The Knowledge Volunteers
Evaluation Report I

Fondazione Mondo Digitale
www.**mondodigitale**.org

"THE KNOWLEDGE VOLUNTEERS"
Grant agreement number: 2011-3279/001-001

Lifelong Learning Programme

" This project has been funded with support from the European Commission. This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein"

BY NC ND

Fondazione Mondo Digitale 2012

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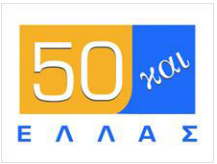
The Knowledge Volunteers Project



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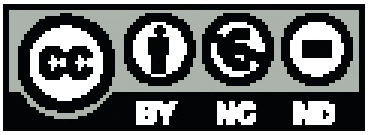
This volume contains the rusults of the evaluation conducted by the University of Edinburgh and the Fondazione Mondo Digitale during the training courses implementation and accompaigns the training kit designed by the Fondazione Mondo Digitale for the "The Knowledge Volunteers" Project.

The full basic training kit includes 7 volumes:

Guidelines for Tutors
Guidelines for Teachers
Guidelines for Grandparents
The ABC of ICT
Social Networking

Scientific supervision of Alfonso Molina,
Professor of Technology Strategy, at the University of Edinburgh
and Scientific Director of the Fondazione Mondo Digitale

With the collaboration of Annaleda Mazzucato,
Project manager at the Fondazione Mondo Digitale.



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The University of Edinburgh and the Fondazione Mondo Digitale

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Introduction

This report analyses the results of the Pilot ICT Training courses conducted during the first year of "The Knowledge Volunteers" - TKV- Project. TKV was financed by the European Commission through the Grundtvig Programme for the years 2001- 2013. One of the main objectives of TKV is to provide elders with the skills and resources necessary to benefit from ICT. To reach this project objective, a digital literacy training programme was designed to define the overall course curricula including methodological and didactical contents and activities. Afterwards a didactical kit was developed in all the partner languages, comprising Guidelines for Tutors, Teachers, Course organizers and elder learners (grandparents), as well as Handbooks in all the partner languages for 4 different levels of training courses: ABC of ICT, Social Networking, E-government, Easy Technology.

The curricula were tested though implementing pilot digital literacy training courses in Italy, Romania, Spain, Czech Republic and Greece, using guidelines and handbooks as supporting materials for teachers, tutors and learners. Key factors of the courses organization, was the presence of young students tutoring the elders, under the supervision of an adult teacher that promoted the intergenerational exchange elders-youths.

Each pilot was developed ad hoc for the different countries (see below). This report analyzes the data produced by TKV courses to understand the initial digital literacy rate of elders and the knowledge acquired during the courses. It also describes the digital competences of tutors and teachers taking part in the project. Furthermore the report highlights the "life skills" youths acquired thanks to their experience as tutors.

Italy

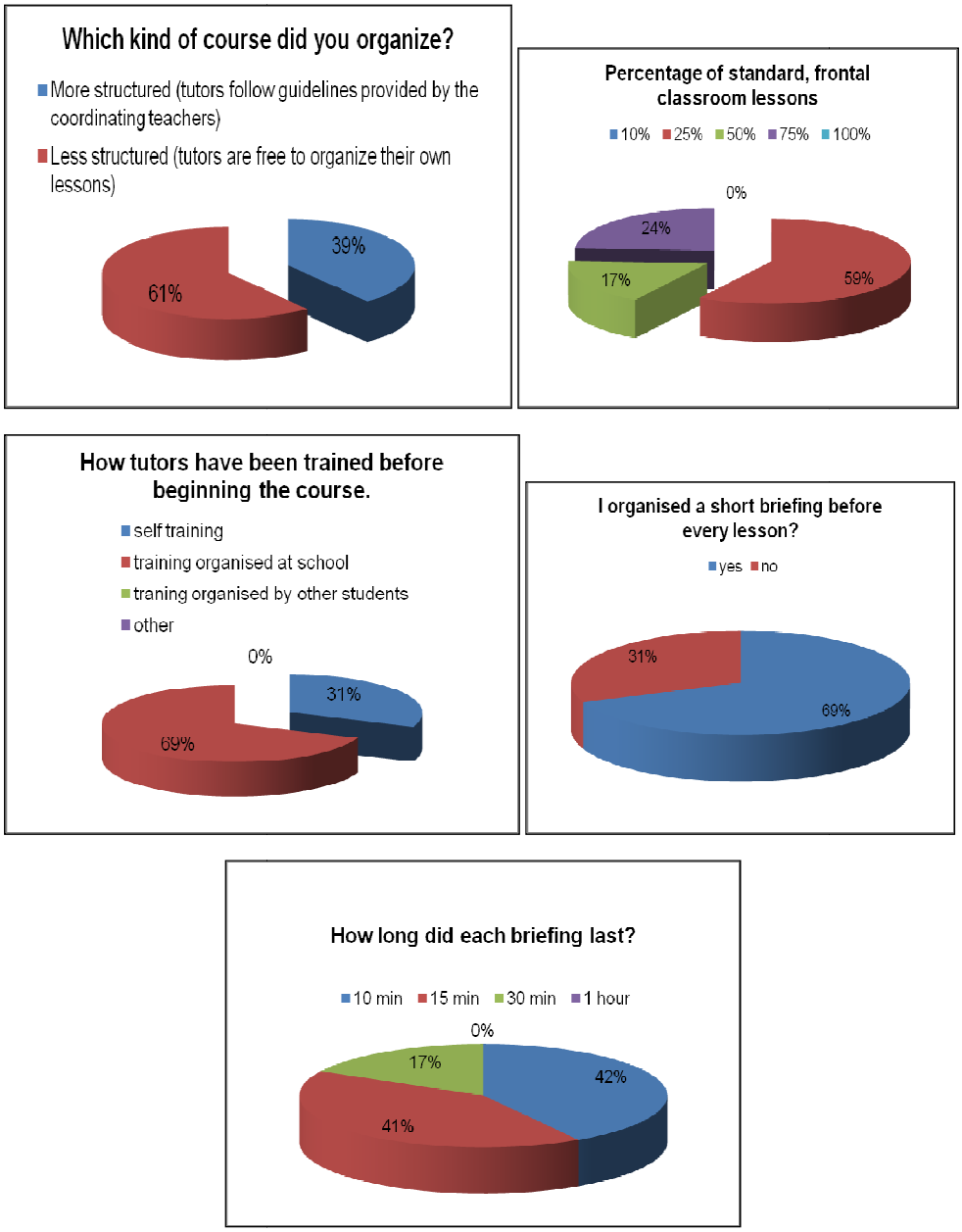
The Italian pilot obtained great interest from both elders and younger participants.

