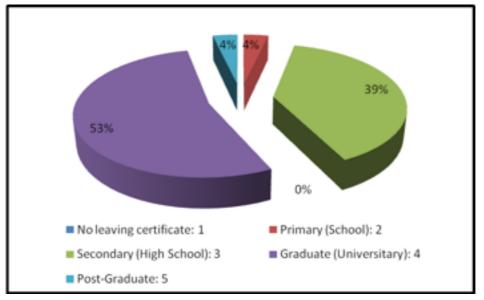


Figure 4. Living alone (Intelekti Ltd., Bulgaria)

As it was stated for Figure 2, the age of our students suggest that they are married or live with a partner without officially being married. Since the decisive factor in attending ICT courses in Bulgaria is the job – finding a new job or improving the present one, marital status is not among the key factors influencing the choice. Whether living alone or with partners, family or friends, the students consider the need to study ICT especially in terms of whether and how this will enhance their expertise and will help them adapt better to the situation on the Bulgarian labour market.

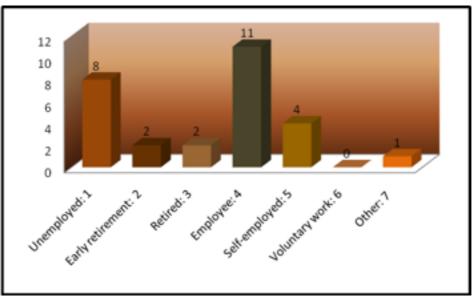


## 5) Qualifications

Figure 5. Qualifications (Intelekti Ltd., Bulgaria)

The group of students is divided into two main main parts – students with university diploma – 53% and those with secondary school diploma – 39%. The relatively low number of people with no education is due to the fact that secondary education in

Bulgaria is compulsory, another important fact is that eduation has been one of the estimable family values and priorities in the Bulgarian society. People over 45 are the generation that had no chance to study ICT at school, except for the youngest of them, whose curriculum included computer languages and hardware study. In this sense, computers are almost completely unknown, but their widespread use in all spheres of life and almost all professions, makes people find ways to be up to date with modern technologies if they want to feel comfortable at work or to find a new and more interesting job in another field. For that reason, most of our students at the age of 45+ are willing to attend beginner level courses in ICT. Fewer are those who already have foundations laid at an earlier stage of life, so now they want to upgrade their knowledge with more complex and more interesting areas of ICT such as graphic design, computer graphics, etc.



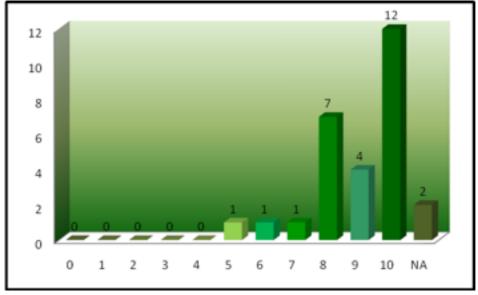
#### 6) Current occupation/job

Figure 6. Current occupation (Intelekti Ltd., Bulgaria)

Logically, the largest groups are those of the unemployed, employed or self-employed. The reasons for this, as it was mentioned before, are related to the main purpose which brings them to study, namely finding a new job, improving skills to keep their present job. The number of retired is very small, since they believe that at this stage of their life there is no point in studying. Of course, there is another group of retired who would like to learn how to use a computer, to use new technologies and to keep pace with time, but the other problem they are faced up with is the lack of funds Difficult financial situation of a very high proportion of the retired in our country makes it impossible for them to

allocate funds for luxuries such as training and education or participation in courses for pleasure.

## **USE OF ICTs**



7) Need to learn how to use ICTs

Figure 7. Need to learn ICTs (Intelekti Ltd., Bulgaria)

It is a striking fact that almost half of the participants in the survey indicate the highest level of need for training -10 and almost the same number indicate -8 and 9. No one of the interviewed has indicated a level lower than 5. This means that all who come to study are strongly motivated and their need is indisputable. In turn, this implies easier work for those who have undertaken the task to train them. When the people who are to study are strongly motivated and want to learn as much as possible, the work of the teachers is really rewarding and fascinating.

#### 8) Interest in ICTs

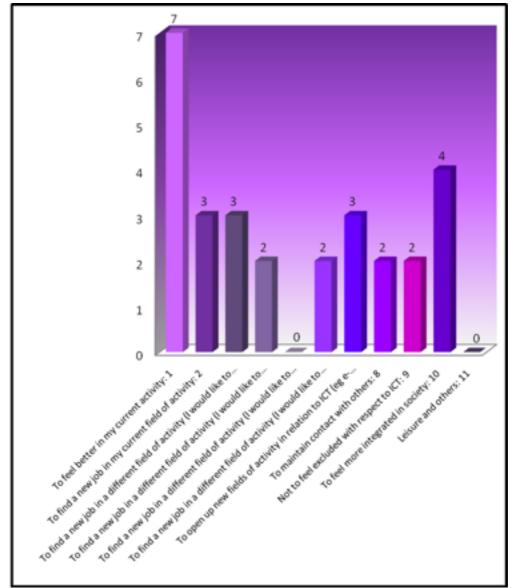


Figure 8. Interest in ICTs (Intelekti Ltd., Bulgaria)

The largest part of the students believes that ICT training will help them feel more secure at their present job. Another significant part of the students would like to improve their skills in ICT to help them find another, set up own business or facilitate their integration into society. As it is shown in the graphics, there is interest in almost all the options, but none has indicated that he/she wishes to work in a public institution, nor that he/she wants to study ICT for entertainment. Interests of all are entirely directed to professional development and improvement in the private sector.

9) What do you mainly use ICTs for?

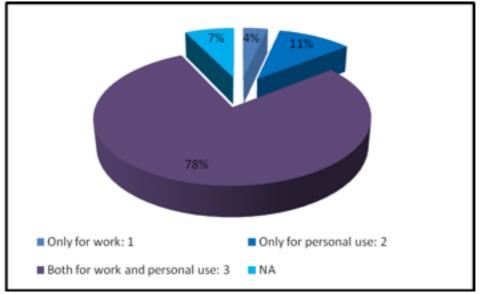
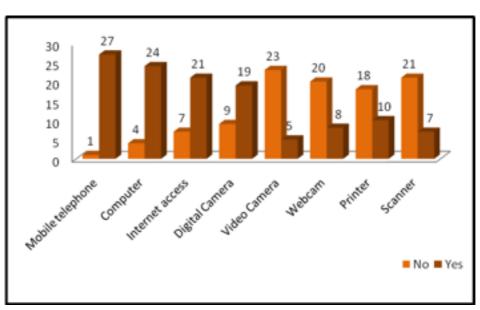


Figure 9. Uses of ICTs (Intelekti Ltd., Bulgaria)

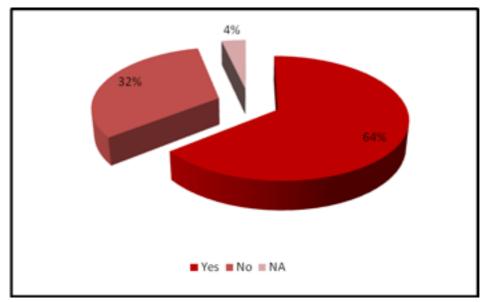
Almost all the respondents use ICT for work and personal needs. This result is not surprising since ICT has versatile application. Very few people use computers and new technologies for business or personal use only. The likely reason is the lack of a computer at home for some, and a profession in a field which does not require the use of a computer - for others.



10) State those ICTs that you have at home and use regularly

Figure 10. ICTs at home (Intelekti Ltd., Bulgaria)

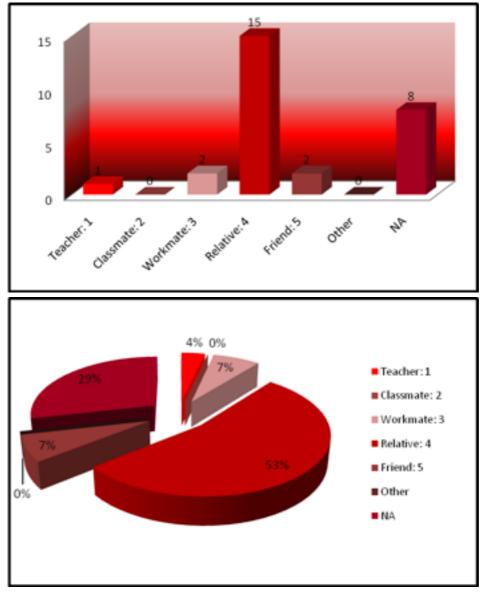
In one way or another everyone uses different kinds of ICT at home. It suggests that people have basic knowledge in modern technologies and it is not completely new for them what they study. The principles of operation of mobile phones, computers, cameras, webcams and others listed in the table are almost the same or very close. Obviously the mobile phone and the computer with internet access are an integral part of our daily life.



11) Can you count on someone to help you if you have problems when using the ICTs?

Figure 11. Help in ICTs (Intelekti Ltd., Bulgaria)

More than half of the students indicate that they count on somebody if they need help with ICT. The reason for this could be that people are eager to learn and they use various means to achieve it, no matter if they are able to attend courses or not. Assistance from colleagues, relatives and friends is a good opportunity to get at least basic knowledge necessary to help students do their specific job or be able to cope with the future tasks.

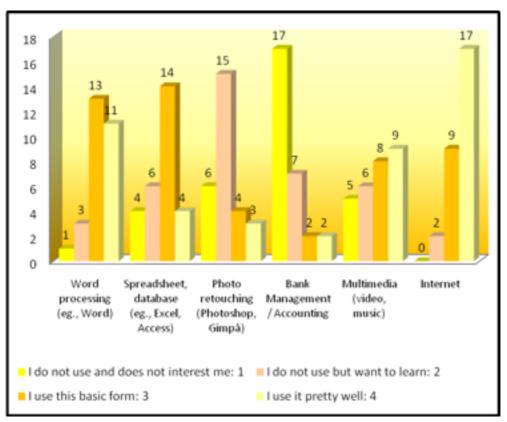


12) Who helps you when you find difficulties in using ICTs?

Figure 12. People helping in ICTs (Intelekti Ltd., Bulgaria)

If needed 53% count on a relative, probably children or other younger relatives. The big percentage of people who did not answer is due to the previous question – those people do not count on anybody. Percentages are equally divided between those who, if necessary, seek help from colleagues and those looking for help from a friend. Hardly does anyone ask the teacher for help. The reason is that it is easier to ask for help somebody they know, thus they feel more comfortable and confident when sharing their problem. Another possible reason is that when confronted with a problem, it is usually at home or at work, and then it's easier to ask people who are around, rather than look for the appropriate teacher in the discipline. Usually younger members of the family and younger colleagues at work are very well

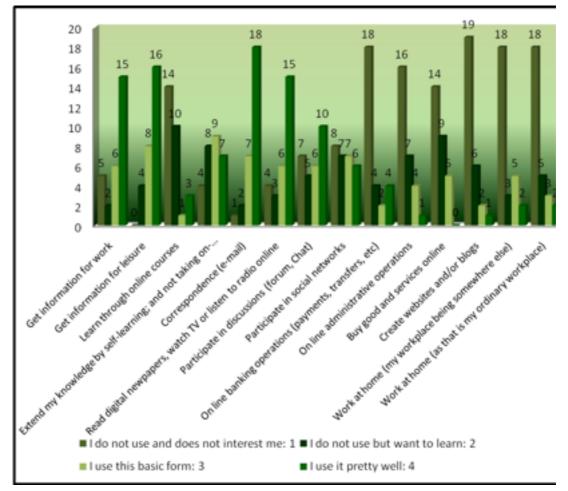
educated in the field of ICT and are reliable helpers for their colleagues or relatives at a beginner level.



## 13) What do you use yor PC for?

Figure 13. Uses of a PC (Intelekti Ltd., Bulgaria)

As it is shown on Figure 13, there is almost complete lack of interest in Internet banking and accounting among our students. The reason is this area is specific, it is necessary to have the basis of relevant education, so those willing are usually fewer in number. Another reason is that the Bulgarians, especially the elderly, have little confidence in online banking. They prefer to manage their finances personally and go to the bank. Generally, the computer is used for surfing the internet and word processing. Most students have basic knowledge in Microsoft Office applications, Internet, multimedia and photo retouching programs. The reason for this strong interest is that these software products are used not only for pleasure and personal needs, but also for work - for example, they can me used to produce advertising materials of own products. Advertising is an expensive investment, so making advertising materials on one's own can save significant costs. Knowledge of programs for processing graphics allow for finding a good job in a field which currently has solid market demand.

