## Instituto Príncipe Real - Portugal

**Project Report** 

Project financed b y Erasmus+





## Erasmus + project: Education - The challenge of the later years -Live and Learn

The third age which traditionally assumed a minority paper in the age segmentation of the population has been earning a new space, due to the increase of the longevity and the reduction of the fertility rate of those countries. On the other hand, the technological tools supporting the information, the communication and the access to knowledge, have been suffering deep changes. In this context is critical to systematize what has been done in Portugal at the level of familiarization of the elderly with the Internet services and that, by their ubiquitous character, allow a new kind of mobility.

#### **Project and Research coordinators**



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For the realization of this project, several cycles were defined, to identify the role of institutions (IPSS and nursing homes or similar) of the District of Bragança in integrating ICT activities with its users, as well as inform and sensitize institutions to the benefits associated with the use

of Information and Communication Technologies. With this project work is intended to further promote active ageing, keeping the elderly integrated through communication and interactions allowed the use of ICT and develop and implement methodological strategies to integrate the elderly in a virtual community that will develop autonomously.



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First a survey associated with the survey of all IPSS's and Lares of Bragança district was conducted, followed by the application of a questionnaire that aimed to characterize the institutions particularly in terms of available physical and human resources, as well as the activities developed among seniors and their skills in ICT, if they possessed. Taking into account that the study covered various institutions of the district and

considering the reduction of project costs, the questionnaire was made through three different ways:

- At institutions of the city of Bragança was applied personally. These contacts were previously scheduled to facilitate collaboration;

- At institutions outside of the city area were applied via e-mail providing the link to complete the questionnaire.

- In addition to these contacts, there was the need for the phone to apply the questionnaire to specific situations.

As the project concerns the Portuguese situation and as the first graphs and documents were designed in Portuguese some information were not translated but is clarified by an English explanation.



#### Abstract

In the last decades the configuration of the age pyramids of the western countries have suffer structural changes. The third age which traditionally assumed a minority paper in the age segmentation of the population has been earning a new space, due to the increase of the longevity and the reduction of the fertility rate of those countries. On the other hand, the technological tools supporting the information, the communication and the access to knowledge, have been suffering deep changes.

In this context is critical to systematize what has been done in Portugal at the level of familiarization of the elderly with the Internet services and that, by their ubiquitous character, allow a new kind of mobility.

The Internet services empower the space-temporal barrier erosion which is more profound in the elderly due to physiological and psycho-social difficulties. It is, therefore the goal of this communication to describe the status of the Portuguese case and to foresee its future, in the medium term, when it is expected that the Portuguese elders will have incorporated in their routines the use of the Internet.

But, to foresee the future we will have to analyse one's present, in order to understand the perception that the elders have of the new information technologies and of the net communication, and what are the impacts of these cognitive and social routines. In this map is fundamental to trace a methodological strategy that will allow us to understand the present perception of the elderly of the society of the information and communication, to suggest measures to the future.

In this context new challenges of citizenship of the elders are emerging, which can be use as inspiration to construct a social vision of the elderly as significant knowhow for the memory of the organizations where they exercised its professional activities and for the social memory inductive of an improved collective and connective intelligence.

## 1. Introduction

The increasing of the elderly population is a reality of today's society, making it necessary to reflect upon social policies, so that the elderly are no longer a group of excluded citizens. The inclusion of the elderly in the Information Society and Knowledge reveals important for active ageing because the lack of access or understanding technology interferes significantly in the integration and participation in individual and group processes.

In Portugal, similarly to what happens in other countries, there are university courses in Information Technology and Communication aimed at older people, the so-called universities of the third age. This research intends to study the impact of ICT courses in digital inclusion of the elderly. To this end, questionnaires were administered to trainees from senior universities in Bragança district.

Through the analysis of the answers in the questionnaires it became clear that the senior ICT courses seek primarily the need to purchase and upgrade computing skills, which they consider essential in their daily lives. The results confirm the general satisfaction of all respondents. They are unanimous about the contribution of ICT training to improve their quality of life, especially with regard to the aspect of communication.

In this sense, the promotion of active ageing also involves the integration of the elderly in the Information Society, which requires improving skills in Information Technology and Communication and the acquisition of new skills in this area, and the acquisition of new skills in digital literacy and informational that most of the elderly have considered these skills essential in their day-to-day life, because it allows the approximation of familiar elements which are geographically distant.



Considering the crucial role of institutions for the promotion of active ageing, this project pretends, as an initial claim, to identify the part of Braganca District institutions in the integration of Information Technologies and Communication in activities with their users for later plan, implements and evaluates a project that contributes to digital literacy and informational elderly. This work was developed with the collaboration of the institutions in the district of Bragança and it was guided by the methodology of project management. The implementation of this project confirmed that the older community, just like any adult, only demonstrates willingness to learn if it is governed by a strong motivation that most often goes beyond curiosity. The balance of this project was based on observation and the testimony of the participants, crossed with the feedback of the technical staff of the institutions, which considered this positive initiative, continuing the practice established by

the designated project.

## **1.2 Active ageing**

The WHO defines active ageing as follows:

#### Active ageing is the process of optimizing opportunities for health, participation and security in order to improve the quality of life as people get older. "(WHO, 2005, p. 13).

The word "active" refers to continuing participation by the elderly, in social, economic, cultural, spiritual and civil matters, not only to ability of the individual to be physically active or to be part of the force work. "(WHO, 2005, p. 13). WHO adds that the process of **Active ageing** refers both to individuals and the population groups as enables people to have the perception of its potential for physical well-being, social and mental throughout his life and, simultaneously, these people participate in society according to their needs, desires and capabilities (WHO, 2005).

It is associated with ageing the progressive loss of capacity in that the elderly will changing their habits and daily routines, replacing them with activities that require a lower degree of participation. This decrease in activity or even inactivity can cause various effects such as decreased attention span and reaction, decreased self-esteem, apathy, lack of motivation, loneliness and social exclusion. (European Commission, 2010).

In this perspective active ageing can be seen as a way to combat some of these consequences. In support of this action refers to the following statement of Decision Proposal of the European Parliament and of the Council concerning the European Year of Active Ageing (2012):

Active ageing is also an effective instrument fight against poverty in old age. In 2008, 19% of people over 65 years in the European Union were at risk of poverty. A considerable number of older people experience old age as a time of marginalization. If, on the one hand, to create best employment opportunities for these people could help solve some of the causes of poverty that affects this age group, on the other the active participation in voluntary activities could reduce the isolation of these people. (European Commission, 2010, p. 3).

Above this, it appears that this concept has and will have an increasingly important and central role at various levels and hence will be increasingly taken into account in the various multidisciplinary studies and investigations since, according to the "resident population projections in Portugal 2008-2060 "(INE, 2009), reside in Portugal, in 2060, 271 elderly people for every 100 young people,

more than double the projected value for 2009 (116 elderly people for every 100 young people). Faced with such scenario the present society is directed to a different society where institutional working standards will have to adapt to changes resulting from the silent revolution of the demographic system.

The goal of active ageing is to develop a new attitude, a new way of living and ageing, develop new socialization patterns so as to combat all forms of exclusion. By integrating the elderly in monitoring of modern society is to help you acquire social and technological skills.