The pilot involved **24 elderly centers** (CSA San Quintino, CSA Dragona, CSA Torre Spaccata, Circolo Auser Potenza, CSA Galline Bianche, CSA Via Iberia, CSA Tosti, CSA Colli Aniene, CSA Villa Lais, CSA Cinecittà Est, Circolo Auser Reggio Calabria, CSA Civita, Circolo Auser Lauria, Circolo Auser Scampia, CSA Villaggio Olimpico, Circolo Auser Bologna, CSA Cornelia, Csa Primavalle, CSA Carsto Pretorio, CSA Monte San Giusto, CSA Valcannuta, CSA Valcannuta, CSA Bel Respiro, CSA Sabotino) and **32 schools.**

Courses Organisation

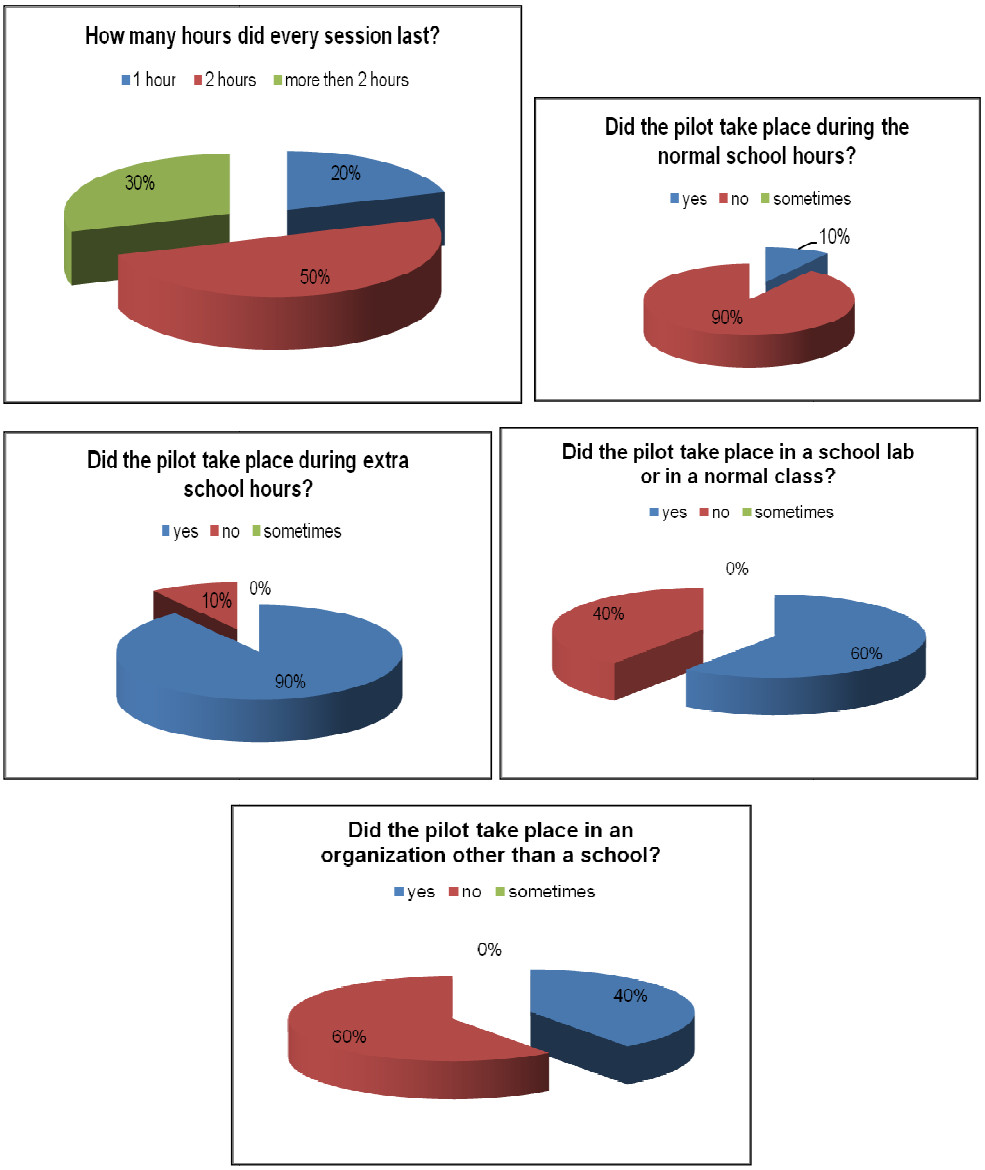
Most of the courses were organized in a more structured way and tutors were provided with training and briefed on the lessons to impart. In other cases, tutors prepared the lessons themselves based on guidelines provisions and needs identified during the dialogue with learners (**Fig.1**).