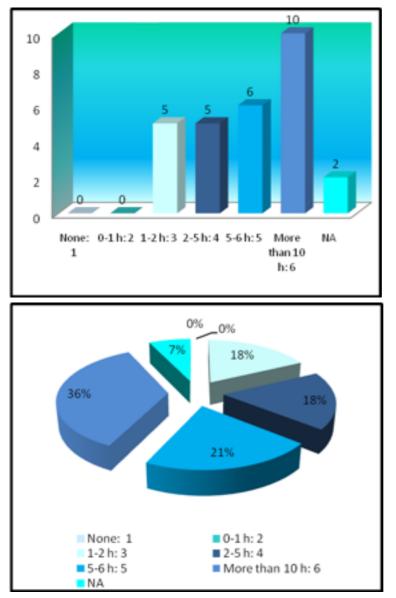


#### 14) What do you use the Internet for?

Figure 14. Uses of Internet (Intelekti Ltd., Bulgaria)

Most of the respondents use the Internet primarily as a source of information - various web sites, online radio, television and newspapers, to maintain communication - email or chat, and for entertainment. Elderly people are still prejudiced against the use of computers and Internet for online banking, administrative services, e-work, e-learning or online shopping. At the same time, however, most of them would like to learn how to do some of these activities. Therefore, such results are shown in the graph - the same activities have been marked by both the highest number of people who are not interested in them and the highest number of those who would like to learn to use the Internet in this way. Interestingly, the elderly people show willingness to participate in the social networks such as Facebook, My space etc. Lack of sufficient social networking among them provokes a desire to explore different ways for communication with other people with similar interests. Internet offers great opportunities and

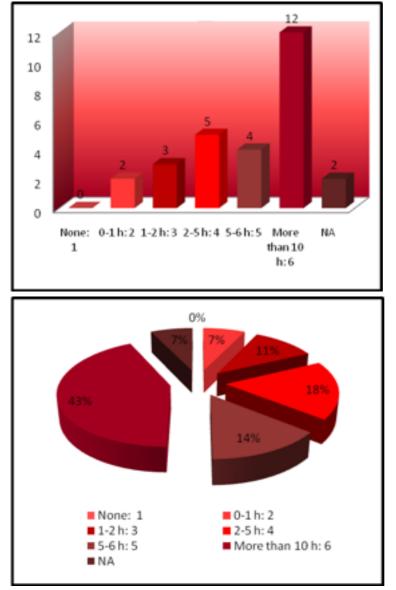
conditions for this, as it connects people who would hardly have had the opportunity to meet and exchange ideas.



15) How many hours a week do you usually use your PC?

Figure 15. Hours a week using a PC (Intelekti Ltd., Bulgaria)

Nowadays, the computer occupies most of the people's time in their everyday life. As it is shown in the graph, even the elderly people actively use it at least for an hour every day.



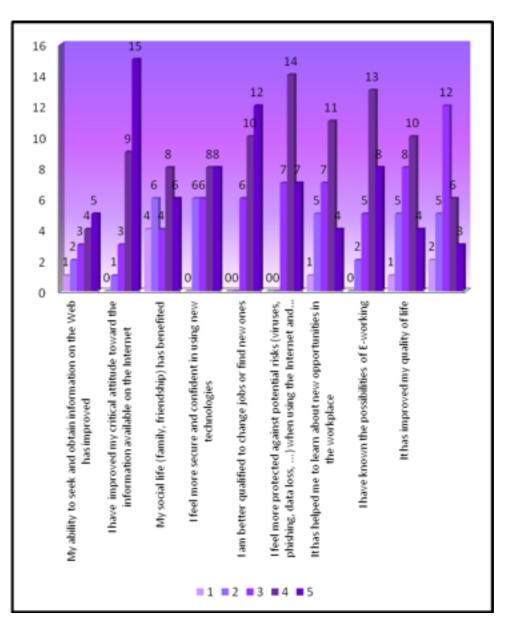
16) How many hours a week do you usually surf the Internet?

Figure 16. Hours a week using Internet (Intelekti Ltd., Bulgaria)

Internet is part and parcel of the computer. The world wide web is an integral part of our life. It facilitates us both in our work and personal life, as it helps us save time and money and offers a wide range of options for entertainment. The time spent on the Internet is growing. The more we know about the opportunities offered online, the more

we use them. When the elderly people become aware that they have already acquired the skills and understanding of what Internet is and how they can use it, the time spend online will increase. In regard to the process of study, the time spent online is less due to the following reasons: on one hand, those people are still lacking confidence in their abilities, and on the other hand, some of them do not have computers at home or do not have enough time for practice apart from the time when they attend the ICT course.

#### PERSONAL PERCEPTION



17) Range from 1 to 5

#### Figure 17. Range from 1 to 5 (Intelekti Ltd., Bulgaria)

"My ability to seek and find information on the Web have improved" and "I feel more secure and confident in using new technologies "have been given the highest marks, i.e. the greatest number of students believe that the ICT course, which they have undergone, has helped them navigate more skillfully in the flow of information on the Internet and extract the maximum from the information they need or find useful. The training has given them confidence in the use of new technologies. The ICT course proves to have little or no impact on the students' quality of life, as well as their perception of the information found on the Internet. Despite the acquired information on the issue as a result of the completed training, students have not seriously changed their opinions. The students have assigned marks from 2 to 5 to assess the extent to which their social life has changed since their participation in ICT courses. They following statements have also been highly evaluated: "I'm better qualified to change jobs or find new ones", "I feel more protected against potential risks on the Interne", "I have found new opportunities in the workplace" and "I have known the possibilities of e-working". As it is seen in Figure 17, students have assessed very positively their ICT training. According to them, it has substantially helped them improve their self-confidence in the modern IT society.

In conclusion, interests of people 45+ in ICT are limited mainly to the necessity of acquiring new and improving already acquired skills related to their professional development. Most of the elderly people think training is unnecessary as they consider themselves too old to study. The use of ICT for pleasure among people of this age group has been reduced to a minimum, and visiting ICT courses as a leisure time activity is quite rare. On one hand, it is due to the difficult economic situation in Bulgaria over the last years. On the other hand, it is due to the "self-study" aided by friends and relatives that is getting an increasingly popular form of study. In general, people believe that it is necessary to attend ICT courses. They also demonstrate their strong willingness for training and development.

# STATISTICAL ANALYSIS FOR THE ITALIAN CASE:

CHART OF DATA	
The total group under study (N)	23
Participants (n)	19
Percentage of population having or lacking the characteristic under study ( $p = q$ )	0,5
Reliability	95%
Units of standard deviation in the normal distribution (Z)	1,96
Standard error (SE)	9,58%

# **GENERAL DATA**

1) Sex

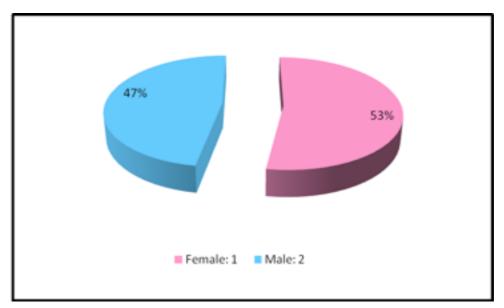


Figure 1. Sex (FNP-CISL, Italy)

The data show that, within the case study group, the majority is represented by female. On the other hand, we have a more balanced distribution inside the group who is going to attend the course.

In some way, we can say it reflects the gender distribution inside the organization: 54,49% of female and 45,51% of men, being the total registered members 2.201.150 (2009 data).

## 2) Marital status

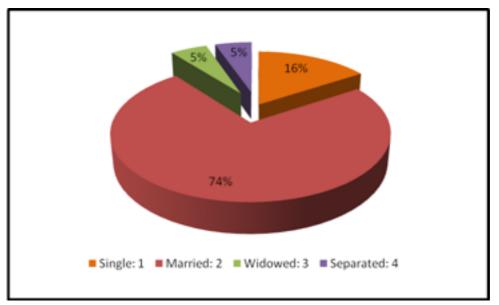
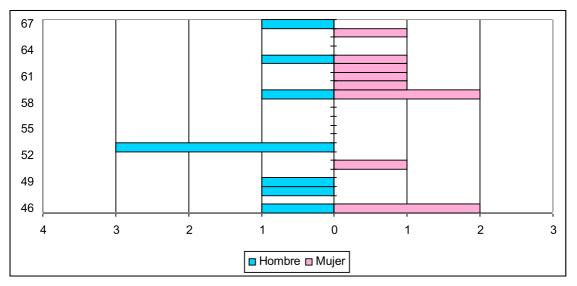


Figure 2. Marital status (FNP-CISL, Italy)

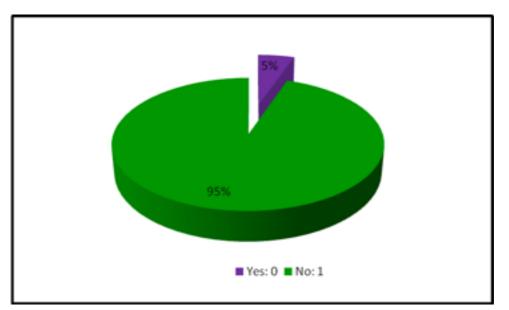
In the Italian case there is a strong majority of married people, 74%. Even if, as any other kind of job or volunteer committment, the trade union activity implies a form of socialization, we have to consider that "socialization" is not the main motivation in our case study. It is important to note that this trade union has a Catholic inspiration, so marriage is still considered an important institution, even more in the age group involved in the project.



# 3) Age

Figure 3. Age (FNP-CISL, Italy)

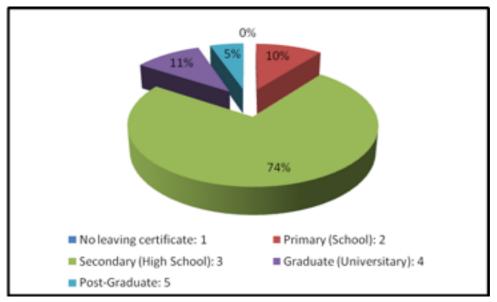
The avarage age of the participants strictly involved in the project is 60, ranging from 58 to 68 years old. This sample reflects the human resources of the organization, being a pensioners trade union, there is a majority of elderly people committed in the activity. Our target group is composed in its majority by retired people, still very active in their social life, that collaborate in a voluntary way in the smallest local structure of the trade union, called "lega". The several local structures rely also on young workers and fellow workers, but all the managerial offices must be held by retired people.



#### 4) Do you live alone?

Figure 4. Living alone (FNP-CISL, Italy)

Only one person in the target group declares to live alone. So, we can suppose that, besides the married people, the large majority of widowed, divorced/separated or single people live with someone else, within the family, with children or relatives or chose some cohabitation model.



### 5) Qualifications

Figure 5. Qualifications (FNP-CISL, Italy)

The majority of students are undergraduated, with a secondary high school educational level. It reflects, on one hand, the average situation of the retired people in Italy and, on the other hand, a low percentage of graduated trade unionists, especially of the "old" generation. Nowadays, the situation is gradually changing and a high educational level is becoming an important requirement, but for a long time the main appreciated skills and qualifications have been gaining experience in the field, that is to say, the trade unionist action and activity in the work place. The complexity of current society, with so many social, political and economic issues interconnected, calls for different means of analysis.

# 6) Current occupation/job

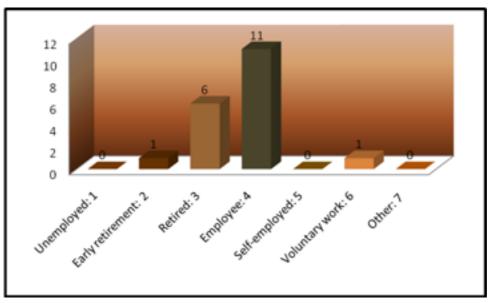
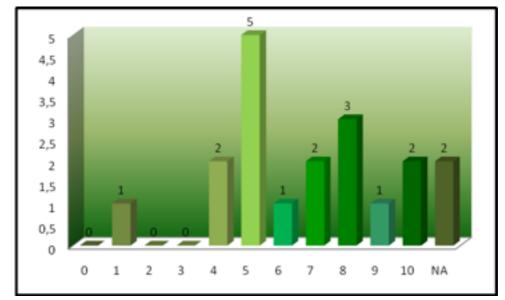


Figure 6. Current occupation (FNP-CISL, Italy)

Around half of the survey participants are employee of the Fnp-Cisl headquarter in Rome, with ICT skills properly adequate to their job tasks. The remaining are volunteers, mostly retired people, that carry out their activity in the local FNP "lega".

# **USE OF ICTs**

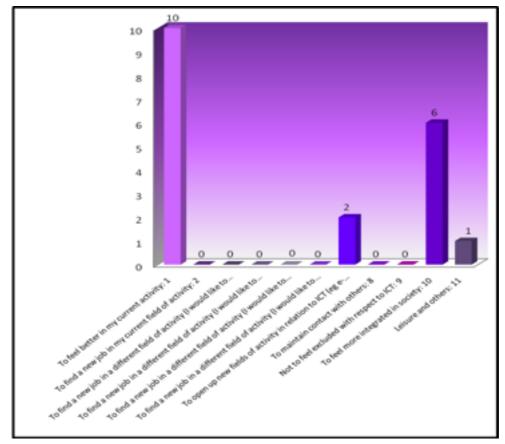
This section is devoted to present ICT training needs and skills of the interviewed people.



7) Need to learn how use ICTs

Figure 7. Need to learn ICTs (FNP-CISL, Italy)

This first question asks to rate the need to acquire ICT skills with a score that comes from 1 (not interested at all) to 10 (very interested). 5 of the 19 interviewed people answer that they are more or less interested, 9 people answer with a score from 6 to 10, emphisising that they are interested to follow a ICT course. The results of this part of the survey have allowed to identify a homogenous group of potential students for the ECOM 45 ICT course, that resulted interested to improve their own ICT skills.