A successful old age is associated with the meeting of three major categories conditions:

 $\hfill\square$  The first is the low probability of diseases, in particular those cause loss of autonomy.

 $\Box$  The second is to maintain a high functional level in cognitive and physical plans, which sometimes is called great old age.

 $\Box$  The third is the preservation of social commitment and welfare subjective. These three types of conditions come together in proportions variable according to the different influences development that individuals suffered during life.

## 2. Situation

The use of ICT has become increasingly common in our everyday, functional and operational knowledge of making essential computer elements. Lack of access or technological understanding interferes significantly on integration and participation in individual and group processes. A person alphabetized in the digital universe will be able to select and search for information on the Web, process data, gain knowledge and more importantly, pass them by making it a means to improve their quality of life. However, the elderly have shown difficulty using and understanding technologies. Presented by this new tool, raising increasingly importance of digital literacy which is to allow the elderly to learning skills necessary to use this tool and allows them to also be included digitally.

By means of guidance, or a collaboration people who dominate this novelty, the trend and gain confidence, releasing blocks that exist within them. That's why in Portugal, similarly to what happens in other countries, there are courses at universities directed to this age group (universities calls Elderly), which work at the pace of the elderly themselves, the capabilities of handling of ICTs. Computer courses offered there enable, through domain that they acquire about digital tools,

including new relational perspectives mediated by the participation of the elderly in communication networks, building a new social attitude from the same well as the emergence of another social representation of this contextualized class with the changes technology.

INE - National Statistics Institute (Portugal), in collaboration with the UMIC – Agency Knowledge Society, recently presented the results of the survey Use of Information Technology and Communication in families. This report discloses relevant data for this research, which highlights following figures:

Regarding the use of the personal computer:

□ By age group has the following variations: 16-24 years - 83% | 25-34 years - 63% | 35-44 years - 44% | 45-54 - 32% | 55-64 years - 17% | 65-74 years - 4%.

 $\Box$  For educational qualifications only 27% of the Portuguese population qualification to the 3rd cycle computer uses, ranging these ratios to the population with secondary education (87%) and higher education (91%).

As regards the accession to the Internet:

□ By age group unfolds as follows: 16-24 years - 75% | 25-34 years - 54% | 35-44 years - 36% | 45-54 - 24% | 55-64 years - 12% | 65-74 years - 3%.

For educational qualifications only 19% of the Portuguese population qualification to the 3rd cycle has Internet access, varying these proportions for the population with secondary education (80%) and higher education (87%).

Starting from the premise that the internet and computer use are realities that are intimately connected, deductions infer that these figures are simple:

 $\Box$  Access to computers in general and the Internet in particular continues restricted to only a few people;

 $\Box$  the low level of education has a very negative impact on the use of computer and Internet access;

 $\Box$  the lower level of education in the elderly is an obstacle to their access to the Internet;

 $\Box$  older generations are the most info-excluded.

Also the low economic level associated with the vast majority of individuals who currently belong to old age (as shown below) makes the priority is given to meeting the basic needs, removing the Internet this experience.

## Table 1.8: Old-age depedency ratio

(%)