Fig.1



Each course provided 30 hours of training divided in lessons of 1 to 2 hours hosted by school classes or pc laboratories and, in some cases, by social or elders' centers. They taook place mostly out of the normal school hours (**Fig.2**). Frontal and informal lessons were combined **(Fig.1)**. Classes were organized in groups of 15 up to 25 grandparents' learners (**Fig.3**).

Fig.2



As an average, haft of them were aged between 60 to 65 years old, but some of them were aged up to 80 year old. Gender distribution among participants was homogeneous, 42% females and 58% males **(Fig.4)**. Regarding their social background and educational level, 8% of them completed the high school, 25% the primary school and 67% the secondary school (**Fig.5**).

Fig.3

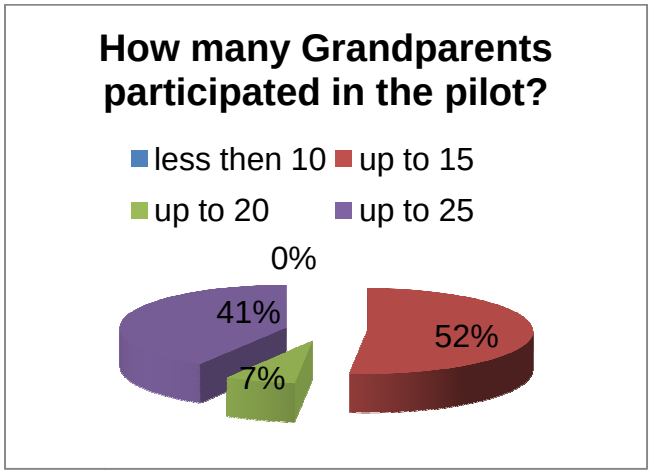
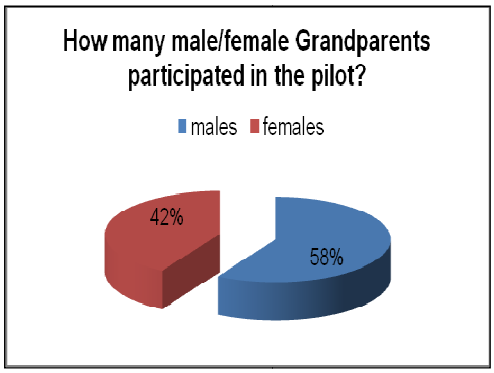


Fig.4



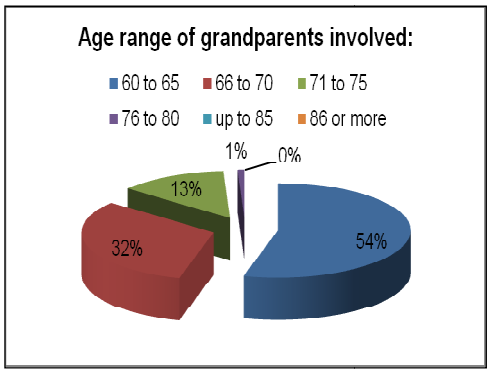
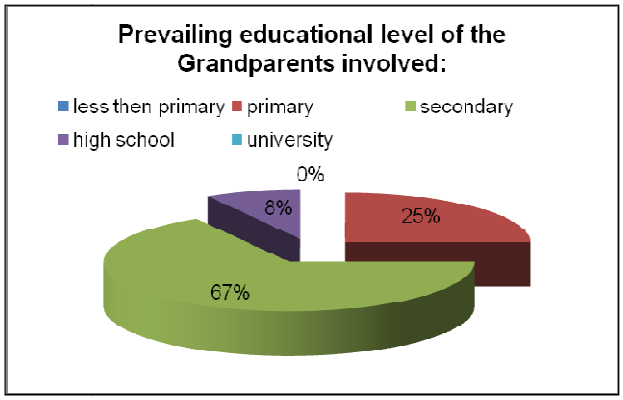
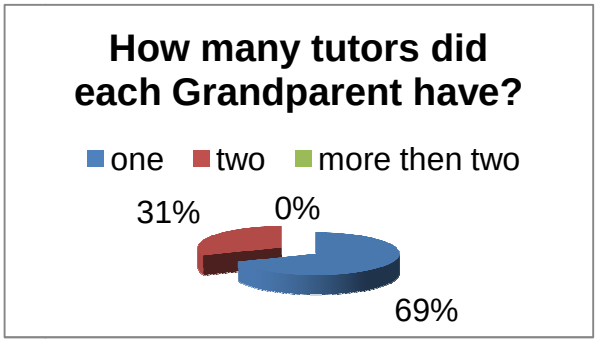