#### 8) Interest in ICTs

Figure 8. Interest in ICTs (FNP-CISL, Italy)

For what concerns the reason to improve their own ICT skills, the figure 8 gives evidence that 10 of the 19 interviewed people need to feel better in the current activity. This results the most diffused reason. Another important motivation is to feel more integrated in society, chosen by 6 interviewed, 2 other people think that ICT may be considered a mean to open up new fields of activity. Only 1 person relates the use of ICTs to leisure time. One reason of this low preference could be that the target group have not yet a deep knowledge of the possibilities offered by ICTs even to better, enrich or to ease their free time. Summing up, the age and the role of the target people in FNP lead to concentrate the replies on two main aspects: the contribution that ICT can give to improve the performance of the job and social inclusion

## 9) What do you mainly use ICTs for?

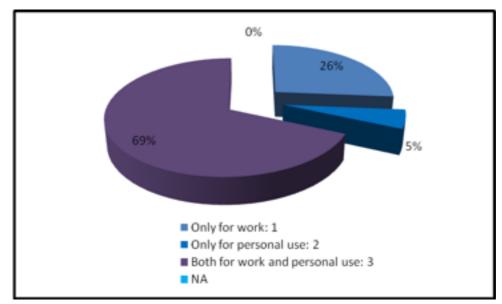
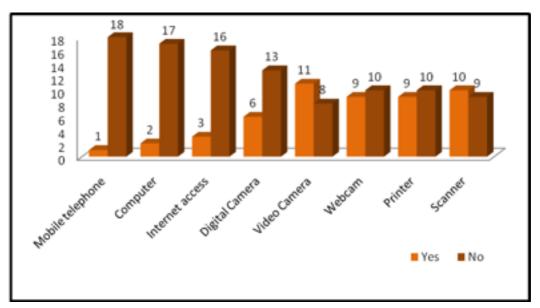


Figure 9. Uses of ICTs (FNP-CISL, Italy)

Regarding the use of ICT, it emerges that around 70% of the group uses ICTs both for work and personal use, whereas only 26% of the interviewed uses ICTs only for work while only 1 people sees in the ICTs a useful tool for personal uses. This reflect the considerations made analyzing the answers to the previous question. The majority of the group has not a proper perception of the potentiality of the ICTs in terms of improving personal interest and leisure time.



10) State those ICTs that you have at home and use regularly

Figure 10. ICTs at home (FNP-CISL, Italy)

These are the ICT devices that our students have got and enjoy most frequently:

- (i) a mobile phone, a group of 95%,
- (j) a PC, a group of 89%,
- (k) access to the internet, a group of 84%,
- (1) a digital camera, a group of 68%,
- (m)a digital videocamera, a group of 42%,
- (n) a webcam, a group of 47%.
- (o) a printer, a group of 47%, and
- (p) a scanner, a group of 42%.

# 11) Can you count on someone to help you if you have problems when using the ICTs'

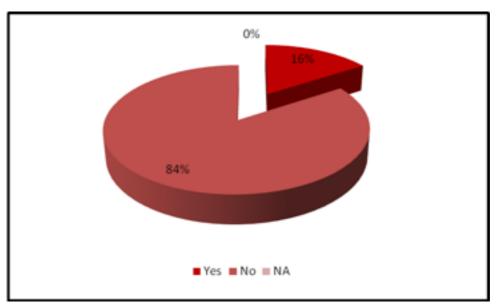
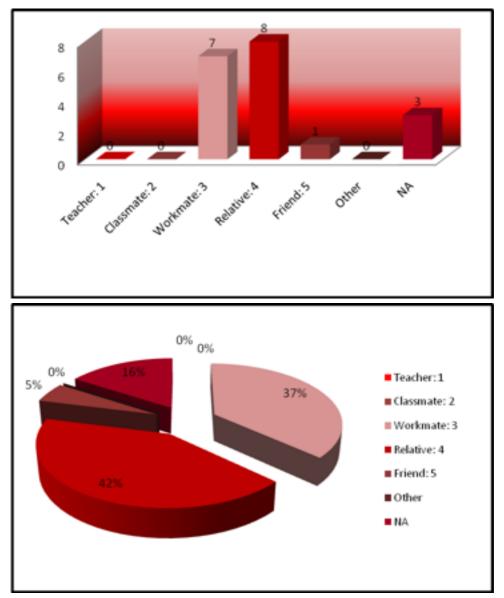


Figure 11. Help in ICTs (FNP-CISL, Italy)

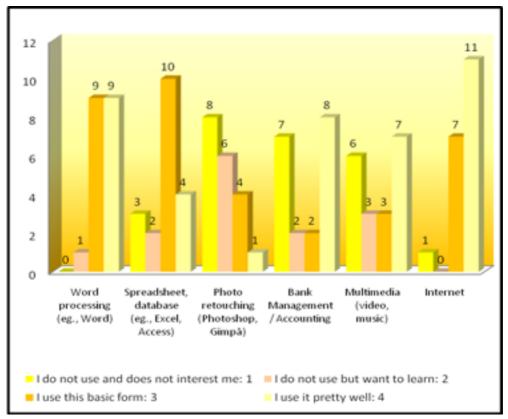
A large majority of the group, 84%, can count on the support of someone to solve problems deriving from the use of ICTs instruments. This kind of help is a key factor to stimulate this target group of elderly people, to approach the ICTs field.



12) Who helps you when you find difficulties in using ICTs?

Figure 12. People helping in ICTs (FNP-CISL, Italy)

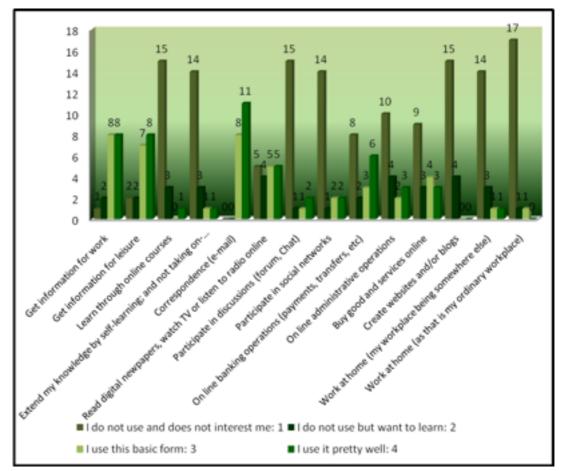
42% of the group consider relatives the main reference in case of any problem rising from the use of ICT. It means that the use of ICT at home is a valid instrument to become confident with the pc. Another good percentage replies that the main source for solving ICT difficulties is represented by the support of workmates, 37%. This last element confirms the important role assumed by ICT skills in the performance of FNP job and the sense of cooperation which is developed inside the trade union federation.



#### 13) What do you use your PC for?

Figure 13. Uses of a PC (FNP-CISL, Italy)

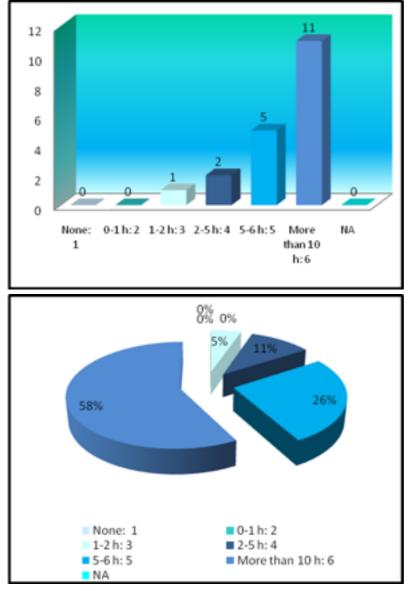
A more detailed analysis of the use of pc, give evidence that the majority of our students uses the computer in its basic way, word and excel mainly. As for Internet, a high percentage of them uses this tool but, also in this case, in its basic form. They do not appear so prepared in some more sophisticated use of the computer, such as photoshop, multimedia or bank management. The digital divide is quite evident in this field, as elderly people is more reluctant, mainly for "cultural" reason, to approach technological solution for their daily life. They should be encouraged to overcome the barriers that prevent a wider use of the ICT.



14) What do you use the Internet for?

Figure 14. Uses of Internet (FNP-CISL, Italy)

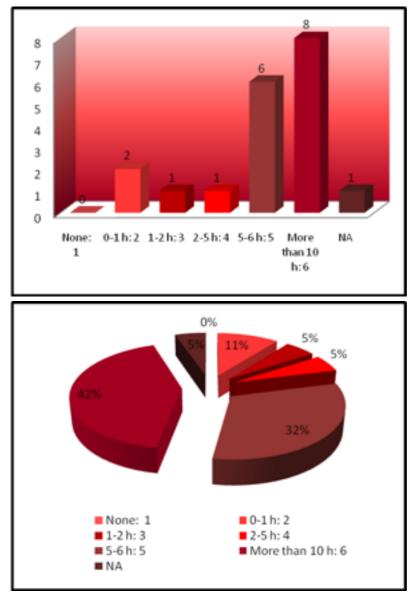
As mentioned before in relation with the use of the computer, our students use internet especially for the e-mail. They are able to use internet pretty well also for both getting information for work and for leisure. They show a low degree of interest in internet possibilities such as social networks, forum, chats or on line courses. On the contrary they are interested to improve their skills for using internet for shopping online, for carrying out administrative or banking operations. Some of them already uses internet for reading the newspapers on line or listening to the radio.



15) How many hours a week do you usually use your PC?

Figure 15. Hours a week using a PC (FNP-CISL, Italy)

If we consider the time spent in front of a computer, it emerges that most part of the interviewed people spend more than 10 hours a week. Around 20% of the interviewed spend 5-6 hours a week and only 3 people use the pc for less than 5 hours. This gives evidence that the use of pc is constant for the majority of the target group.



16) How many hours a week do you usually surf the Internet?

Figure 16. Hours a week using Internte (FNP-CISL, Italy)

If we ask how many hours a week they use internet, it emerges that 14 people spend at least 5 hours a week, 8 of these people spend even more than 10 hours. Only 4 people spend less than 5 hours. It means that the time spent in front of the pc and the time spent in internet is more or less the same.

Summing up, we can argue that the above mentioned characteristics give evidence the Italian traget group uses pc in a basic way both for internet or to prepare documents in word or excel. The use of pc is quite constant. It allows the interviewed to keep a certain level of trust in the use of pc, even if most part of them need the support of relatives and workmates in case of uncertainty.

## PERSONAL PERCEPTION

### 17) Range from 1 to 5

None dates for Italian case

# STATISTICAL ANALYSIS FOR THE ESTONIAN CASE:

CHART OF DATA	
The total group under study (N)	30
Participants (n)	28
Percentage of population having or lacking the characteristic under study (p = q)	0,5
Reliability	95%
Units of standard deviation in the normal distribution (Z)	1,96
Standard error (SE)	3,84%

#### **GENERAL DATA**



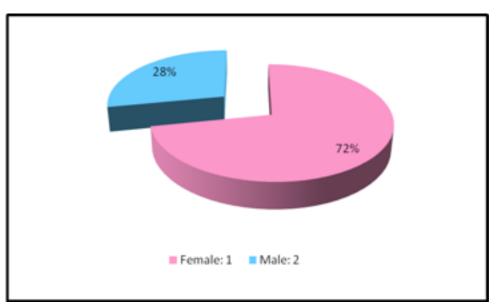


Figure 1. Sex (YSBF, Estonia)

As the figure shows most of the older people who take the E-communication courses in Estonia are female. It makes sense since the participants in this study and the courses were mostly unemployed people. In Estonia the unemployment rate is highest within the younger female population followed by older (45+ years) women. Another reason for this is that older women mostly didn't need to use computers for working, nowadays

however the knowledge of modern tools is essential for almost any kind of typical jobs offered for women.

# 2) Marital status

On this figure it is shown that 50% of people taking e-communication courses are married. For them the need for this course is probably mostly related to new working possibilities and finding job offers. At the same time 50% of the people are currently not in a steady relationship. For them these courses can provide an opportunity for communicating to others over the Internet. Estonia is highly developed in the IT field and mostly all homes have at least one computer, personal laptops are a new trend as well. This means that much of the leisure time is spent and the work is done on the computer. The Internet provides us with many different networking opportunities, such as e-forums or websites devoted to socialising (f.e. Facebook or other similar).

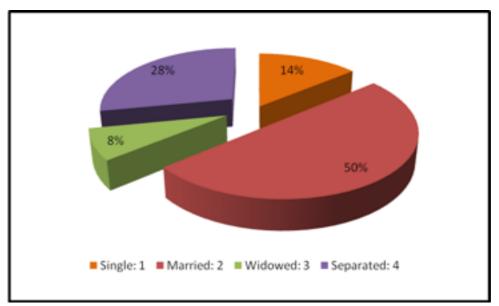


Figure 2. Marital status (YSBF, Estonia)

# 3) Age

Substituted by Age Pyramid Figure 3. Age (YSBF, Estonia)

#### 4) Do you live alone?

The figure shows that only 19% of the participants live alone. Still this does not mean that 81% of these people have a partner in life. In Estonia it is quite common that people raise their children alone. As shown on the figure 1 most of the participants were female and most of the single parents are also female. Therefore this figure does not mean that the socialising over Internet aspects of the studies are underestimated. However this graphic can rise the need for e-learning on the aspect of finding a new job, since the participants probably have to provide for their children or others living with them.