	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050
EU (25 countries)	22.1	23.4	24.9 <sup>(f)</sup>	26.3 <sup>(f)</sup>	28.9 <sup>(f)</sup>	32.1 <sup>(f)</sup>	35.7 <sup>(f)</sup>	40.3 <sup>(f)</sup>	44.8 <sup>(f)</sup>	48.5 <sup>(f)</sup>	51 <sup>(f)</sup>	52.8 <sup>(f)</sup>
EU (16 countries)	23	24.3	25.9 <sup>(f)</sup>	27.5 <sup>(f)</sup>	30.1 <sup>(1)</sup>	32.80	36.3 (1)	41.2 <sup>(f)</sup>	46.3 <sup>(1)</sup>	50 <sup>(f)</sup>	52 <sup>(1)</sup>	53.2 <sup>(7)</sup>
Belgium	23.8	25.5	26.3 <sup>(f)</sup>	26.4 <sup>(f)</sup>	29.1 <sup>(f)</sup>	32.2 <sup>(f)</sup>	36.5 <sup>(f)</sup>	41.3 <sup>(f)</sup>	45.1 <sup>(f)</sup>	47.2 <sup>(f)</sup>	47.8 <sup>(f)</sup>	48.1 <sup>(f)</sup>
Czech Republic	19.3	19.8	19.8 <sup>(f)</sup>	21.9 <sup>(f)</sup>	26.8 <sup>(f)</sup>	31.8 <sup>(f)</sup>	35 (f)	37.1 <sup>(f)</sup>	39 <sup>(f)</sup>	43.8 <sup>(f)</sup>	51.2 <sup>(f)</sup>	54.8 <sup>(f)</sup>
Denmark	22.7	22.2	22.6 <sup>(f)</sup>	24.8 <sup>(f)</sup>	28.7 <sup>(f)</sup>	31.2 <sup>(f)</sup>	33.8 <sup>(f)</sup>	37.1 <sup>(f)</sup>	40.4 <sup>(f)</sup>	42.1 <sup>(f)</sup>	42 <sup>(f)</sup>	40 (f)
Germany (including ex- GDR from 1991)	22.5	23.9	27.8 <sup>(f)</sup>	31 <sup>(f)</sup>	32 <sup>(f)</sup>	35.1 <sup>(f)</sup>	39.3 (f)	46 <sup>(f)</sup>	52.6 <sup>(f)</sup>	54.6 <sup>(f)</sup>	54.9 <sup>(f)</sup>	55.8 <sup>(f)</sup>
Estonia	20.2	22.4	24.1 <sup>(f)</sup>	24.7 <sup>(f)</sup>	26.3 <sup>(f)</sup>	28.7 <sup>(f)</sup>	31.3 <sup>(f)</sup>	33.4 <sup>(f)</sup>	34.5 <sup>(f)</sup>	36.6 <sup>(f)</sup>	39.1 <sup>(f)</sup>	43.1 <sup>(f)</sup>
Greece	22.2	24.2	26.8 <sup>(f)</sup>	28 <sup>(f)</sup>	30.3 <sup>(f)</sup>	32.5 <sup>(f)</sup>	35.5 <sup>(f)</sup>	39.1 <sup>(f)</sup>	44.3 <sup>(f)</sup>	49.8 <sup>(f)</sup>	55.2 <sup>(f)</sup>	58.8 <sup>(f)</sup>
Spain	22.3	24.5	24.5 <sup>(f)</sup>	25.4 <sup>(f)</sup>	27.7 <sup>(f)</sup>	30 <sup>(f)</sup>	33.6 <sup>(f)</sup>	38.9 <sup>(f)</sup>	45.9 <sup>(f)</sup>	54.3 <sup>(f)</sup>	63.2 <sup>(f)</sup>	67.5 <sup>(f)</sup>
France	23	24.6	25.3 <sup>(f)</sup>	25.9 <sup>(f)</sup>	29.5 <sup>(f)</sup>	33.2 <sup>(f)</sup>	36.9 <sup>(f)</sup>	40.7 <sup>(f)</sup>	44.1 <sup>(f)</sup>	46.9 <sup>(f)</sup>	47.2 <sup>(f)</sup>	47.9 <sup>(f)</sup>
Ireland	17.8	16.8	16.5 <sup>(f)</sup>	17.5 <sup>(f)</sup>	19.9 <sup>(f)</sup>	22.5 <sup>(f)</sup>	25.2 <sup>(f)</sup>	28.3 <sup>(f)</sup>	31.6 <sup>(f)</sup>	35.9 <sup>(f)</sup>	40.9 <sup>(f)</sup>	45.3 <sup>(f)</sup>
italy	24	26.8	29.4 <sup>(f)</sup>	31.3 <sup>(f)</sup>	34.3 <sup>(f)</sup>	36.6 <sup>(f)</sup>	39.7 <sup>(f)</sup>	45.2 <sup>(f)</sup>	52.4 <sup>(f)</sup>	59.8 <sup>(f)</sup>	64.6 <sup>(f)</sup>	66 <sup>(f)</sup>
Cyprus	17.2	17	17.7 <sup>(I)</sup>	19.1 <sup>(†)</sup>	22.1 <sup>(I)</sup>	25.5 <sup>(†)</sup>	29.3 <sup>(†)</sup>	32.9 <sup>(†)</sup>	34.7 <sup>(†)</sup>	36.1 <sup>(†)</sup>	38.2 <sup>(†)</sup>	43.2 <sup>(t)</sup>
Latvia	20.5	22.1	24.1 <sup>(f)</sup>	25.2 <sup>(f)</sup>	26.3 <sup>(f)</sup>	28 <sup>(f)</sup>	30.7 <sup>(f)</sup>	33.4 <sup>(f)</sup>	34.9 <sup>(f)</sup>	37.4 <sup>(f)</sup>	39.9 <sup>(f)</sup>	44.1 <sup>(f)</sup>
Lithuania	18.5	20.8	22.5 <sup>(†)</sup>	23.4 <sup>(†)</sup>	24.2 <sup>(I)</sup>	26 <sup>(†)</sup>	29.2 <sup>(†)</sup>	33.4 <sup>(†)</sup>	36.5 (†)	39.3 <sup>(†)</sup>	41.2 <sup>(t)</sup>	44.9 <sup>(t)</sup>
Luxembourg (Grand-Duché)	20.6	21.4	21.2 <sup>(f)</sup>	21.6 <sup>(f)</sup>	22.8 <sup>(f)</sup>	24.7 <sup>(f)</sup>	27.7 <sup>(f)</sup>	31.5 <sup>(f)</sup>	35.1 <sup>(f)</sup>	36.7 <sup>(f)</sup>	36.6 <sup>(f)</sup>	36.1 <sup>(f)</sup>
Hungary	20.9	22	22.8 <sup>(f)</sup>	24.3 <sup>(f)</sup>	26.7 <sup>(f)</sup>	31.2 <sup>(f)</sup>	34.5 <sup>(f)</sup>	35.1 <sup>(f)</sup>	36.9 <sup>(f)</sup>	40.3 <sup>(f)</sup>	45.9 <sup>(f)</sup>	48.3 <sup>(f)</sup>
Malta	16.3	17.9	19.2 <sup>(f)</sup>	20.4 <sup>(f)</sup>	25.7 <sup>(f)</sup>	30 <sup>(f)</sup>	33.8 <sup>(f)</sup>	36 <sup>(f)</sup>	35.5 <sup>(f)</sup>	35.9 <sup>(f)</sup>	38 <sup>(f)</sup>	40.6 <sup>(f)</sup>
Netherlands	19.3	20	20.7 <sup>(f)</sup>	22.2 <sup>(f)</sup>	26 <sup>(f)</sup>	29 <sup>(f)</sup>	32.5 <sup>(f)</sup>	36.7 <sup>(f)</sup>	40.3 <sup>(f)</sup>	41.6 <sup>(f)</sup>	40.2 <sup>(f)</sup>	38.6 <sup>(f)</sup>
Austria	22.5	22.9	23.6 <sup>(f)</sup>	26.3 <sup>(f)</sup>	28.1 <sup>(f)</sup>	30.3 <sup>(f)</sup>	34.5 <sup>(f)</sup>	40.8 <sup>(f)</sup>	47.1 <sup>(f)</sup>	50.4 <sup>(f)</sup>	51.5 <sup>(f)</sup>	53.2 <sup>(f)</sup>
Poland	16.6	17.6	18.7 <sup>(f)</sup>	18.8 <sup>(f)</sup>	21.7 <sup>(f)</sup>	27.1 <sup>(f)</sup>	32.8 <sup>(f)</sup>	35.7 <sup>(f)</sup>	37.1 <sup>(f)</sup>	39.7 <sup>(f)</sup>	44.3 <sup>(f)</sup>	51 (f)
Portugal	21.9	23.7	25.2 <sup>(f)</sup>	26.5 <sup>(f)</sup>	28.8 <sup>(f)</sup>	31.5 <sup>(f)</sup>	34.7 <sup>(f)</sup>	39 (f)	43.4 <sup>(f)</sup>	48.9 <sup>(f)</sup>	54.7 <sup>(f)</sup>	58.1 <sup>(f)</sup>
Slovenia	17.4	19.8	21.7 <sup>(f)</sup>	23.6 <sup>(f)</sup>	25.9 <sup>(f)</sup>	30.8 <sup>(f)</sup>	35.8 <sup>(f)</sup>	40.4 <sup>(f)</sup>	44.5 <sup>(f)</sup>	47.7 <sup>(f)</sup>	52.1 <sup>(f)</sup>	55.6 <sup>(f)</sup>
Slovakia	16.3	16.6	16.3 <sup>(f)</sup>	16.9 <sup>(f)</sup>	19.1 <sup>(f)</sup>	23.5 <sup>(f)</sup>	28.1 <sup>(f)</sup>	31.7 <sup>(f)</sup>	34.2 <sup>(f)</sup>	38.1 <sup>(f)</sup>	44.5 <sup>(f)</sup>	50.6 <sup>(f)</sup>
Finland	21.1	22.2	23.7 <sup>(f)</sup>	25.4 <sup>(f)</sup>	31.6 <sup>(f)</sup>	37 <sup>(f)</sup>	41.4 <sup>(f)</sup>	45 (f)	47 <sup>(f)</sup>	46.1 <sup>(f)</sup>	46.1 <sup>(f)</sup>	46.7 <sup>(f)</sup>
Sweden	27.4	26.9	26.4 <sup>(f)</sup>	28 <sup>(f)</sup>	32 <sup>(f)</sup>	34.4 <sup>(f)</sup>	36.5 <sup>(f)</sup>	38.5 <sup>(f)</sup>	40.6 <sup>(f)</sup>	41.5 <sup>(f)</sup>	41.2 <sup>(f)</sup>	40.9 <sup>(f)</sup>
United Kingdom	24.3	23.9	24.4 <sup>(f)</sup>	25.1 <sup>(f)</sup>	28.1 <sup>(f)</sup>	30.3 <sup>(f)</sup>	33.2 <sup>(f)</sup>	37.4 <sup>(f)</sup>	41.4 <sup>(f)</sup>	43.8 <sup>(f)</sup>	44.2 <sup>(f)</sup>	45.3 <sup>(f)</sup>
Bulgaria	22.2	23.8	24.9 <sup>(f)</sup>	25.6 <sup>(f)</sup>	29 <sup>(f)</sup>	33 (f)	36.9 <sup>(f)</sup>	40.4 <sup>(f)</sup>	43.7 <sup>(f)</sup>	48.8 <sup>(f)</sup>	55.4 <sup>(f)</sup>	60.9 <sup>(f)</sup>
Croatia	:	18.2	:	:	:	:	:	:	:	:	:	:
Romania	17.6	19.3	21.1 <sup>(f)</sup>	21.2 <sup>(f)</sup>	22.1 <sup>(f)</sup>	25.1 <sup>(f)</sup>	28.5 <sup>(f)</sup>	29.6 <sup>(f)</sup>	34.4 <sup>(f)</sup>	39.6 <sup>(f)</sup>	46.1 <sup>(f)</sup>	51.1 <sup>(f)</sup>
Iceland	17.3	17.8	:	:	:	:	:	:	:	:	:	:
Norway	24.8	23.5	:	:	:	:	:	:	:	:		:
Switzerland	21.7	22.7	:	:	:	:	:	:	:	:	:	:

(:) Not available

(f) Forecast

(Source: Europe in Figures- Eurostat yearbook 2006-07)

These studies show that the weak intervention capacity of the third age of Portugal comes from a combination of factors that match poor adherence to Information Society. The digital divide seems to link with social exclusion enhancing it, as is

the hallmark of this technology. This reading indicates a lack of resources, which justifies a low uptake of digital technology by the third age. And this reality has very little to do with the widespread belief that the elderly do not use the new technologies in general and the Internet in particular by a natural disability.

Based on data provided by Eurostat (Available at: http://epp.eurostat.ec.europa.eu/) crossed information concerning percentage of individuals who, in 2005 and in 2006, used engines search for information in the following universes:

- 1. EU15 (EU-15): Austria, Belgium, Denmark, Spain, Finland, France, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Sweden and the UK.
- 2. EU25 (EU-25): EU15 + Cyprus, Slovakia, Slovenia, Estonia, Hungary, Latvia, Lithuania, Malta, Poland and the Czech Republic.

3. Portugal

By crossing these data was constructed the following table:

Individuals' level of Internet skills								
Date of extraction: Fri, 19 Jan 07 05:43:55 Last update: Wed Dec 13 17:09:01 MET 2006								
ind_type ind_total All Individuals indic_is i_isrch Percentage of individuals who have used a search engine to find information unit pc_ind Percentage of individuals								
	time	2005a00	2006a00					
geo								
eu25 European Union (25 countries)		51	54					
eu15 European Union (15 countries)		54	55					
pt Portugal		34	38					
unit pc_ind Percentage of ind	lividuals time	2005a00	2006a00					
eu25 European Union (25 countries)		67	72					
eu15 European Union (15 countries)		72	73					
<i>pt</i> Portugal		51	57					
ind_type y65_74 Individuals, 65 to 74 years old indic_is <i>i_isrch</i> Percentage of individuals who have used a search engine to find information unit pc_ind Percentage of individuals time 2005a00 2006a00								
geo								
eu25 European Union (25 countries)		12	12					
eu15 European Union (15 countries)		14	13					
pt Portugal		3	3					

By observing these figures, we can take a few conclusions:

First, if we compare the figures in the EU15 / EU25 and Portugal, it is observed that the percentage of individuals who used a search engine is very much lower in

our country. We conclude that, in Portugal, the enormous potential access to information that the Internet is not being taken advantage of it so that in other EU countries. This gap in 2005, corresponding to -33% (relative to EU25) and -37% (over the EU15). In 2006, the difference is -30% (EU25) and -31% (EU15).



Using the same variables, but applying them only to the age group between 25 and 34 years (seniors in 2050), the gap between Portugal and the EU25 in 2005 corresponds to 24% and between Portugal and the EU15 is 21%. In 2006 the distance between Portugal and the EU25 amounts to 29% and between Portugal and the EU15 is -22%. the evolution between 2005 and 2006 is as positive, with the results of 5% and 1% of the EU25 average and the EU15 average, respectively. The smallest progression in relation to the EU15 based a smaller gap, which tends to slow down approach.



These figures reinforce the idea that the effort expended in Portugal of an evolution towards full integration in the Information Society, at least when it

comes to Internet use, is progressing positively. The percentage disparity in Portugal compared with the average of the EU25 and the EU15 average between 2005 and 2006, evolved 3% and 6% respectively, which is a remarkable result.

But if the same variables are applied to the age group between 65 and 74 years (the current seniors) are found the following results: in 2005, the divergence between Portugal, the EU25 and the EU15 corresponds to -75%. In 2006 the gap between Portugal and the EU25 amounts to -79%, and between Portugal and the EU15 is 77%. Between 2005 and 2006 there was no percentage change, while the EU25 progressed 2% and EU15 advanced 1%. In practice, this result means a distancing from the current third Portuguese age regards the third European age.



One of the reasons for the figures set out above is linked to the educational level of the investigated populations. According to a presentation of a Portuguese expert, Portugal is facing a paradoxical reality: on the one hand, is located in 5th position (average: 80%) EU25 (average: 61%) with people with secondary education (only after the Netherlands, Sweden, Denmark, Luxembourg) and is the 8th country (average: 87%) EU25 (average: 84%) with people with higher education (just below the previous and Finland, the UK and Slovenia); but these results highly positive contrast with another universe: Portugal is also the country 22 (average: 19%) EU25 (average: 32%) with those with education up to 9th grade or below (just ahead of Italy, Cyprus, Greece). This situation has the following age distribution:

From 65 to 75 years: 2% (2 million) 25 to 54 years: 15% (3 million) From 16 to 24 years: 59% (1 million)

What these figures indicate is that in Portugal, the strategy for the inclusion of older people in new technologies and specifically, using the Internet, does not

seem to produce the expected result. This study argues that the origin of this deficiency relates to the fact that seniors to position in space and time through obsolete constructs, and this limitation can only be overcome by structuring a social attitude and digitally active induced transversal actions and intergenerational.

We identified some representations that seniors puts face to microcomputers:

 $\Box$  I am too old to familiarize myself with the PC: 69% (EU 47.9%)

□ I am informed of computers and their applicability: 13% (EU 49%)

 $\Box$  I am motivated to learn about the technological development: 24% (EU 53.7%)

 $\hfill\square$  The industry does not take into account the elderly in the PC's design: 46.7% (EU 48%)

To this end, the construction of a third digitally included age implies higher levels of education, easier access to information, greater mobilization capacity of existing resources, and even a new social position. These solutions appear to be dependent on a shift not only access to new technologies, but a new mentality to be created in the school seats based in the pleasure of knowledge and discovery in the stimulus proactive attitudes and approach and familiarity with the use of computers and the Internet, extending the current predominantly recreational use of Internet.

The Portuguese Government promotes, from September 2007 to all Portuguese students enrolled in the 10th grade, access to reduced prices to a computer and high speed Internet, and is estimated to this measure by 2010 covering about 240 thousand students. Despite not having debated the necessary training associated with this action, the measure goes against the position that defends here: the change of attitude of the elderly face the Internet should begin with a cultural change, which should originate in education the new generations.

Effectively, we often meet in the elderly one denunciator speech of a mentality aimed to "no longer I serve for anything," "I am too old to," "this is not for my age" or "now I want to enjoy life." These repeated formulas and interlocking reveal a socially perceived attitude and that no benefits to any age group in particular or for the society at large. Including the very old sit away and undervalued, often going into depressive states.