Fig.5



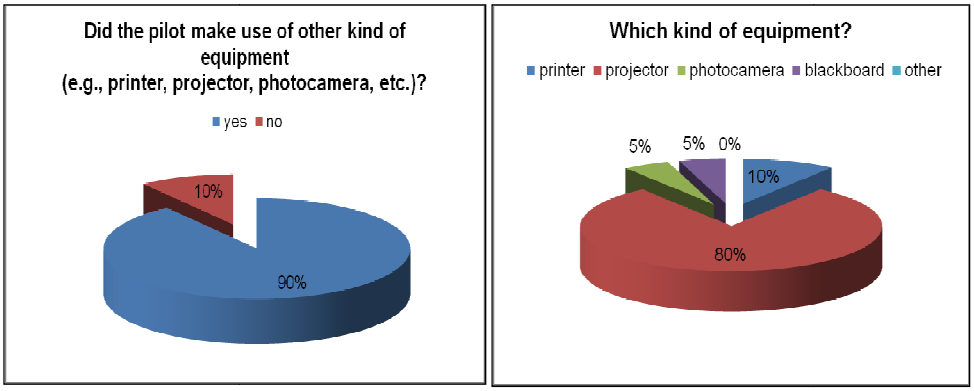
The courses were organized during the school year, as the didactical model requires. Students tutored the elders in a student/elder ratio of 1:1 or 2:1 under the active supervision of an adult teacher (**Fig.6**).

Fig.6



Schools and elders centers provided equipment in order to support the training pathway and learners practice: PCs were available for grandparents in all the classes were the lessons took place. In many cases, printers, projectors, photo cameras were also made available for learners and tutors use during the lessons (**Fig.7**).

Fig.7

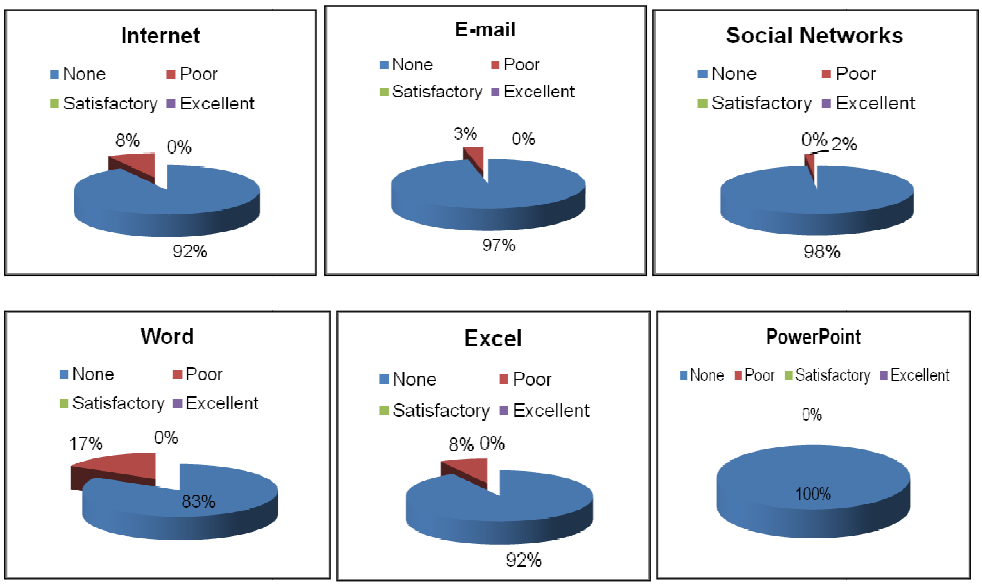


Educational value of The Knowledge Voluteers Project

Questionnaires were submitted to grandparents attending courses, before the beginning of the courses and at the end. Interviews as part of the real time evaluation were also organized during the courses. The objective of the survey was to evaluate (a) the methodological and didactical aspect of the training curricula and model, (b) testing the intergenerational and peer to peer approach in relation to both the skills acquired by grandparents involved in the education path and the changes in their use of the pc, and (c) the main evolutions in the relationships between elders and youths.