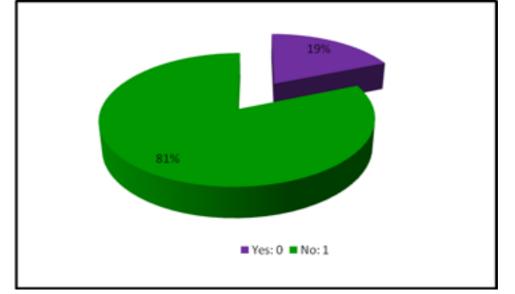


Figure 4. Living alone (YSBF, Estonia)

#### 5) Qualifications

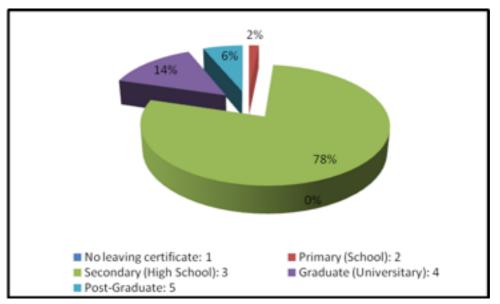
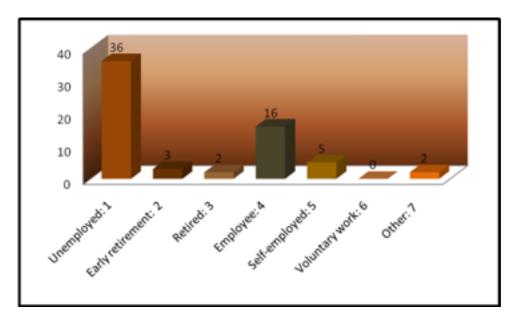


Figure 5. Qualifications (YSBF, Estonia)

Most of the participants have a High School education. This indicates to the development of the technology and society in general. It confirms the fact that knowledge of e-communication was not needed for working before when we are talking about people with a high school or primary school education. On the other hand nowadays it is very important to know how to use Internet and a computer to even find job offers, in addition to this the use of computers for working is also more needed. Other qualifications are in minority and it makes sense that most of the people with the graduate or post-graduate degree already know how to and also have to use computers for their jobs. As for the 14% of graduate and 6% of the post-graduate people the reason for learning about e-communication could be that they want to be more competitive on the labour market and therefore need higher skills of how to use e-tools.

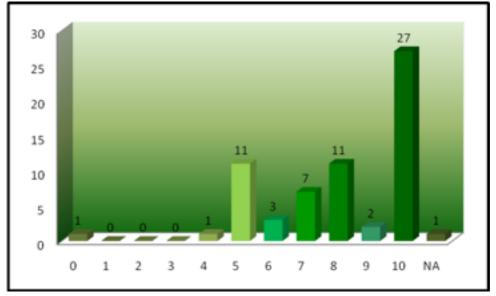


#### 6) Current occupation/job

#### Figure 6. Current occupation (YSBF, Estonia)

As said before most of the participants are unemployed and currently seeking a job. What is interesting about this chart is that there were no people involved in voluntary work. This indicates to the overall tendency in Estonia – in our society it is not very common to do voluntary work, especially among the older generation.

#### **USE OF TICs**



#### 7) Need to learn how to use ICTs

Figure 7. Need to learn ICTs (YSBF, Estonia)

This figure shows that the need for ICT learning in Estonia among the older people is very high since most of the participants ranked their need for this on the highest possible value. There need differes from the moderate to highest, giving us the information that teaching ICT to the older generation is in fact something we need to work on and promote. This study therefore is very important for our society for letting us know what we need to do for a better and more sustainable society and labour market.

#### 8) Interest in ICTs

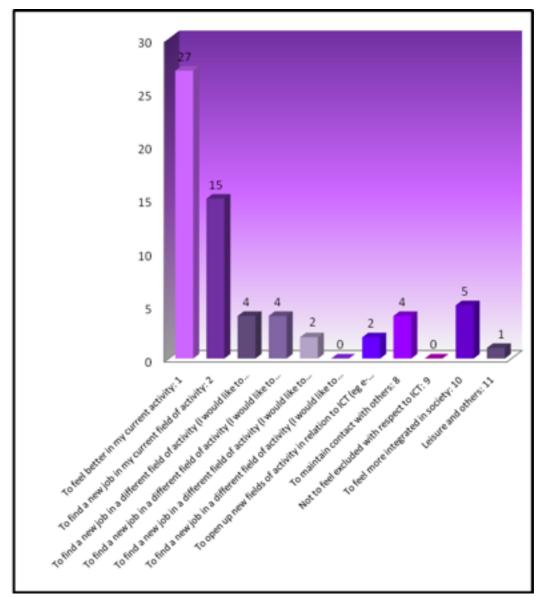
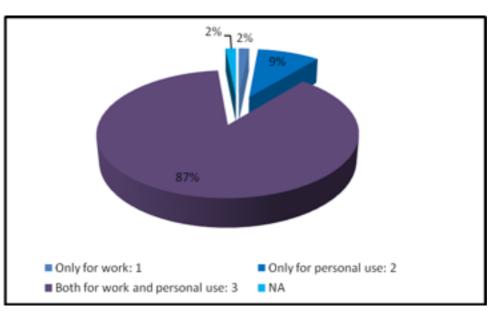


Figure 8. Interest in ICTs (YSBF, Estonia)

In Estonia the older people are mostly interested in ICT to improve their qualifications in the field they are currently working in. The second reason for ICT learning has to do with finding a new job on their current field of activity. This shows that older people are not very enthusiastic on the issue of training for a new profession but rather need to increase their ICT skills to continue on their current profession and be able to adapt to the technological changes. The figure also shows that the people who participated in the study are not interested in starting their own business or company, especially the kind of that would need them to re-train or learn something completely new. This could be because of the economical crisis and the fear of taking a risk (and starting your own business is always at least a bit risky) at their age. The figure also indicates that most of the older people in Estonia would like to work as employees not as employers. This might have to do with the fact that the people of the older generation were studying their professions on the Soviet Union times when the teaching of business was not common.



# 9) What do you mainly use ICTs for?

Figure 9. Uses of ICTs (YSBF, Estonia)

The figure of the use of ICT in Estonia shows that the participants use ICT for both work and personal reasons. The percentage is 87%. This shows that older people in Estonia actually are interested in adapting to the technological changes and the advantages that ICT offers, such as the possibilities to spare time on communication, information transmission, easy typing and correcting mistakes, etc. This also shows that in Estonia ICT technologies and tools are widely used both for work and personal reasons. Only 9% of the participants said that they use ICT for personal use only, and even lesser said that they use ICT for working only, percentage on this case being 2%.

# 10) State those ICTs that you have at home and use regularly

The figure 10 shows that ICT use at home is quite popular in Estonia. Older people mostly use mobile phones, computers and Internet access at home, of course this was to be assumed, after all these three are most widely used ICT tools in any age group. The use of digital cameras is also quite common for approximately 60% of older people use them. The use of mobile phones is the highest and it is not a surprise since mobile phones are very common in Estonia. Nowadays we can even say, that people use mobile phones even more than regular phones. The trend is that younger people often don't even have a regular phone and only use cell phones. The older people don't mostly use video cameras, webcams and scanners at home. The use of printers at home is slightly higher than not using them at home.

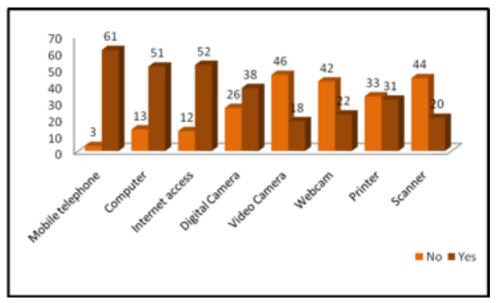


Figure 10. ICTs at home (YSBF, Estonia)

11)Can you count on someone to help you if you have problems when using the ICTs?

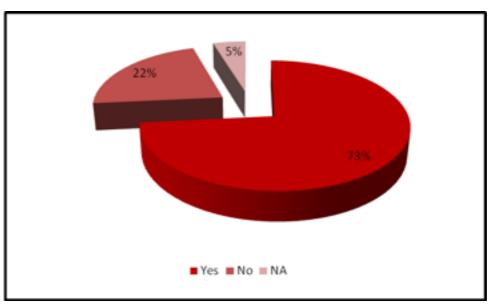


Figure 11. Help in ICTs (YSBF, Estonia)

Most of the older people in Estonia are able to find help in using ICT tools, if needed. The percentage is quite high, being 73%. Usually it would be the children or other younger relatives who will assist the older people with the ICT tools. However, 22% said that they don't have anyone to help them with the use of ICT tools. For them the schooling on this topic is even more important than to those who are able to receive help.

# 12) Who helps you when you find difficulties in using ICTs?

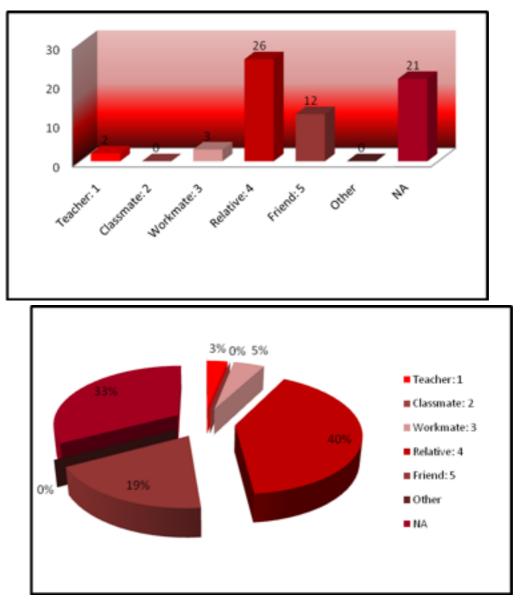


Figure 12. People helping in ICTs (YSBF, Estonia)

Most of the older people said that they receive help with using ICT tools from their relatives (40%), 19% said that their friends are the ones who help them with these tools. 33% of the questionned people did not give any answer at all. Other options got rather low percentages (such as teacher, workmate, etc.). This shows that Estonian people are more open to turn to the people they know well and have more trust in. This could indicate that discreteness is a typical Estonian personality trait. Estonian people often feel that they don't want to bother others with their problems so turning to friends and family is very common.

13) What do you use your PC for?

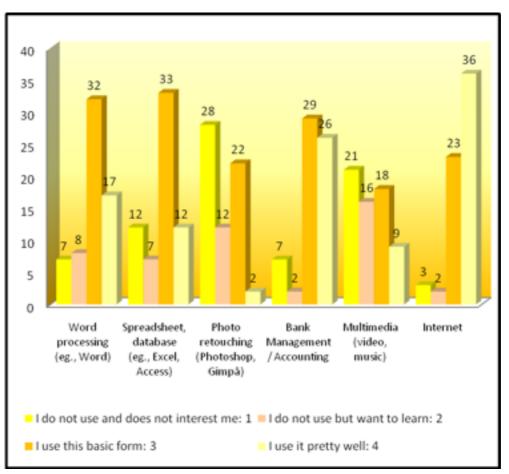


Figure 13. Uses of a PC (YSBF, Estonia)

Older people in Estonia think that they are most capable in using the Internet. It is probably because using it is pretty easy and doesn't require as much knowledge of the operating programs as Word, Excel, etc. The know-how of using word and spreadsheet database programs is on the basic level for most of the participants, bank management and accounting is not too difficult either, ranking differs mostly from the highest to the second from highest level of value.

The older people are basically not interested in using photo retouching programmes, however, there are some who are using them and some who want to learn. Multimedia is not very popular either in that age group. This might have to do with the fact that older people who participated in this study haven't felt the need to do digital art since it is not that common for their generation. They prefer regular drawing or playing instruments rather than to use Photoshop for art or Reason for making music.

Still there are some people, who would like to learn about multimedia programmes and photo retouching.

14) What do you use the Internet for?

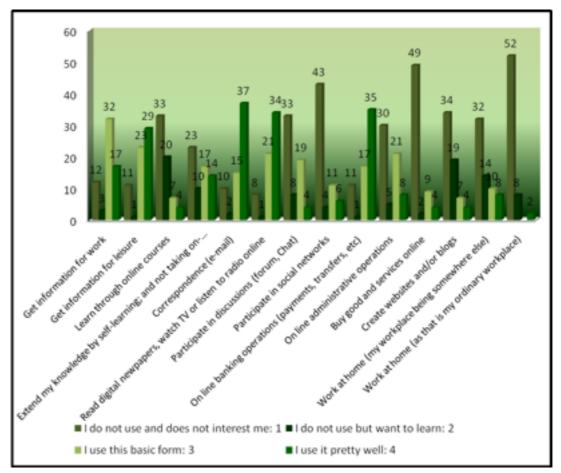


Figure 14. Uses of Internet (YSBF, Estonia)

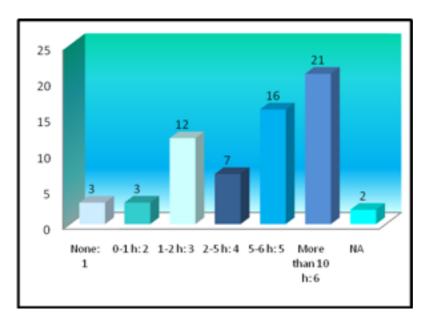
The participants in Estonia use the Internet for quite different reasons and have a different qualification of actions they can conduct in the web. Most common is the use of e-mail and this does not seem to be difficult either. Internet banking and accounting is also common, indicating that older people in Estonia don't have much trouble of learning to use these tools because it is a way to provide oneself with more spare time. The use of chat and forums is not a problem as well. People ranked their skills on the highest level on these three tools the most.

Using the Internet to get information for work is also common, but the skill is mostly evaluated as a basic level skill. However, if one is working at home, being his regular workplace, the participants said that they do not use nor feel the need to use Internet for working. This might be because usually the older people who work at home don't have a job that requires the use of Internet. They mostly do something practical such as cooking, handicraft or other. On the basic level skill the other two most common values are to find activities for leisure time and to use media channels (watch TV, read newspapers and other). Interestingly, the use of media channels on the Internet is ambivalent since some people use is and others are not interested in using these possibilities at all. This may have to do with the tradition of watching news on television and/or reading newspapers.

Another possibility that older people in Estonia don't use that much on the Internet is participating in social networks. This is more common for the younger generation, for almost everyone has an account on some kind of social networking page (such as Facebook, Orkut or other).