This situation is complex and its approach will only be effective through multidisciplinary measures. To this end, the use of the Internet is only one of these solutions. Not only will not be the most important. But it is an effective solution to combat the exclusion of spaces that are voted the elders, either by age dimension, either by education or by economic insecurity. Because the Internet can be viewed as a space for their inclusion of scaling character and identity papers, this causes the elimination of social embarrassment and a membership by groups of interest.

Over the years, the weight of the Internet as a tool for integration tends to be increasingly remarkable fact, because some of the biggest current obstacles to its use by senescent relates to the need for learning with respect to the new technologies and English and these difficulties as point out the Eurostat figures, tend to be overcome when the generation-net reach old age (the experience of these individuals already incorporates the domestication of ICT and normalization of English).

We are in the emergence of the edge of these new seniors terminating itself features that can be used not only to combat the isolation and psychological ageing, but as a possible answer to problems such as degradation of the social system. For these future elders and retired with higher educational and already accustomed to the use of new technologies, the Internet can offer a set of solutions to expand their working lives, offering solutions such as teleworking or e-business.

In this sense, emerge as structural needs the development of a framework on the third Portuguese age that currently use the Internet, the pursuit of new forms of labour cooperation and the search for solutions curriculum to be introduced in primary education, secondary and higher. The aim will be to infer how one can optimize this technology for mobile having your enjoyment as inclusion factor, communication and information.

The investment in training should be done at different levels:

- building technological competence
- establishment of a critical capacity enabling it to the user to distinguish different levels of credibility of the numerous sources that are on the Internet
- available for the pleasure of discovery, innovation

Portugal does not want and cannot keep away from new technologies and must combat info exclusion not only through palliative measures, but above all by generating guidelines of corrections to negative deviations from the standard European technological context. It is argued that the Internet acts as a concave mirror dematerialises the concept of space and time, acting as an implosion current reducing mechanism concepts of extending a useful life in old age.

## **3. RESEARCH QUESTIONS**

With the increasing ageing of the world population is emerging a new youth, the youth of old age. And then what do these people who retire and are still completely valid people for life and society? Do these people fall into the void, sorrow in solitude? What conditions are given to these people so that they can continue to have quality of life and can still play an important role in society?

Based on these general questions raises the question of what is the relationship between these people and the computer? Do they use computers or even know what a computer seen that at the time these people were young there were no computers? Do they have the same ease of access to these systems than younger people? Does use of computers by these people can bring something positive to an improvement in their quality of life? It is true that technology advances almost the speed of light, and that every day there are new computers increasingly powerful, new applications arise in order to respond to our problems, but then comes another question, do these applications and computers are developed to think this kind of people with a higher age and their cognitive abilities and learning, cannot compare to a young man or a child?

Based on this set of doubts and uncertainties and for which there was no concrete answer, the "Research Questions" that this study will try to answer are:

## □ "HAVE A COMPUTER A SIGNIFICANT ROLE IN THE QUALITY OF LIFE OF THE ELDERLY?"

## □ "WILL PEOPLE OVER 60 YEARS USE COMPUTERS?"

## □ "DOES THE SYSTEM IS ADAPTED IN ORDER TO PROVIDE AN EASY FOR USE PART OF THESE PEOPLE?"

## □ "THAT RESULTS POSITIVE OR NEGATIVE IF CAN TAKE THE INCLUSION OF THE THIRD AGE COMPUTERS?"

## 3.1. SURVEY

The survey is a research technique that allows collecting information directly from a player in the research through a set of questions organized according to a certain order. These can be made of Oral way in interviews or by writing form by conducting questionnaires. It is one of the most widely used techniques because it allows to obtain information about a particular phenomenon, by formulating questions that reflect attitudes, beliefs, perceptions, interests and behaviour of a set of individuals. In this study the data were only collected on the form of questionnaire and were further processed statistically, which is based on quantitative methods and the methodology applied the "Case Study", because the questionnaires were applied to a specific group of the population.

#### **3.2. QUESTIONNAIRE**

Questionnaire is a set of structured questions in order to obtain data on persons on whom it is addressed. The questionnaire can be of direct administration when is the proper respondent to register the answer choices and indirect administration when the investigator himself (or interrogator) that fills depending on the answers given by the respondent in this case the questionnaires were carried out through administration indirect. These questionnaires were developed in order to meet the study variables and were conducted in various regions of the country by a group of people previously selected by the investigator, who subsequently delivered the questionnaires for analysis of collected data.

#### **3.3. OBSERVATION**

The process of observation in this study is part of the qualitative methods since tried to perceive the opinions, habits and attitudes of people to use the computers at the same time the methodology applied at this stage was the Action Research as occurred repeated cycles of planning, action, observation and reflection.

## 3. ANALYSIS OF QUANTITATIVE DATA

The analysis of data collected consisted of several stages, namely, Selection of Data, Database Building, Data Entry and Data Analysis Statistics.

Data selection was made immediately following the data collection and aimed to analyze whether the answers were readable and understandable. Only the valid answers were selected and cancelled the questionnaires that were not within acceptable limits for the study. They were rejected all the questionnaires in which the age of the respondent was less than 60 years and also all questionnaires were not fully completed. As the term suggests, "Variable" is the characteristic of interest is measured in each element of the sample or population; their values vary from element to element. Variables can be characterized in a qualitative or quantitative.

Quantitative variables are the characteristics that can be measured on a quantitative scale, i.e., have numerical values that make sense and can be continuous or discrete. Continuous represent measurable characteristics which take values in a continuous range. Usually should be measured using an instrument. Examples: Weight (balance), height (ruler), age. The discrete represent measurable characteristics that can assume only a finite or infinite number of countable values. Usually counts are the result. Examples: number of children.

Qualitative variables are the characteristics that do not have quantitative values, but rather, are defined by several categories, i.e., represent a classification of individuals and can be nominal or ordinal. In roll there ordination between categories. Examples: sex, eye colour. In ordinal there is an ordering between the categories. Examples: education (4.grade, 6th year, 12th grade). Below an explanatory framework of the variables used in this study.

	Quantitativa		Qualitativa			
Variáveis	Discretas	Continuas	Nominais	Ordinais	Descrição	
Idade		Х			Idade do idoso	
Tipo de Localidade onde habita				Х	Tipo de Localidade onde o idoso habita( Aldeia, Vila, Cidade)	
Escolaridade				Х	Escolaridade do idoso (Não têm, 4ªC, 6ºA, 9ºA, 12ºA, CS)	
Sexo			Х		Sexo do idoso(Masculino/Feminino)	
Nacionalidade			Х		Nacionalidade do idoso	
Distrito a que pertence			Х		Distrito onde vive o idoso	
Sabe Ler ou Escrever			Х		Se o idoso sabe ler ou escrever	
Sabe o que é um Computador			Х		Se o idoso sabe o que é um computador	
Já alguma vez utilizou um computador			Х		Se o idoso já alguma vez utilizou um computador	
Quais as principais razões da utilização do computador			Х		Quais as principais razões para que o idoso utilize um computador	
Se sente dificuldade na utilização do computador			Х		Se o idoso sente dificuldade ao utilizar o computador	
Qual a razão de nunca ter utilizado um computador			Х		Qual a razão para o idoso nunca ter utilizado um computador	
Seria útil saber utilizar um computador			Х		Se o idoso acha que seria útil saber utilizar um computador	
Onde aplicaria a utilidade de saber usar um computador			Х		Em que medida o idoso acha que seria util utilizar um computador	

## 4. RESULTS

## 4.1. QUESTIONNAIRES

Data collected through questionnaires were statistically analyzed and are shown in the graphs that out below.