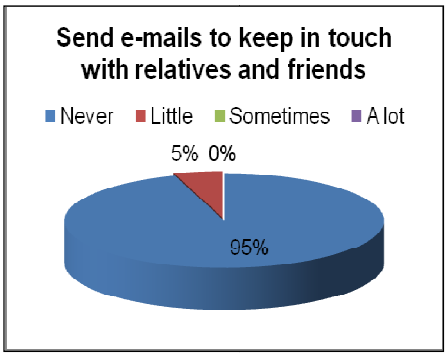
The following charts (**Fig.8**) refer to the use of a PC before the courses. Only 5% of elders used a PC to write letters or emails, look for information on what to do in their free time, while 95% of elders did not use a PC at all for this aim. About 8% of the elders interviewed used internet to look for general information such as what to do in fee time, and 10% had used internet to access public instruction and information services.

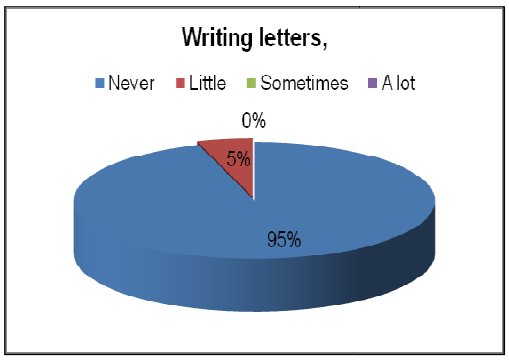
Fig.8

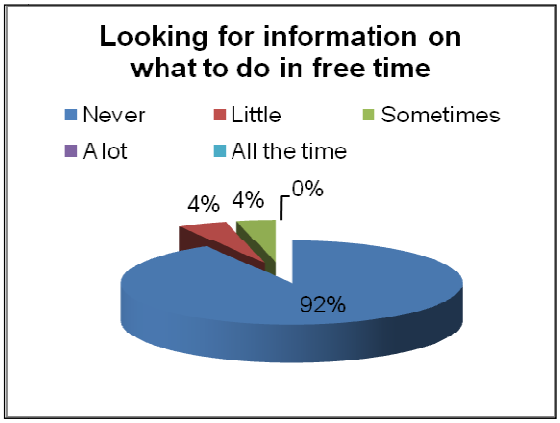


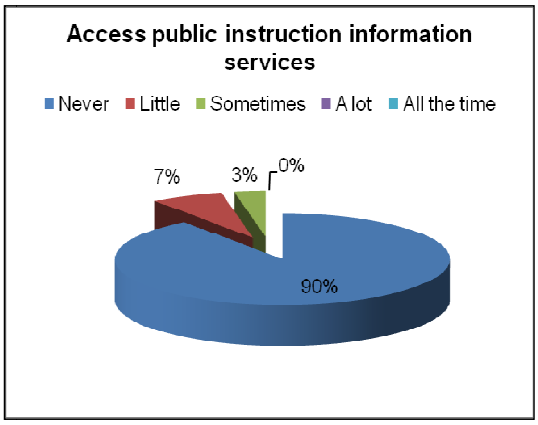
The following charts **(Fig.9)** refer to the use of a PC. Only 5% of elders used a PC to write letters or emails, look for information on what to do in their free time, while 95% of elders did not use a PC at all for this aim. About 8% of the elders interviewed used internet to look for general information such as what to do in fee time, and 10% had used internet to access public instruction and information services.

Fig.9





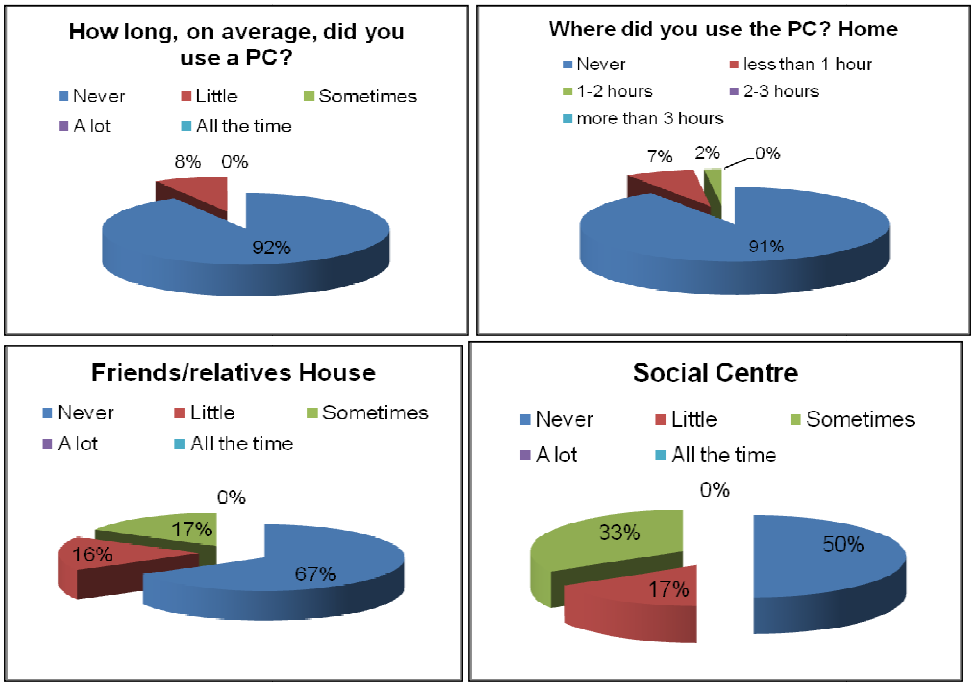




Most of the grandparents interviewed at the beginning of the courses, declared that as an average they never had used the PC.