Older people in Estonia are not very interested in pursuing goods online or use e-shops or buying e-services. This might have to do with the fact that people mostly like to see what they are buying first hand. Older people might also not know how to use e-shops or are afraid of some kind of fraud. It seems that e-shops are not that important for them to take the time to learn how to use them.

On the value of what older people do not use but would like to learn when it comes to using the Internet the most popular answers were: to learn through online courses and to create a website or blog. This shows the general interest in the development of information society and the need for creativity. Making your own website or blog is a symbol of one's uniqueness and could be seen as a landmark, a wish to share your personality with others. While younger people mostly use networking websites for this kind of self-expression, the older people are more interested in having their own separate website or blog.



#### 15) How many hours a week do you usually use your PC?

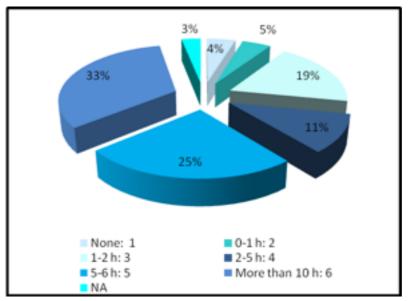
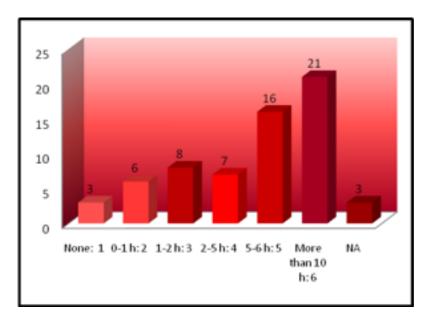


Figure 15. Hours a week using a PC (YSBF, Estonia)

Figure 15 shows that older people use their PC quite a lot, most of the participants estimated their weekly use for over 10 hours (33%). This means that they spend their free time on computers several times a week. 25% of the participants estimated their weekly use of their own PC to 5-6 hours. Since television and also newspapers are still very popular in the older age group, this shows that the older people are quite interested in technological advantages computers have to offer. 19% said they use their computers 1-2 hours a week. Regarding that quite a lot of work is done on the computer as well, the use of computers is popular even at home. Only 4% of the participants said they don't use their PC-s weekly. From this figure we can come to the conclusion that Estonia is in general quite developed on the technological scene when it comes to using computers even by the older generation.



16) How many hours a week do you usually surf the Internet?

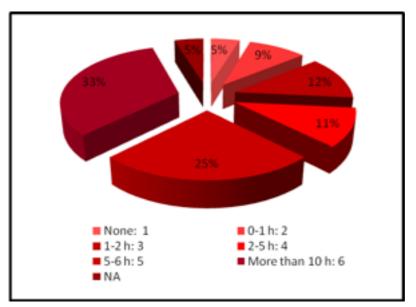


Figure 16. Hours a week using Internet (YSBF, Estonia)

The percentages of computer use and Internet use in the studied age group are very similar. Only 5% said that they do not use Internet weekly. Most of the participants use the Internet more than 10 hours a week (33%) and 25% said that they use Internet 5-6 hours a week. This means that Internet use ise very popular in the older generation in Estonia. 12% said they use Internet 2-5 hours a week, 11% use it 1-2 hours and 9% of the participants in this study claimed to use the Internet for one hour a week. Even though most of Estonian homes have Internet access and computers, there are still a few that do not. It would be logical, that these people who do not have Internet access at their own home use it less, since they would need to visit a friend or a public Internet access point for surfing in the net. All in all we can conclude that in Estonia it is not a problem for older generation to surf on the Internet, but they still would need to learn about some specific tools that ICT can offer both in computer and Internet use.

#### PERSONAL PERCEPTION

#### 17) Range from 1 to 5

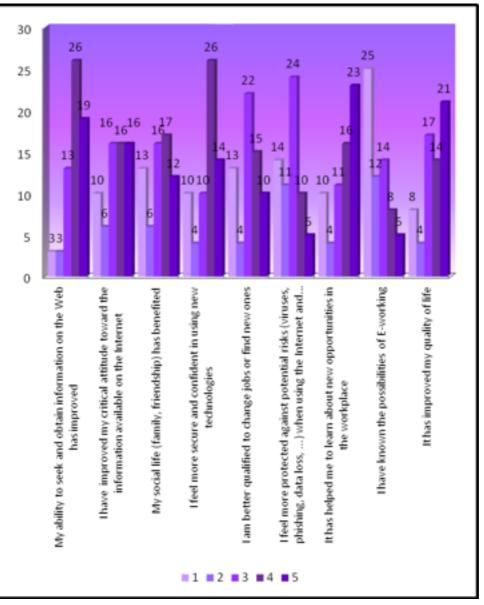


Figure 16. Range from 1 to 5 (YSBF, Estonia)

Figure 16 shows personal perception on ICT learning in Estonia for the people over 45 years of age. The results were positive. Most people said that they have discovered new opportunities in their working place that the course has improved their quality of life and also their knowledge on how to seek and obtain information on the web has improved rating all these with the highest value being 5 points. Although on the last part of how to seek and obtain information a bit more people rated the value with 4 points, but still 5 and 4 were both highest on this aspect. As information seeking and obtaining can be quite tricky on the web sometimes, this surely is a knowledge that people need to improve for working and free time or even studying. This also applies to the younger generation, especially for teenagers and younger.

3 points were highest for the arguments saying "I feel more protected against potential risks on the Internet" and "I am better qualified to change job, find a new job." This shows that people are still afraid of potential schemes and viruses on the web, but have a basic knowledge on how to identify potentially dangerous websites that might try to harm their computer. Still rating this at 3 points is rather logical because the viruses and other risks on the web are continuingly developing and one should always stay alert. Maybe this is a good topic on what we should teach on ICT courses. As for being better qualified to change jobs it makes sense that after learning about ICT you do feel somewhat more confident, but cannot really say that you are too confident since the knowledge of ICT is pretty widely spread in the whole society so this only cannot be the reason why a new employer would hire that specific person. Still this will be beneficial to even try to find a new job.

The benefit to one's social life rated varied between 1, 3, 4 and 5 points. This probably depends on how much a specific person uses Internet for communication, if they have someone important abroad or if they are interested in finding new acquaintances on the web.

The participants also said that their critical attitude toward the information on the Internet has improved, ranking this argument with mostly 3, 4 or 5 points. This knowledge is rather important and should be added to the ICT courses.

As for ranking any argument with the value of 1 point there was only one significant argument, namely "I have known the possibilities of e-working." This indicated that to these people the ICT course was very important and enlightening. We can conclude that even though Estonia is quite well developed on the ICT field we still need to teach our people about the possibilities they really have to improve their quality of life.

# STATISTICAL ANALYSIS FOR THE HUNGARIAN CASE:

#### HUNGARY

CHART OF DATA	
The total group under study (N)	22
Participants (n)	22
Percentage of population having or lacking the characteristic under study $(p = q)$	0,5
Reliability	95%
Units of standard deviation in the normal distribution (Z)	1,96
Standard error (SE)	0,00%

#### **GENERAL DATA**



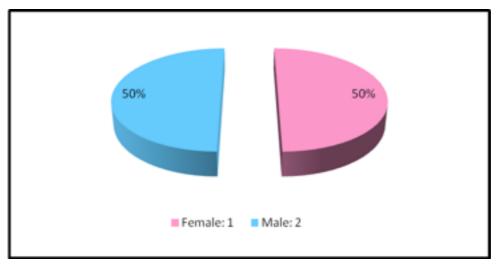


Figure 1. Sex (Net-Mex Ltd., Hungary)

During the first half of 2010 we organised 2 ICT courses in Nagykovácsi. The participants were divided into two groups based on their ICT knowledge: beginners and possessors of basic knowledge and skills (intermediate group).

The percentage of men and women in the courses was equal, but it was different between the beginner and the intermediate courses. Both courses were organised during the afternoon, after the traditional working time.

## 2) Marital status

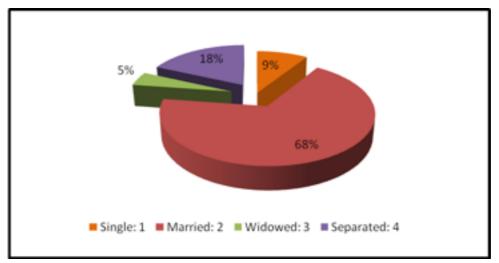


Figure 2. Marital status (Net-Mex Ltd., Hungary)

68% of the participants at the courses were married. There was 1 widower in the group, but the percentage of this marital status did not have a significant importance in the group. Based on further information most of the learners lived within ordered family circumstances. There weren't any learners whose family situation could have influenced in a negative way their learning process.

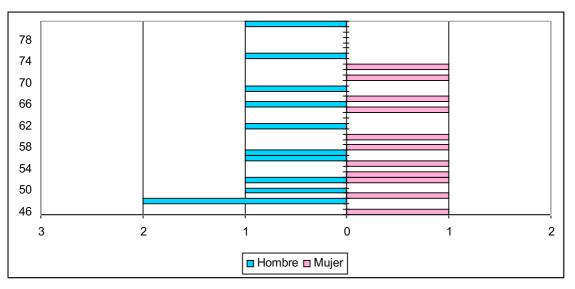
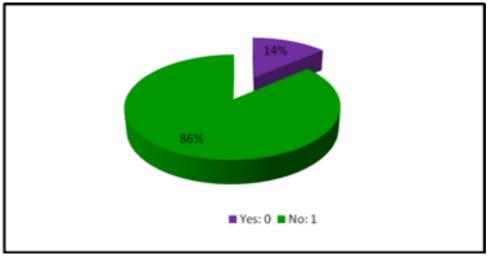




Figure 3. Age (Net-Mex Ltd., Hungary)

From the analysis of the age groups resulted that the age interval was larger in case of men participating in the training than in case of women participants. The oldest participant in the men's group, an 80 years old man was a member of the beginner

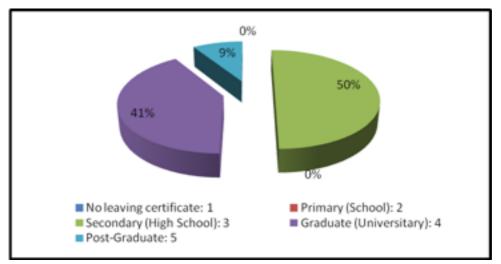
group. Among women, most of the participants belonged to the 55 - 65 years old age group. In the beginner group male participants were mainly older than 60, in case of the intermediate group male participants were mainly aged about 50. The youngest participant at the course was female.



# 4) Do you live alone?

Figure 4. Living alone (Net-Mex Ltd., Hungary)

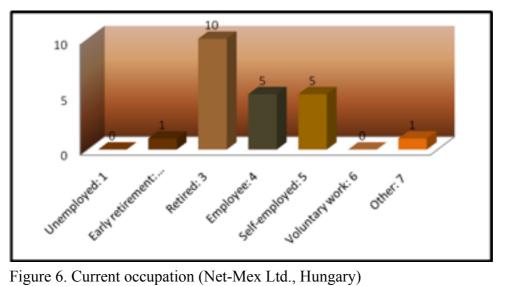
According to the answers to the first question the proportion of those married was 68%, and most of the participants, 86%, lived in a relationship. A high percentage of participants living in a relationship were married. Only 10% of the learners lived really alone.



# 5) Qualifications

Figure 5. Qualifications (Net-Mex Ltd., Hungary)

The learners possessed different educational backgrounds. All participants had at least middle level studies. There was a high percentage (41%) of people with university studies. In the beginner group the percentage of graduates was higher than in the intermediate group. The reason for this was that computers started to spread beginning with the early 90s and by the time they became usual at workplaces, this age group had already retired without learning to use a computer. But, due to their relationship with their children and grandchildren, respectively because of needs for organising their spare time, it became necessary to have basic ICT skills. Members of the 60 years old age group living an active life and maintaining intense social relationships were able to recognize their gaps in this field and could also afford both the cost of acquiring a computer and the cost of the course to gain the needed knowledge. In the intermediate group there were several learners with only middle level studies.



#### 6) Current occupation/job

Figure 6. Current occupation (Net-Mex Ltd., Hungary)

Important parts of the learners' group (almost 50%) were retired. The members of the beginner group belonged entirely to this group of persons. In the intermediate group there were retired persons still active in the field of work. Also, several self-employed participated at the training. They needed ICT knowledge to increase performance in their daily work. In Hungary it does not exist a tradition of voluntary work, many of the participants could not interpret its meaning.

## **USE OF ICTs**

### 7) Need to learn how to use ICTs

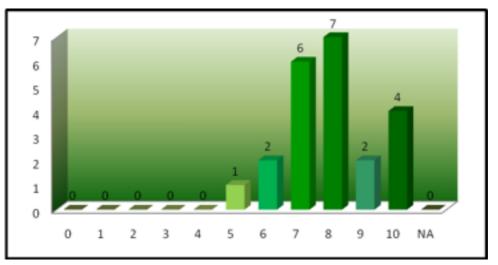
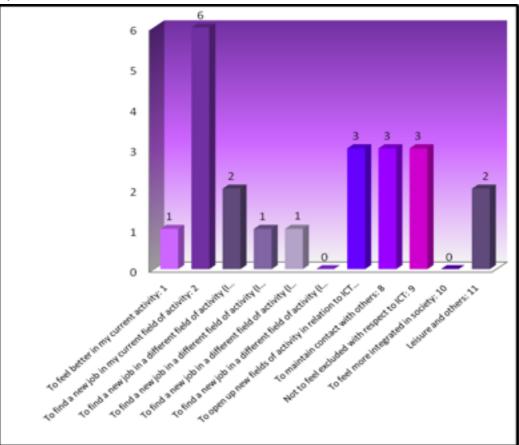


Figure 7. Need to learn ICTs (Net-Mex Ltd., Hungary)

Both groups considered very important learning ICT knowledge and skills. This was the reason they attended the course for. There were only a minimum number of absences, in fact only 1 learner absented.