## 4.1.1. TYPE LOCATION

The region is composed by cities, towns and villages. The graph shows the results of answers to the question "Type Location." With this question was intended to get an idea if the people who answered the questionnaires were living in villages, villages or cities. As we can see, 45.5% of the responses were from people living in villages, 30.90% of people living in towns and 23.36% of people living in cities.



#### 4.1.2. Read or write

In the chart shows the results of answers to the question "Do you know Read or Write?". With this question was intended to get a sense if people surveyed knew Read or Write. As can be seen from the graph, 71.05% of the surveyed population can read or write, and the remaining 28.95% cannot read or write.



## **4.1.3. EDUCATION**

The graph is the answers to the "Education" question. With this question was intended to get a taste of Education of the people surveyed. At the outset, says that mostly have people who have the 4th class, then people who do not have any education.

- $\Box$  They have no education = 149 persons
- $\Box$  4th Class = 201 people
- $\Box$  Year 6 = 16 people
- $\Box$  Year 9 = 15 people
- $\Box$  12th grade = 16 people
- $\Box$  Degree = 10 people
- $\Box$  Did not respond = 4 people



## 4.1.4. KNOW WHAT IS A COMPUTER

The graph relates to the question "Do you know what a Computer is". With this question was intended to whether the respondents knew what a computer, and we can conclude that the vast majority of people knew what a computer (77.86%) but there is still a significant percentage of people (22 14%) did not know what a computer. For people who did not know what a computer (91 of 411 people surveyed) completed the questionnaire here.



## **4.1.5. ALREADY USED A COMPUTER**

The graph represents the responses received to the question "Have you used a computer." With this question wanted to know, of the respondents who knew what a computer (320 of 411 in total), if you have ever had used a computer, and as we can see by the graph 67.81% of the people surveyed never they used a computer, and only 32.19% of respondents have used a computer.



Into another study presented by Eurostat - Community Survey on ICT in Households and by Individuals in 2006, it turns out that the skills of citizens the European Union are low, being located at about 60% of the total population. The conclusion is that even among the elderly that this amount reaches a value very other negative with respect to citizens as shown in this Table:

<b>ERASMUS + PROJECT: EDUCATION</b>	THE CHALLENGE OF THE I	LATER YEARS - LIVE AND LEARN
-------------------------------------	------------------------	------------------------------

Internet user	EU	Low	Aged	Aged	Retired/	unemployed	women			
skill level	total	educated	55-64	65-74	inactive					
Never used	43	67	65	85	76	48	47			
Have some										
degree of	57	33	35	15	24	52	53			
internet skills										
	Computer User Skills									
Computer user	EU	Low	Aged	Aged	Retired/	unemployed	women			
skill level	total	educated	55-64	65-74	inactive					
Never used	41	65	61	83	73	44	44			
Have some										
degree of	59	35	39	17	27	56	56			
computer skills		~~~	00		2,					

(Source: Eurostat - Community Survey on ICT in Households and by Individuals, 2006)

## 4.1.6. HAVE COMPUTER AT HOME

In the chart shows the results to the question "Have Computer at Home". With this question wanted to know of respondents who have used a computer (103 of 320 people in total) if they had computer at home, and as we can see by the chart below 70.87% of people said they had computer home, as 28.16% of people said they had no computer at home.



#### 4.1.7. REASONS FOR COMPUTER USE

The graph relates to the question "What are the Reasons for Use your computer". With this question, was intended to find out the main reasons for using the computer, of the respondents who had used a computer (103 of 320 people in total), each person could have several reasons to use the computer we note the main reason is the use of internet then writing documents and professional reasons.

- $\Box$  Professional = 29 responses out of a possible 103
- $\Box$  Internet = 56 responses out of a possible 103

 $\Box$  Documents = 35 responses out of a possible 103

- $\Box$  Movies = 6 answers out of a possible 103
- $\Box$  Play = 14 responses out of a possible 103
- $\Box$  Music = 10 responses out of a possible 103

 $\Box$  Another = 25 responses out of a possible 103



## Razões da Utilização

#### 4.1.8. FEEL DIFFICULTIES IN COMPUTER USE

The graph is the answers to the question "Do you feel difficulties in Using the Computer." With this question wanted to know if people who said they have used a computer (103 of 320 people in total), felt some kind of difficulty in using the computer, and as we can see by the chart, the vast majority of people feel

difficulties in computer use (75.73%), and only (24.72%) did not feel any difficulty using the computer.



## 4.1.9. MAIN DIFFICULTIES IN COMPUTER USE

The graph shows the results to the question "What kind of Use Difficulties Feel". With this question wanted to know, of the respondents who felt difficulties in using the computer (78 people from a total of 103), which his main difficulties were, each person could have various types of difficulties, we note that uses of the programs are the main difficulty they feel when using a computer, also using the mouse and even the keyboard are a major difficulty in using the computer.



## 4.1.10. REASONS FOR NOT USING COMPUTER

The following data are related to the question "What is the reason had never used a Computer". As this was an open question, we had up to group the data by keywords. Table shows us how to how the answers were grouped.

RAZÕES DE NUNCA TER UTILIZADO UM COMPUTADOR	PALAVRAS CHAVE	Nº RESPOSTAS	
NAO EXISTIA COMPUTADOR	The box of the strategy of the state of the		
NAO EXISTIAM COMPUTADORES	NAO EXISTIA COMPUTADOR	9	
NAO HAVIA COMPUTADORES		35. <sup>4</sup>	
NAO FAZ FALTA	29 D		
NAO FAZ FALTA E SEM CURIOSIDADE			
NAO FEZ FALTA E NAO TEVE INTERESSE			
NAO FOI PRECISO			
NAO FOI PRECISO E NAO TEVE CURIOSIDADE			
NAO HAVIA NECESSIDADE	SEM NECESSIDADE DE USO	71	
NUNCA FOI PRECISD			
NUNCA FOI PRECISO E NAO EXISTIA NA ALTURA			
NUNCA SENTIU NECESSIDADE DE UTILIZAR			
PORQUE NUNCA FEZ FALTA			
PORQUE NAÓ PRECISOU	(2) (1) (1) (1) (1) (1) (1) (1) (1) (1) (1		
NAO SABE LER	NAO CARE LES NEM DECOUVES	-	
NAO SABE LER NEM ESCREVER	NAO SABE CEN NEW ESCREVEN	5	
NAO SABE UTILIZAR			
NAO SABIA		53	
NAO SELUTILIZAR	MUNICA ADDEENIDEN A UTH IZAD		
NUNCA APRENDEU	NONCH APREENDED A OTIEIZAR	51	
NUNCA ME ENSINARAM A UTILIZAR UM COMPUTADOR			
NUNCA PODE APRENDER			
MUITO CARO	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
SEM MEIOS FINACEIROS	SEM MEIOS FINANCEIROS	15	
SEM POSSIBILIDADE DE COMPRAR	Contraction of the second s		
NAO TEM			
NAO TEM ACESSO A NENHUM COMPUTADOR			
NAO TEM COMPUTADOR		39	
NAO TEM NENHUM EM CASA	NAS TRA COLUMN		
NAO TINHA	NAO TEM COMPUTADOR		
SEM ACESSO			
NUNCA COMPROU			
NUNCA TEVE COMPUTADOR			
FALTA DE DISPOSICAO			
NAO GOSTO NEM QUERO SABER			
NUNCA TEVE INTERESSE	SEM INTERESSE	5	
NUNCA TEVE VONTADE DE UTILIZAR	1.022000.000120000		
SEM VONTADE DE APRENDER	1		
CONHECE O COMPUTADOR PORQUE VE OS NETOS A TRABALHAR NELI			
DEVIDO A IDADE			
LIMITACAD VISUAL	OUTROS	5	
NAO SABE PARA QUE SERVE			
TEM MEDO DE ESTRAGAR			
NÃO RESPONDEU	NÃO RESPONDEU	17	