Only 8% of them used it, mainly at the social center 50%, at their relatives' house, 33%, or at home 9%, for less than 2 hours a week **(Fig.10)**.

Fig.10



Grandparents who already had some knowledge about PC Programmes, or made use of the Internet, declared they already knew about computers because they used them for work reasons 39%, or attended other courses 5%, or used them before the beginning of the course thanks to their daughter/son or granddaughter/grandson 56%. 5% of them had attended other courses before **(Fig.11)**.

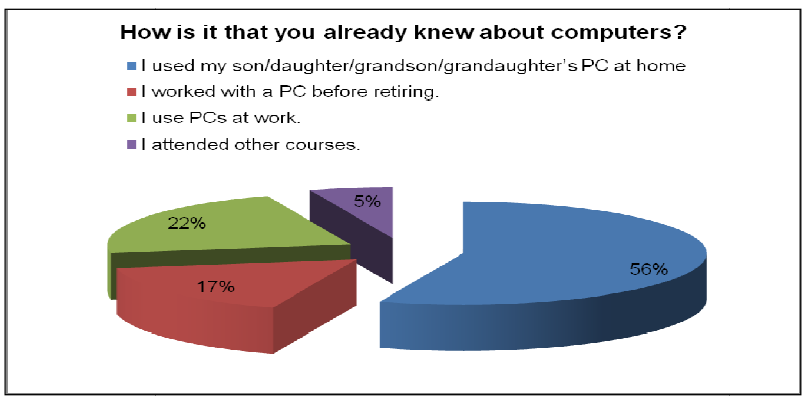
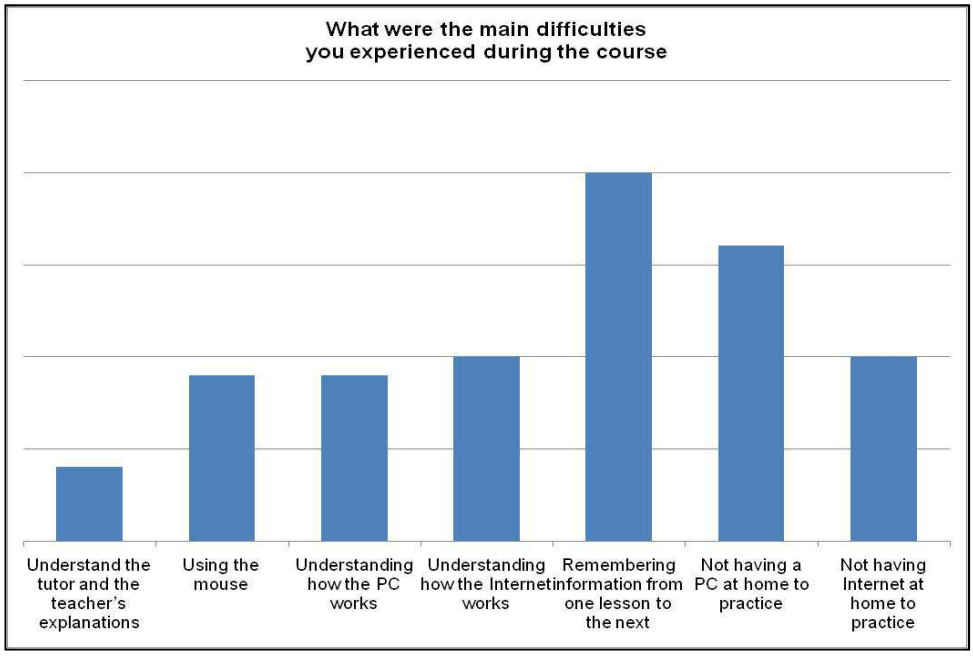


Fig.11

Evaluation of the courses

The courses curricula were adapted continuously to the learning needs of the grandparents, video lessons to support the teaching methodology were developed and introduced during the lessons and made available for self-learning and home exercises.
The methodology was adapted regarding the time needed on each step and with high degree of personalization.
In many cases, grandparents faced learning difficulties that required to repeat the lesson, add exercises or/and extend the time dedicated to some of the subjects, to ensure the achievement of very good results in terms of elders digital literacy competences **(Fig.12)**.

Fig.12



The main difficulties grandparents met were related to the difficulties of remembering information from one lesson to another (26%), of understanding of the tutor or teacher explanation (5%).

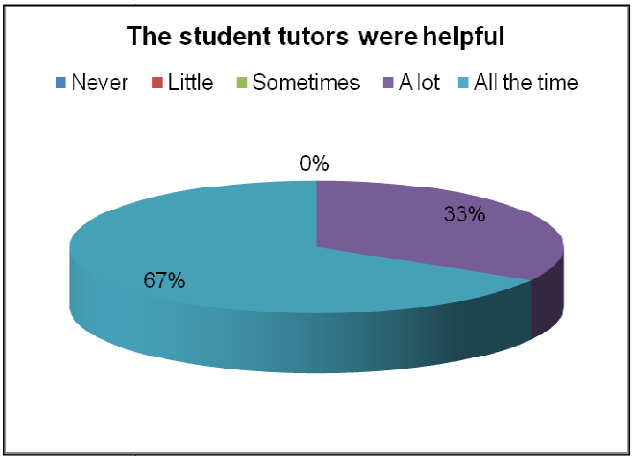
In some cases, not having a pc or internet at home to practice (20% and 13%) affected the learners' capacity to memorize and practice the lessons learnt. The main understanding difficulties were related to the basic knowledge regarding the use of the Pc, as well as how to use the mouse or understand how the Internet works **(Fig.12)**.