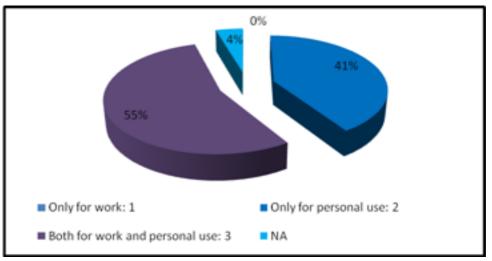
8) Interest in ICTs

Figure 8. Interest in ICTs (Net-Mex Ltd., Hungary)

The main answer given to the question concerning the interest in learning ICT skills was "to find a new job in my current field of activity". This answer was ticked mostly by members of the intermediate group. The answers given by the members of the beginner group were mainly "to open up new fields of activity in relation to ICT" and "to maintain contact with others". The members of this group were mainly interested in learning to use social websites (IWIW) for maintaining contact with others and search on the internet (search engines).

Some ticked several answers for this question but in processing the data only the most relevant answers were taken into account.

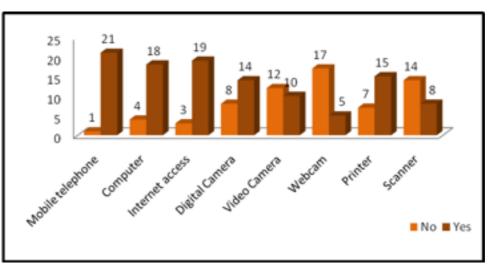
The rest of the answers presented a large spread.



# 9) What do you mainly use ICTs for?

Figure 9. Uses of ICTs (Net-Mex Ltd., Hungary)

The answers given to this question by the members of the two groups were fundamentally different. Members of the beginner group, who were retired and were not present in the labour market, mostly ticked only personal relationship. The members of the intermediate group considered important both the use of ICT for personal and work reasons. Being still active participants of the labour market they considered natural to use ICT in their daily work.



10) State those ICTs that you have at home and use regularly

Figure 10. ICTs at home (Net-Mex Ltd., Hungary)

81% of the learners had got a computer and 87% of them had got a mobile telephone too. Many of them possessed or were acquainted with the use of a digital camera (63%). 45% of them had also used a video camera. An important part, 68% of the learners used printer and 36% were acquainted with the use of a scanner. This statistics presents a much better image than the average situation in using ICT in Hungary. The web camera was the less popular device, known mainly by members of the intermediate group.

# 11)Can you count on someone to help you if you have problems when using the ICTs?

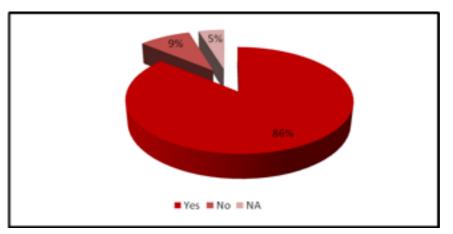
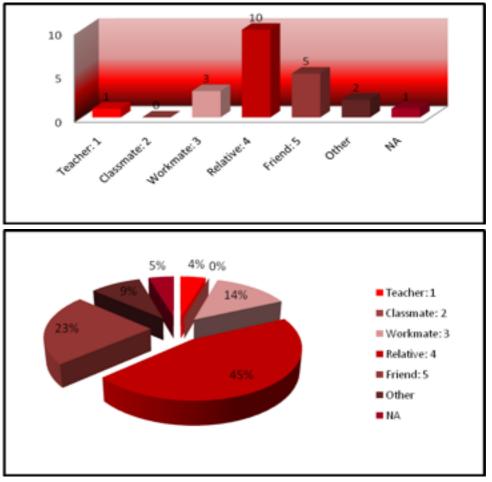


Figure 11. Help in ICTs (Net-Mex Ltd., Hungary)

The members of the two groups could ask for help when they encountered problems. 86% could get help from members of their close environment. This was very important because they could get an answer in a short while when they had questions or encountered problems, so that the continuation of the learning process was not hindered. Thus the learners could go through the entire process without withdrawing and were able to learn the content of the course.



12) Who helps you when you find difficulties in using ICTs?

Figure 12. People helping in ICTs (Net-Mex Ltd., Hungary)

Most of the learners could be helped by a relative, mainly a member of the family. The older learners were usually helped by their grandchildren in better understanding certain ICT processes. As the learners were older than 45, they often had blockages in developing ICT skills, and they rather preferred to ask for help from members of the family or friends than the teacher or classmates. Several learners asked co-workers if they had a problem. When teaching to members belonging to this age group the teacher's role is not only delivering knowledge but also lifting blockages.

#### 13) What do you use your PC for?

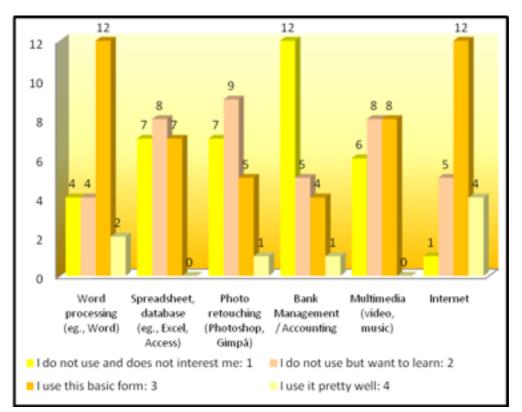
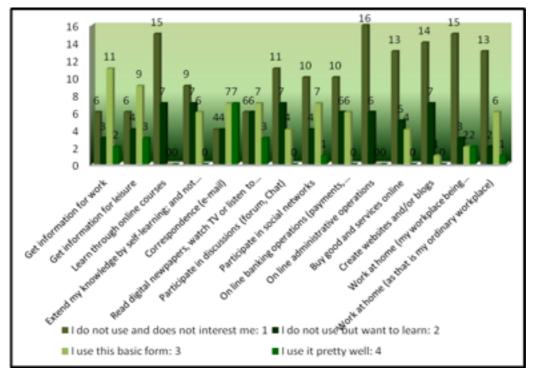


Figure 13. Uses of a PC (Net-Mex Ltd., Hungary)

The learners of the two groups were open to learning. For example, the beginner group had not known the basic software but they were ready to learn them during the course. Most of them, 54%, used the internet and the word processing at a basic level. Multimedia software (photo, music) were situated on the second place, used by 36% of the participants.

It is interesting that many participants rejected the idea of internet banking. 54% answered that they were not interested in it and they had not used it before. In Hungary, a very low percentage of people in their 60s use internet banking. The use of this service characterises mainly the younger generation. Mostly people in their 20s and 30s use it on a daily basis. The older generation is reluctant even to using a bank card.

In the intermediate group there was a higher need for handling databases, while the beginner group learned only the basics of this.



#### 14) What do you use the Internet for?

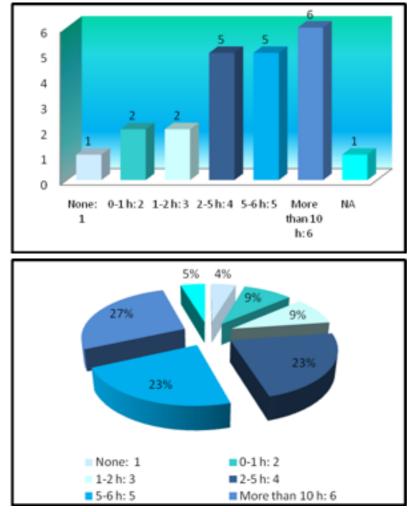
Figure 14. Uses of Internet (Net-Mex Ltd., Hungary)

The most important part of the learners used the internet for a variety of things allowing them to keep, respectively to improve their labour market position but also to organise leisure activities.

Learners did not consider important the prospect of learning on line. In Hungary on line learning is not popular among the population aged more than 45. They neither considered important the possibility of on line administrative operation.

The idea of internet commerce was rejected mainly by participants aged above 60. The most important hindering factors were probably bad examples, bank card payment and language barriers.

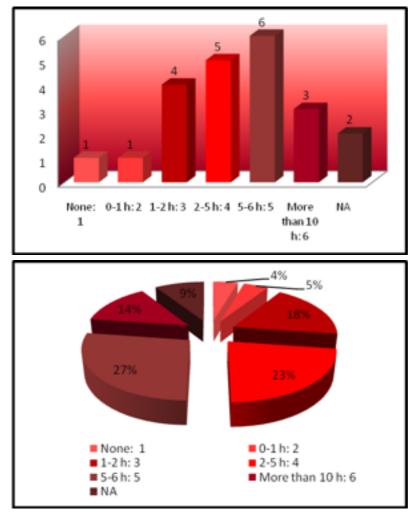
Many participants connected the use of the internet to their leisure activities, especially in case of the older generation.



15) How many hours a week do you usually use your PC?

Figure 15. Hours a week using a PC (Net-Mex Ltd., Hungary)

Almost one third of the participants (27%) used the computer more than 10 hours per week, but most of them spent 6 hours weekly in front of a computer. 4-5% of the participants used internet about 1-3 hours a week. The main part of the learners had got a computer of their own and used it on a daily basis, both for work and for achieving other private goals.

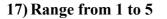


#### 16) How many hours a week do you usually surf the Internet?

Figure 16. Hours a week using Internet (Net-Mex Ltd., Hungary)

The use of the internet and the computer were not separated significantly. While using a computer learners also used the internet. The beginner group preferred the internet among the available applications, while the intermediate group used the computer as a working tool. 14% of participants used the internet more than 10 hours per week. The average learner used the internet 3-4 hours per week. Entirely beginner participants were characterised by a minimal use of the internet, less than 1 hour per week.

#### PERSONAL PERCEPTION



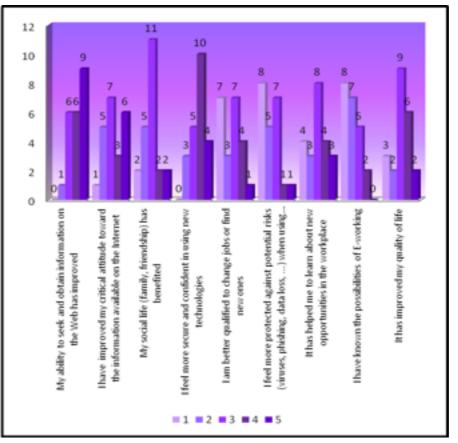


Figure 17. Range from 1 to 5 (Net-Mex Ltd., Hungary)

Through the answer to this question learners assessed the knowledge and skills learnt at the course. After finalising the course, most of them felt that they were able to access information using the internet. 40% thought they gained a higher level of security when surfing on the web and were able to find the needed information. The main part of the learners thought that the course changed them to their advantage (they had become more confident). 50% considered that they registered some kind of change in their social life (e.g. e-mailing to their children, sending and receiving photos), which they experienced as a feeling of achievement determining a positive change in their life. After finishing the course most of the learners felt they were able to use the learnt technology with higher degree of confidence.

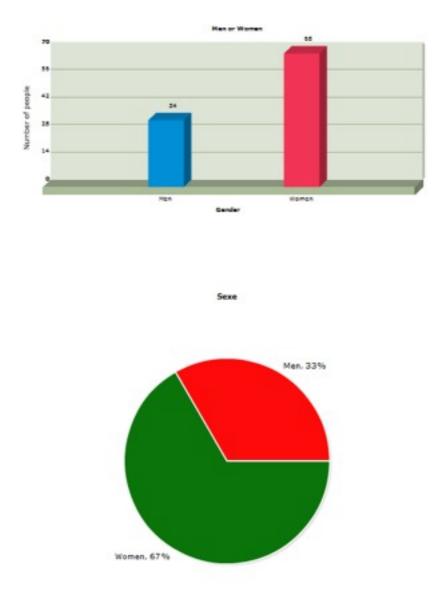
The least agreed concept was e-working, but this term was little known in the target group.

## STATISTICAL ANALYSIS FOR THE FRENCH CASE:

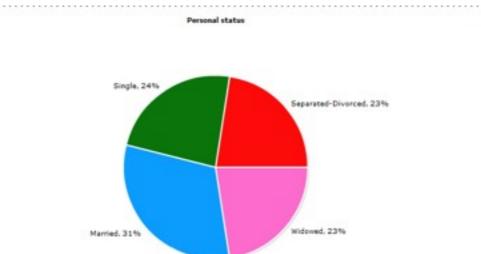
CHART OF DATA	
The total group under study (N)	101
Participants (n)	62
Percentage of population having or lacking the characteristic under study (p = q)	0,5
Reliability	95%
Units of standard deviation in the normal distribution (Z)	1,96
Standard error (SE)	7,77%

# Demography and personal data (incl. occupation)

# Demography



Out of 102 persons who filled in the questionnaire, two thirds (67%) are females and one third is males (33%). This result is not too far from the general result for all institutions taken together (71% female with 29% males).