Tabela 2 - Razões de Nunca ter Utilizado um Computador

With this question tried to understand the main reasons of those who responded who had never used a computer (217 people for a total of 320), never having done so. As can be seen in the graph the vast majority of people answered that never needed to use and so never have used also to register a significant number of people who answered no use because they do not know how to use and also because they do not use they have no computer.



Razões da Não Utilização

## 4.1.11. WOULD BE USEFUL TO KNOW USING THE COMPUTER

The graph refers to the question "would be Useful Info Using a Computer." With this question wanted to know if the people who responded that they had never used a computer (217 people for a total of 320), it thought it was useful to know use. And as we can see by the chart, 60.37% of those who answered that it was useful to know to use, with 34.1% of people said it was not useful to know a computer.



# 4.1.12. ASPECTS THAT WAS USEFUL TO KNOW USING THE COMPUTER

The graph refers to the question "If it was Useful to know use a computer, which apply this utility." With this question wanted to be known, of those who said it was useful to know use a computer (131 people from a total of a total of 217), where they apply this utility, and as we can see in the chart below, the vast majority people said it would be useful to know to use in order to occupy their leisure time.

- $\Box$  Professionally = 24 of 131 possible answers.
- $\Box$  The level of leisure activities = 108 of 131 possible answers.
- $\Box$  At another level = 7 of 131 possible answers.



## 4.1.13. SCHOOLING WHO NEVER USED A COMPUTER

The chart refers to the relationship between the question "Education" and the people who responded that they had never used a computer to the question "Have you ever used a computer." This crossing of information allows us to have an idea of what is the education of those who responded who have never used a computer. As can be seen, the vast majority of people who responded that never used a computer or have no education or have only the 4th class. Table presents the education of people who have never used a computer.



## Escolaridade, Nunca Utilizou Pc

4.1.14. SCHOOLING WHO HAVE USED A COMPUTER

The chart refers to the relationship between the question "Education" and people they said they have used a computer to the question "Have you ever used a computer." This crossing of information allows us to have an idea of what is the education of those who responded who have used a computer, and as we can see still the 4th grade education who have greater focus, but also to be noted that the vast majority of those who responded to the questionnaires they had to 4. Grade. But in the chart we can better see the differences. Table presents the education of people who have used a computer.



## 4.1.15. SCHOOLING WHO NEVER USED ONE VERSUS COMPUTER ALREADY USED A COMPUTER

The graph shows us more clearly the differences between the education of people who have used a computer and people who have never used a computer.

As we can see from the chart below for people who have no education and those with only the 4th class, the vast majority never used a computer, this trend tends then to change with the evolution of the education of the people, as they will increasing education of people, the number of people who have used computer will increased over people who have never used a computer. The table shows a relationship between the education of people who have used a computer and the education of people who have never used a computer.



## 4.1.16. LOCALITY OF WHO NEVER USED A COMPUTER

The graph is relative to the crossing of information between the question "Type locality "and the question" Have you ever used a computer."In the chart below we see information about the type locality of respondents who had never used a computer, and as we can see, as we go down the type of locality, the number of people who have never used a computer increases, but the chart 18 we can see it more clearly. The table shows the type locality (city, village or small village) of people who have never used a computer.



## 4.1.17. LOCALITY OF WHO ALREADY USED A COMPUTER

The graph is relative to the crossing of information between the question "Type Location "and the question" Have you ever used a computer." In the chart below we see information about the type locality of the respondents who had ever used a computer, and unlike the graphic here are 16 people living in the cities appearing in greater numbers, but the chart 18 we can see this with more clearly. The table shows the type locality of people who have used a computer.



## Tipo Localidade Já Utilizou Pc

## 4.1.18. LOCALITY OF WHO NEVER USED ONE VERSUS COMPUTER NOW USED A COMPUTER

The graph shows us more clearly the differences in the type locality of respondents who have used a computer versus the respondents who have never used a computer, and as we see people living in the city most have used a computer but on the other hand people living in towns or villages in the vast majority never used a computer. The table shows the relationship between the type locality of people who have used a computer and type of locality of people who have never used a computer.



## 4.1.19. AGES

The graph refers to the question "Age". With this question wanted to know the correct age of the people who responded to the questionnaires, and as we can see in the chart below, there was even some balance in the average age of the respondents to the questionnaires, and most people stood between 60 and 74 years old, with less then expression but also a large number of people between 75 and 89 years, and then have less expression people over 90 years. The table shows the average age of respondents.



## 4.1.20. MIDDLE AGES, LEARN TO USE A COMPUTER USER VERSUS NOT KNOW USING A COMPUTER USER

The graph is an information crossroads of people who responded that they had never used a computer in question "Have you ever used a computer" and then answer the question "It would be useful to know to use a computer." With this question trying to understand if there was any relationship between age and people respond that it was not useful to know a computer. And as we can see in the chart below only in the age group of between 75 and 79 years is that there were more people to respond that it was not useful to know use a computer, but also note that with advancing age, the difference between people who responded that it was not useful to use a computer and those who answered that it was helpful tends to become more balanced. The table shows a relationship between the age of the people and the answer to the question "If it was useful to know use a computer."



## 4.2. RESULTS ANALYSIS

By doing a general analysis of the results, we note that, most people surveyed live in villages but there is also a large representation of people living in towns and cities. We can also see that most people surveyed read or write although there is still plenty of an illiterate person; the education level of the people is predominantly 4°classe and the vast majority know what a computer to register even though they know what it is, almost 70% have never used it.

Of respondents who have used a computer the great majority live in cities and over 70% have computer at home and its main reason for using the computer to the Internet. At the same time, over 75% of these people experience difficulties in using the computer, especially when using the programs, the mouse and the keyboard.

In terms of respondents who had never used a computer to mostly live in villages and towns and that their education level is predominantly the 4th class. We highlight that the main reasons for non-use were they never had need to use a computer and never learned to use a computer or even not used because they never had a computer. Also noteworthy that although they never use a computer more than 60% of people think it was helpful to know use a computer, in order for to occupy their leisure time. The age range of those who responded to the questionnaires lies predominantly between 60 and 74 years old, although even after 75 years there has been quite representative and particularly these people are over 75 years longer respond that it is not useful to know a computer.