Young students, in the role of tutors, supported the grandparents during their learning pathway, assisting them in practicing the use of the pc.

Courses included frontal lessons and peer-to-peer teaching methods in most of cases young tutors prepared the lessons providing exercises and power point presentations to simplify the explanations of the main curricula subjects.

100% of the grandparents attending the courses declared tutors helped them to acquired skills and knowledge about ICT (**Fig.13**).

Fig.13



The teaching and learning approach based on intergenerational learning, networking, and role exchange was the key important aspect of the project.

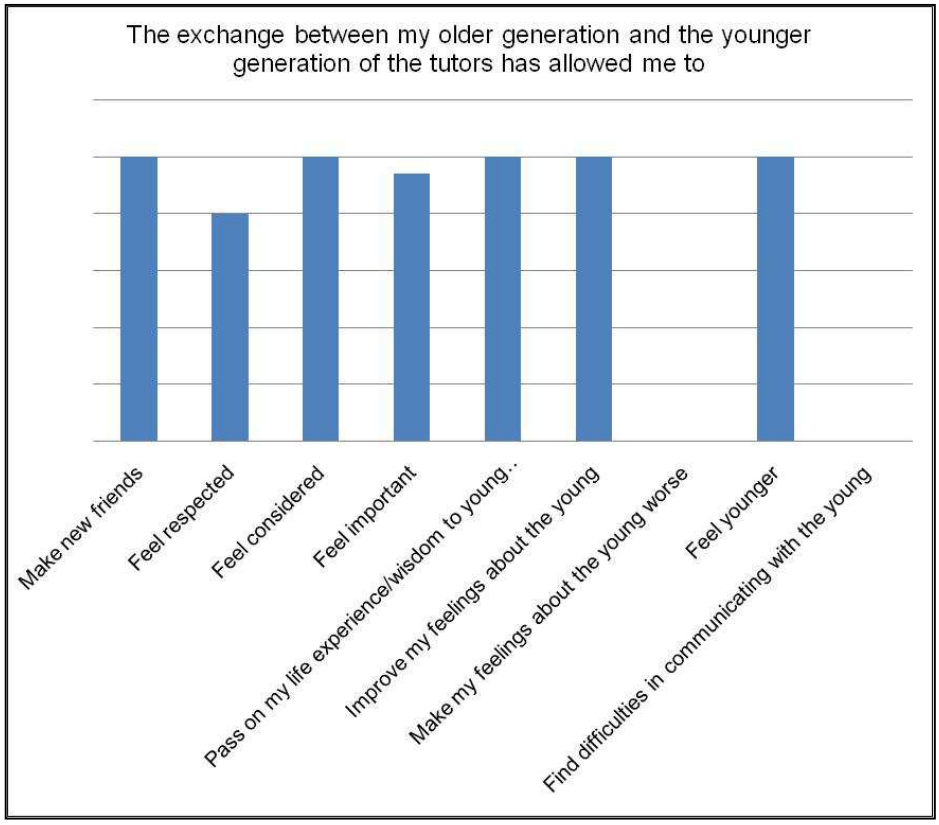
TKV promoted social relationships through the active involvement of different generations who shared experiences and helped

grandparents become aware of their opportunities to participate actively in society.

The intergenerational exchange facilitated communication and dialogue between elders and youth, contributing to the change of elders' opinions about youths.

17% of the grandparents participated in the courses declared the exchange between his/her older generation and the younger generation of tutors allowed him/her to pass his/her experience to the young students and to improve his/her feelings about youths. None of the Grandparents found difficulties in communicating with the students or changed for the worse their opinion about them **(Fig.14)**.

Fig.14



Thanks to the course path, grandparents become aware of their opportunities to participate actively in society. This made them feel considered (17%) and important (15%) (**Fig.14**).

The courses were a chance for grandparents to meet and socialize, making new friends among the older and the younger generation. Grandparents and young tutors established in fact very good relationships and in many cases friendships. 67% of the Grandparents declared they met several interesting people and made friendships during the course (**Fig.15 and 16**).