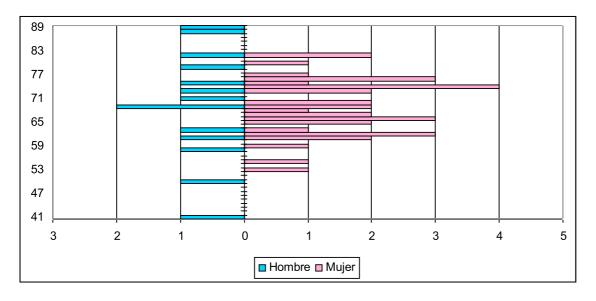


## Marital status and personal questions

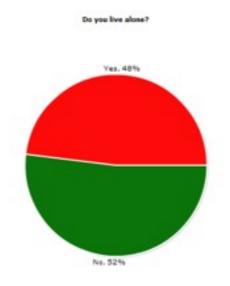
The marital/personal status over the studied answers is clearly broken down into four categories, of which three have approximately the same weight: apart from the married population, representing 31%, the three other categories, are nearly equal in weight. Singles, separated or divorced and widowed, each account for about 23-24%.

Compared with the same statistic over the entire international group, in which the <married> population represents 55% a difference can be noted.

We can state, looking at the graphic below, that the age of the responders varies and spreads from 50+ to 89 (with an exception of 41 years old) with a feminine majority. This public is not very familiar with the technology, which can explain several issues in the analysis.

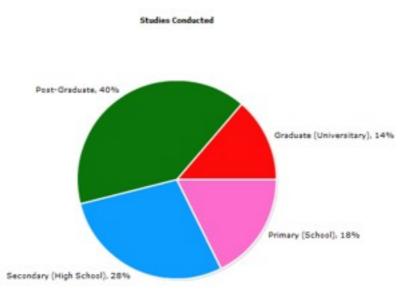


Interestingly, whereas over the global study in which 70% of the respondents declared living with a companion, the figures for the e-Seniors questionnaire show a substantial difference: only 52% declared not living alone.

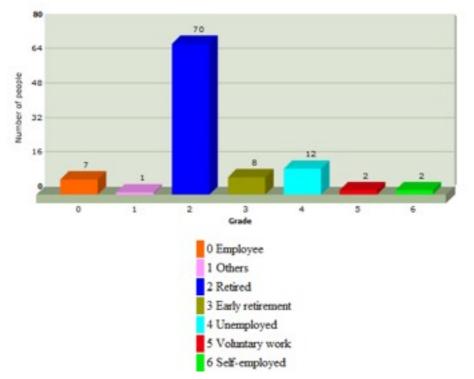


## Academic qualifications

Fifty four percent of respondents to e-Seniors'questionnaire have at least one university degree (54%). A small proportion finished only primary school (18%). This data is useful for taking into account background knowledge, potential motivations and capacity to understand and use both tools and media contents.



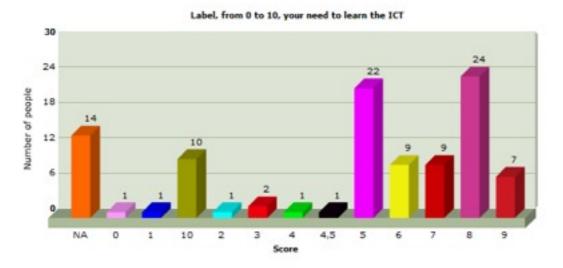
## **Current activity**



Expectedly, the two largest categories are represented by retirees (70/102) and unemployed persons (12/102), followed by persons who took so-called "early retirement" (8/102) often, in France, an intermediary status between unemployed and retiree. Until recently, regulations just changed in September/October 2009, "Early retirement" does not always describe somebody's situation further to a decision made to leave working for personal reasons, but rather an employer's decision to lay out, in a supposedly "clean manner", elder employees, either for financial or competency reasons. Therefore, to a certain extent, the three categories can be grouped together, ie 90 people out of 102 are without formal occupation. Now, out of the 70 retirees, not all may still be in age of conducting a regular job activity. And a more accurate view would be to group the so-called early retirees with the unemployed, adding a few persons of the retiree group (blue bar on chart) able to hold (or wanting/needing) a job.

# Interest and motivation

# Need to learn how to use ICTs

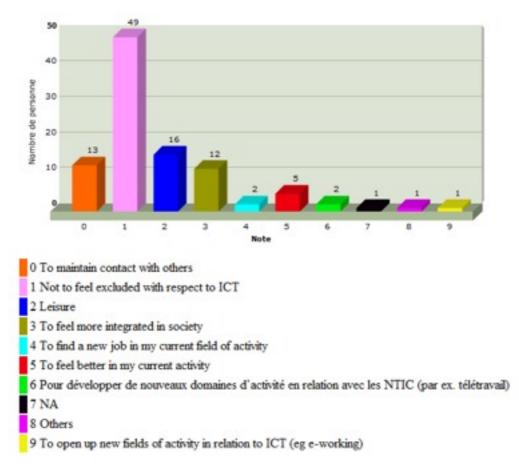


The distribution of answers in the chart above, with its spread diversity, lets realise that, out of the 102 persons who filled in the answer to the questionnaire, 34, ie more than a third, sense a strong learning need. Adding to this third, about a fifth, 22 people, also averagely sense a need. The disturbing figure in this question is constituted by the 14/102 who either express no opinion about this need, or simply just don't know.

Looking at the nevertheless different consolidated figures similar conclusions are to be drawn, like, surprisingly, with 38 "NA" out of the total, and a large majority of persons feeling a need for learning. In both statistics, a minority of respondents with apparently littlee need for learning can be seen.

# Interest in ICTs

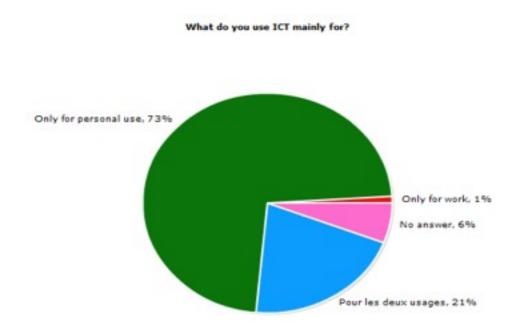
Both charts below represent where the respondents' interest in ICTs lies. The subjects assessed have been ranked from the highest score, 49/102, (Not to feel excluded with respect to ICT) to the lowest score (NA; others; e-working). It would be interesting to develop what the respondents read/understood under "leisure", the point is this heading scored second. Social links/attachment to society scored third: (13+12)/102.



# **ICTs in Practice**

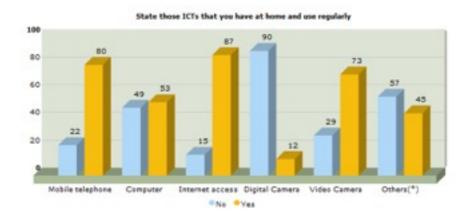
# Main uses of ICTs

The two major answers are "only for personal use", 73%, and "for both personal and professional use", 21%, which together represent 94%. Yet, the "personal use" answers largely predominate.



## ICTs available at home and used regularly

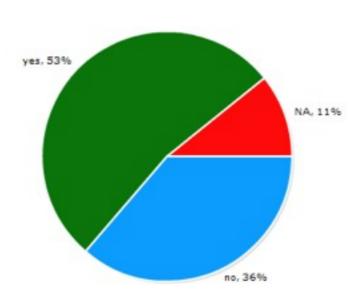
This was a no/yes kind of question. Apart from the case of computers where "yesses" shortly supersede "nos" by a short distance (this is partly explained by the fact that students have access to computers during ICT courses), "yesses" are generally massive, as is the case with mobile phones (nearly 80%), with Internet access nearly 87%), with video cameras (nearly 73%); is there a misunderstanding with the definition of "digital cameras", for which "nos" score nearly 90% ? Or has it been assumed that most pocket digital cameras also include a video filming capability ? In the "others" section "nos" supersed "yesses" with only a 12 point difference.



(\*)Others = webcam, printer, scanner...

# Support

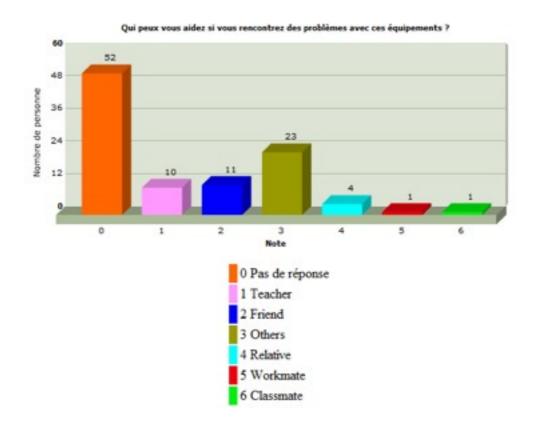
Fifty three percent of responders declared having the possibility to resort to somebody for help, whereas 36% declared they don't have this possibility.



Do you have someone to help you if you have any problems with the use of these resources?

## Who will help?

Answers to the "Can you count on someone to help you if you have problems when using the ICTs ?" question, are surprising when compared with the previous ones: 52 out of 102 give no answer and 23/102, reply "others". Only 21 out of 102 will depend on teacher or friend. This denotes a clear need for education or training on support and trouble spotting.



### What do you use your PC for ?

Most of the seniors are using the computer for three major activities – word processing, Internet, and photo retouching (this is not surprising as classes in this activity are available for e-Seniors students), showing that more complex ICT activities are now being undertaken by seniors. On the other hand banking/accounting applications don't have the favour of seniors.



Discussions "off the record" and informal conversations beside the questioning campaign have shown that many seniors are afraid of phishing, spyware, etc., and more generally require information on how to use Internet securely, especially as regards e-banking and e-shopping, ticket bookings, etc., confirming these figures. This may

perhaps lead to design, for seniors, courses dealing with subjects such as basic safety/ security behaviours for Internet users, with the double benefits of explaining better how things work and relieving stress while using on line services, and, expanding the usage of safer Internet.

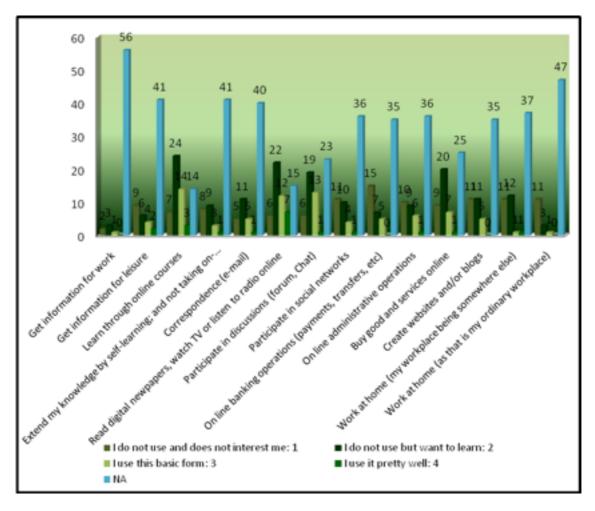


Figure 14. Uses of Internet (E-Seniors, France)

Very few users have claimed to be using the different applications as basic user or experts, this is quite comprehensable regarding the fact, that many of them got to know these applications and services only at a late stage.

However, there is quite a big portion of the users who is interested in learning how to use or "do" things on the internet, which show a certain openness and understanding that it has benefits.

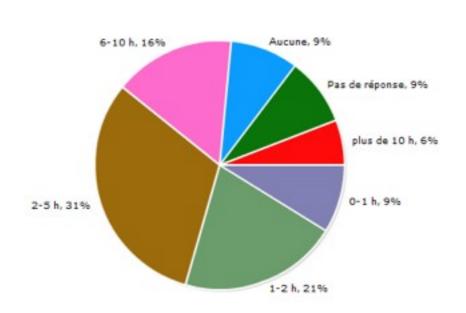
#### Time spent on the computer

Aucune, 6% Pas de réponse, 7% plus de 10 h, 12% 0-1h, 6% 2-5 h, 34%

How many hours per week do you spend on the computer ?

Let apart the 12% of respondents declaring to spend over 10 hours per week on their computer, the usual practice duration seems to span between one hour and ten hours per week, with a strong portion of the respondents spending two to five hours every week on their machine. In a future study, it would be interesting to correlate this data to the personal and marital status of the respondents; to find out whether having a companion in life induces differences in the time spent on the computer. Time spent should also be measured against the number of applications and services used by the respondent.

### Time spent on the Internet



How many hours per week do you use Internet ?

Quite logically, less respondents answer to the same time spans for Internet. Although one may think that time dedicated to Internet may only be a share of the time spent with the computer, it is risky to make assumptions on the comparison of both figures, each one having to be taken separately, it seems.

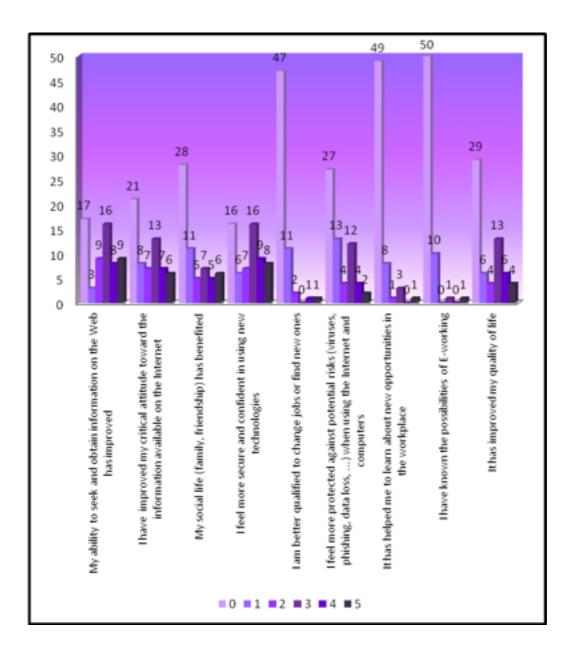
### Benefits of the Internet

Most of the senior users don't feel enough secured and sure of them self regarding the benefits of the use of internet.