#### 4.3. Reason by which signed up in the initiation of discipline to computers

By analyzing this graph it appears that most students (76%) It states that the reason that led him to enroll in the University ICT course was to improve the knowledge, 16% to occupy the free time and 8% for combat loneliness. According the experts the technology enables the individual to be more integrated into an extensive electronic community, putting him in touch with family and friends, allowing you to exchange ideas and information, learning together and reducing isolation through community experience.





Category	Example Answers	Absolute Frequency	Relative Frequency (%)		
	Learning to handle the computer; learn to use the computer	22			
Acquisition of knowledge	learn to deal with the computer; gain knowledge on information technology; acquire more knowledge about computers;		71	40,3%	
	adaptation to ICT	1			
	Expand knowledge	12			
	Learn more		56	31,8%	
	keep me updated				
	update knowledge				
	Progressing	1			
	Research	10	11	6.20/	
	make appointments; payment of invoices 1		11	6,3%	
Use of	Communication with family and friends			14,2%	
Internet	photo sharing		25		
	sending and receiving messages				
	blogs; social networking				
Recreational	Way to pass the time				
	occupation of spare time; living; company	7	12	7 40/	
Activities	therapy		12	7,4%	
	recreational activities	2			

Complementing with observation and surveys:

## 4.4. The contribution of the discipline of ICT has improved their quality of life.

Through analysis of the chart 8 it can be seen that 68% of subjects who agree there was an increase in their quality of life since enrolled in the course. For 32% there is no expression of any opinion and there is no dissenting response. The Internet is a possibility to take the elderly in your area comfort - home TV, grandchildren - and put it on a path of new learning that can improve their quality of life.



#### 4.5. In your daily life, you use the knowledge gained in this course

In the graph it is observed that 76% of students use the knowledge they acquired in this discipline, while 20% say they have no opinion and only 4% say they use the knowledge in their daily lives. Also according the experts for the elderly, email is a tool interesting because they can communicate if, for example, with distant relatives more often because of the speed in the transmission of messages.



#### 4.6. Feel support from family, friends, for this course in ICT who attends.

Through chart analysis 12, 72% of students actually feel support from part of your family and friends to attend the informatics course. Of remaining 20% did not express their opinion and 8% said they do not feel supported by family members or friends to attend the course.



## **5. CONCLUSIONS AND FUTURE WORK**

"Sad times! It is easier to disintegrate an atom than a prejudice ". Albert Einstein (1879-1955)

In fact in the words Albert Einstein is very difficult to draw a prejudice of society, in the days still run continue to look for the elderly as if they were a disposable object, and its sole purpose the end of the walk on earth. With this study we tried to give answers to a small part of the problems of these people, because even though the computer is likely to have a very important role in the lives of older people, it will not solve all the problems of these people. Applying what the researcher thinks, there are many seniors who do not have to give him a bowl of soup, or a blanket in winter or even a little kiss fondly because actually think they would not ask much more than that, but it is unfortunately in this society we live in where our gaze cannot reach more than navel.

Even before the start of this study, we always had the idea that the relationship between the elderly and the computer, it was a very close relationship, and that was the big motivator for the development of my "Research Questions".

The methodologies applied were those that seemed most appropriate to respond to the Research Questions. Since it was not possible to study the entire elderly population of Portugal, it has been studied only a specific group, which is why we used the "Case Study" which allowed to study in depth a phenomenon in its real context. The methodology "Action Research" was the one that seemed most appropriate to the study, since it allowed the freedom to plan, implement, observe and reflect on the subject of study, running this cycle repeatedly to get concrete answers. These two methods are independent but complement each other allowing validate the answers given by one and another. With the questionnaires in selected case study was with the idea of the problems that these people had to use the computers after the observation and investigation process were confirmed answers that had been given in the questionnaires.

Considering the "Research Questions" study can be found that:

# □ "HAVE A COMPUTER A SIGNIFICANT ROLE IN THE QUALITY OF LIFE OF THE ELDERLY?"

At present, the computer plays an important role in the quality of life of all people, just by virtue older people are also affected in their daily lives by this income. However, the benefits gained by the elderly are much smaller than those purchased by younger people because the systems mostly do not respond the needs of these people, nor has there been a previous teaching that they might have opportunity to know how to use them. Thus, it is concluded that currently does not have a computer so relevant role as would be desired in the quality of life of older people, even though in recent years there has been observed a significant development in this aspect, and the Municipal Councils have played a very important role, particularly in the creation of the Third Age Universities which has allowed older people throughout the country begin to have a more direct contact with the computer.

## □ "WILL PEOPLE OVER 60 YEARS USE COMPUTERS?"

Lately, the number of people over 60 years using computers has increased considerably, yet the great majority of people over 60 have never used a computer or even do not know what a computer. Hence it can be concluded that only a minority of people over 60 use computers.

## □ "DOES THE SYSTEM IS ADAPTED IN ORDER TO PROVIDE AN EASY USE FOR PART OF THESE PEOPLE?"

Currently, there are very few systems adapted to provide an easy computer use by the elderly. These systems sometimes even become difficult to use for the most common user, let alone an old man who never went through a learning process. There are too many buttons, using the mouse and keyboard is a great difficulty of use, the programs are mostly difficult to usability, yet it adds a normal lack of vision on the part of older people which makes it much more complicated. It is necessary to urgently rethink the usability of these systems and adapt them to their concept of usability extends from children to the elderly.

## □ "WHAT RESULTS POSITIVE OR NEGATIVE WE CAN TAKE FROM THE INCLUSION OF THE THIRD AGE IN COMPUTERS?"

If no conclusion to be drawn from this study is that even though the vast majority of seniors do not use computers, almost all of them would like to know the use and the use of free time is the main reason for use. And in fact many of these people enter the retirement age and fall into a void without a booking for your free time, here the computer can play an important role serving as occupation element of these people. The computer may also allow closer monitoring by the children on their parents, who often live far away, and so could have a more direct contact with their parents. Also allowed the elderly feel more family because they could see their children and grandchildren at any time. It is important, then, to note that the inclusion of information in old age will allow the elderly take the computer all the benefits that the common user takes nowadays.

There is still a long way to go with regard to changing mindsets. One can look the way as an obstacle course, the first obstacle to be overcome "fear", which has to be overcome by the elderly. Fear can be characterized in two ways, there is fear of "if I use the computer can be exposed to society," and there is also the fear of "if I use the computer can spoil," these are two barriers that lead to greater difficulty in learning by the elderly. The second obstacle to be overcome is the mentality of society. The society has a key role in old's relationship with the computer.

The elderly should be seen as an element that can continue to have an active role in society, and it must be society namely encourage older so they will be motivated to embrace new learning opportunities. Finally, the last obstacle to be overcome, is that of undertakings interfaces do not take into account neither the needs nor the cognitive abilities of these people. It is normal for older people have greater difficulty in learning new processes, therefore, to be developed applications and computer interfaces is important to consider the specific needs of each type of individual. If these barriers are certainly surpassed the process of inclusion of the elderly in this digital age will be much easier.

As we look to the future we can only keep in mind that this process of inclusion of Information Technology in the Third Age is fundamental both for improving the quality of life of older people, but also for ourselves we can have more direct contact with these people. It is important that we start to raise awareness because we will be tomorrow's elderly and unless we start to take action earlier today as we go through this process of ageing may still not be adequate answers to our problems at the time.