The reason for this negative perception could come from the fact that they are not yet used to live on the internet and operate in distance as the younger generations are.

We must emphasise that our responders are mostly at the age of pension, therefore are not that concerned with e6working.

However, it is possible that, if we will get them more acquainted with the intenet through demonstration that will make it easier to view the benefit and therefore understand, they will change their perception to a more positive one.



### GRÁFICAS NO UTILIZADAS POR FRANCIA (NOT USED GRAPHICS BY THE FRENCH PARTNER)

#### **GENERAL DATA**

1) Sex

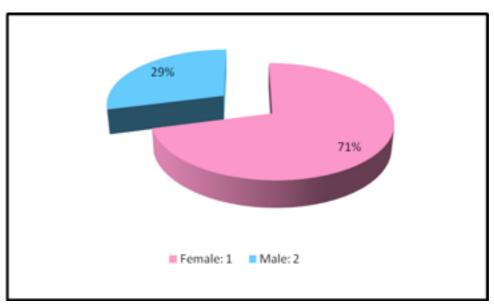


Figure 1. Sex (E-Seniors, France)

2) Marital status

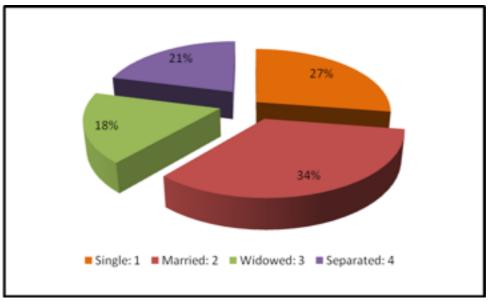


Figure 2. Marital status (E-Seniors, France)

## 3) Age

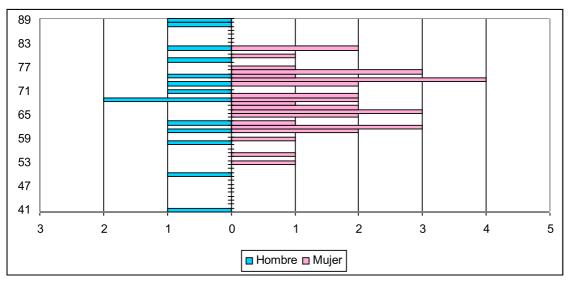


Figure 3. Age (E-Seniors, France)

#### 4) Do you live alone?

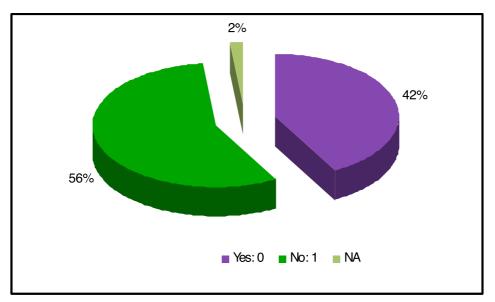
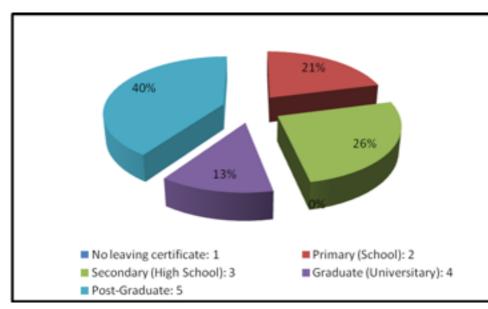


Figure 4. Living alone (E-Seniors, France)



### 5) Qualifications

Figure 5. Qualifications (E-Seniors, France)

### 6) Current occupation/job

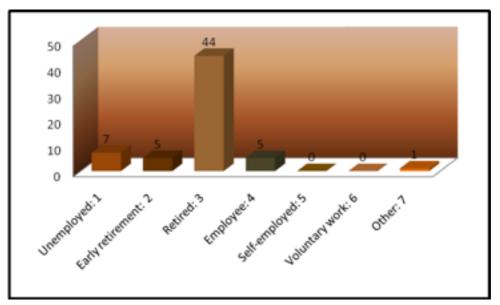
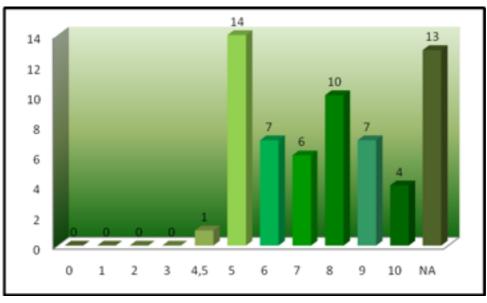


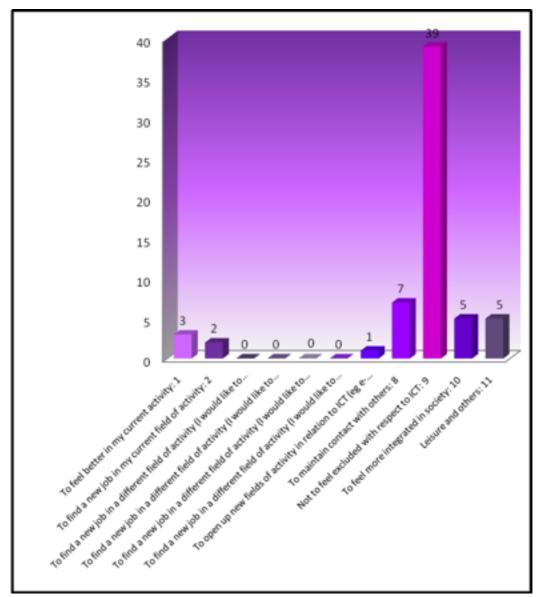
Figure 6. Current occupation (E-Seniors, France)

#### **USE OF TICs**



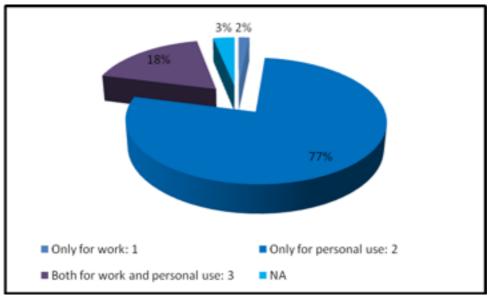
### 7) Need to learn how to use ICTs

Figure 7. Need to learn ICTs (E-Seniors, France)



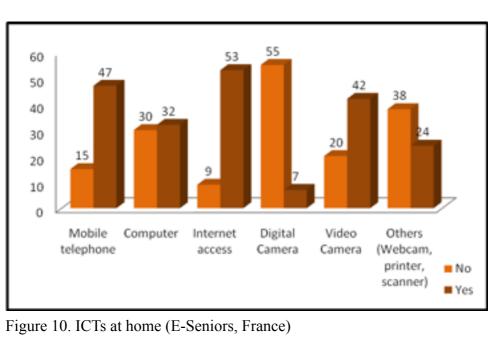
#### 8) Interest in ICTs

Figure 8. Interest in ICTs (E-Seniors, France)



### 9) What do you mainly use ICTs for?

Figure 9. Uses of ICTs (E-Seniors, France)



10) State those ICTs that you have at home and use regularly

11) Can you count on someone to help you if you have problems when using the ICTs?

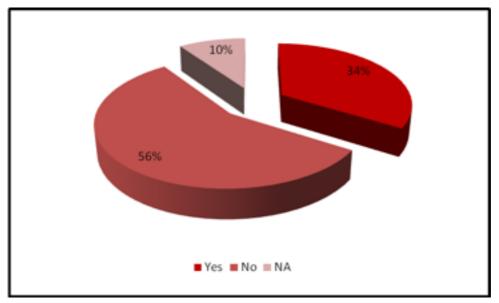


Figure 11. Help in ICTs (E-Seniors, France)

#### 12) Who helps you when you find difficulties in using ICTs?

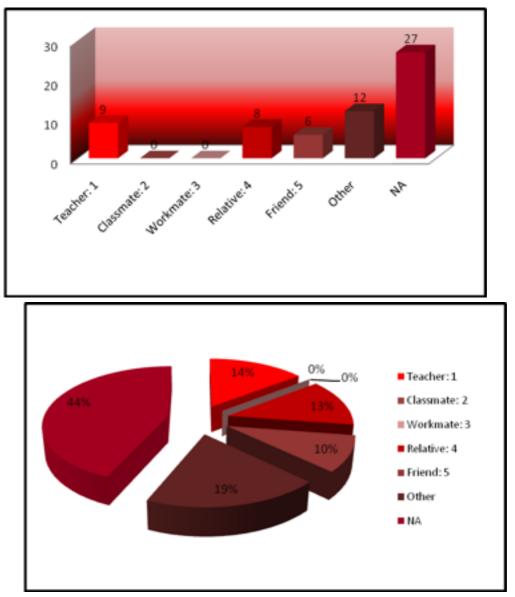


Figure 12. People helping in ICTs (E-Seniors, France)

## 13) What do you use your PC for?

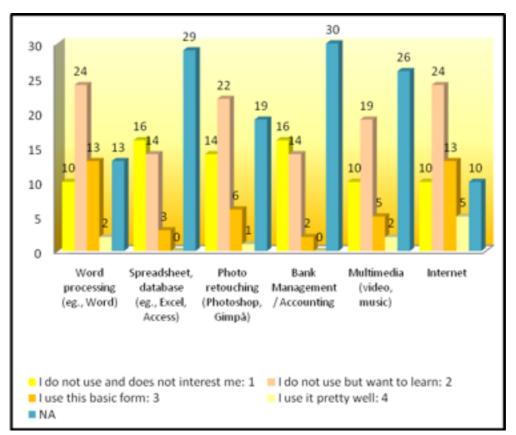


Figure 13. Uses of a PC (E-Seniors, France)

14) What do you use the Internet for?

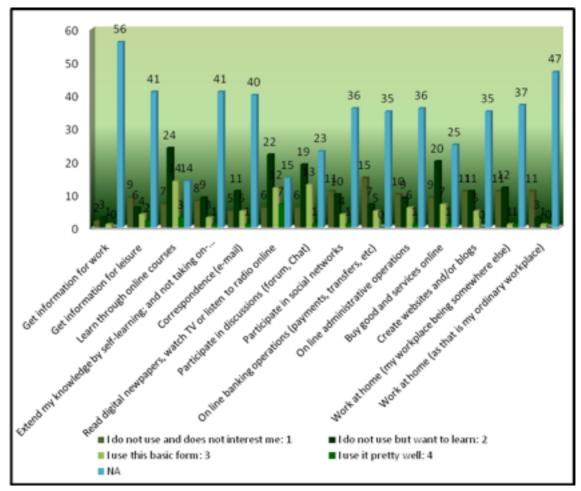
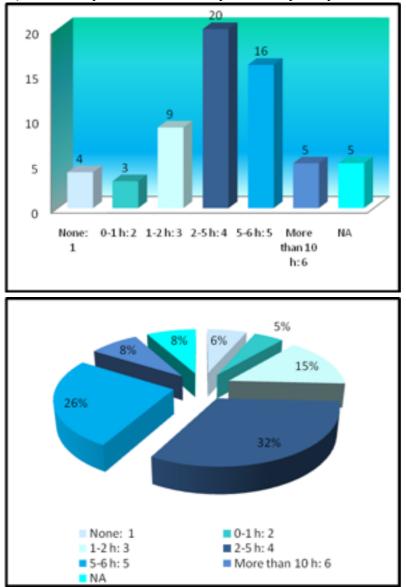
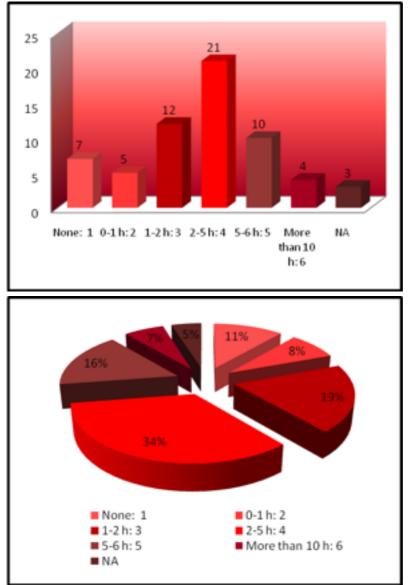


Figure 14. Uses of Internet (E-Seniors, France)



15) How many hours a week do you usually use your PC?

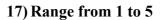
Figure 15. Hours a week using a PC (E-Seniors, France)



16) How many hours a week do you usually surf the Internet

Figure 16. Hours a week using Internet (E-Seniors, France)

#### PERSONAL PERCEPTION



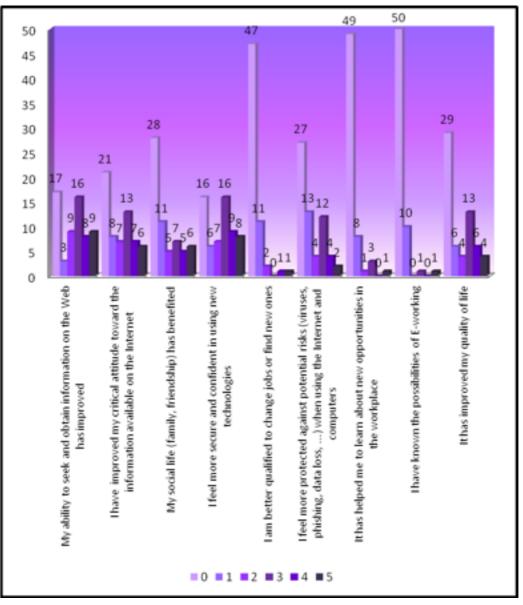


Figure 17. Range from 1 to 5 (E-Seniors, France)