Fig.15

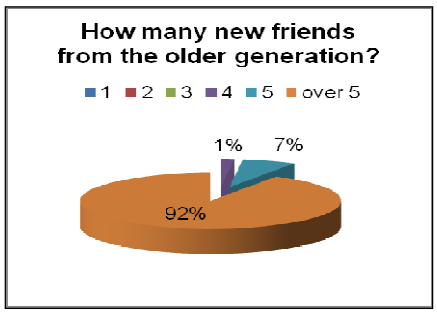
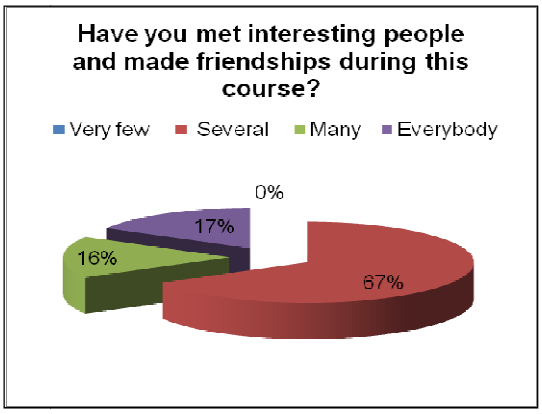
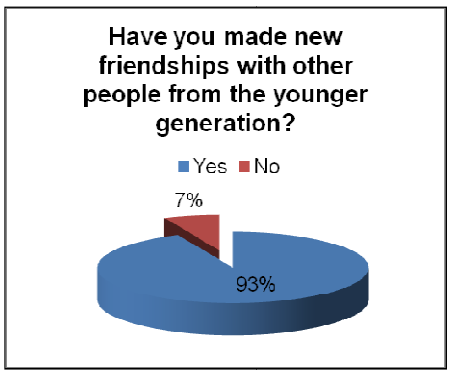
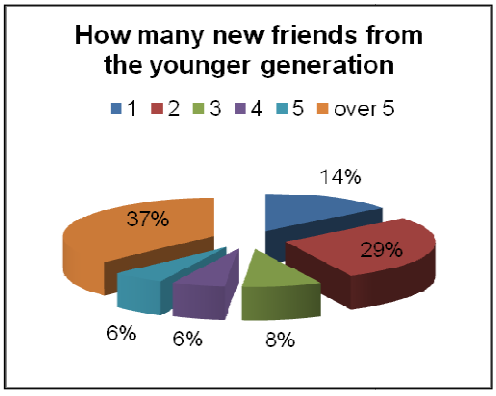


Fig.16







Grandparents also expressed the wish to continue to get together with the newly met friends from the older and younger generations even after the end of the courses. In many cases they also expressed the intention to visiting each other very often **(Fig.16 and 17)**

Fig.16

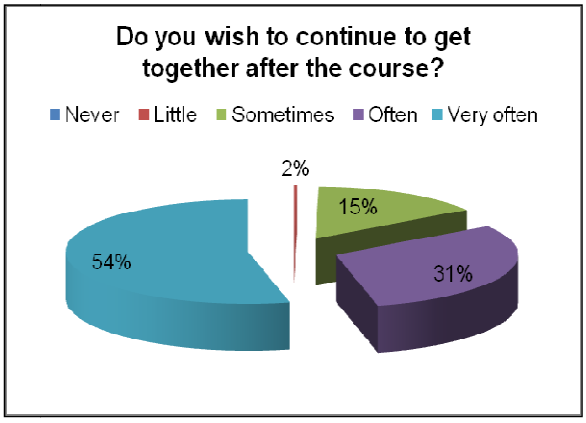
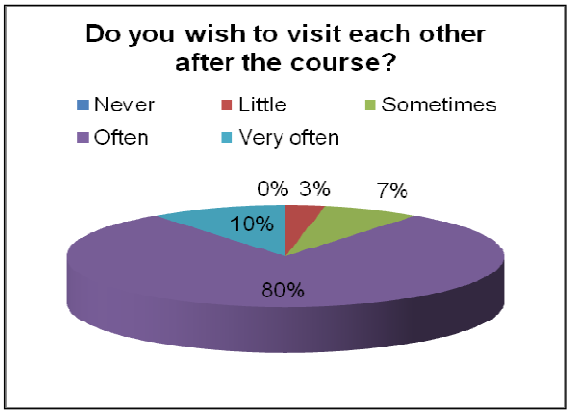


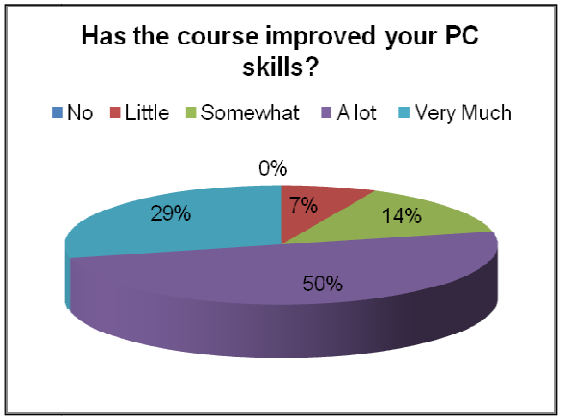
Fig.17



In terms of digital literacy knowledge and competences, the interviews and questionnaires distributed to grandparents at the end of the courses, revealed the level of skills acquired in relation to specific subjects part of the curricula and provided indications on the change of approach and use of the PC.

50% of the Grandparents said the course improved a lot their PC skills, 29%very much. 0% of them stated they did not improve their digital literacy level. 14% of the learners somewhat improved their capacity to manage the internet and are now able to use computer main programmes **(Fig.17)**.

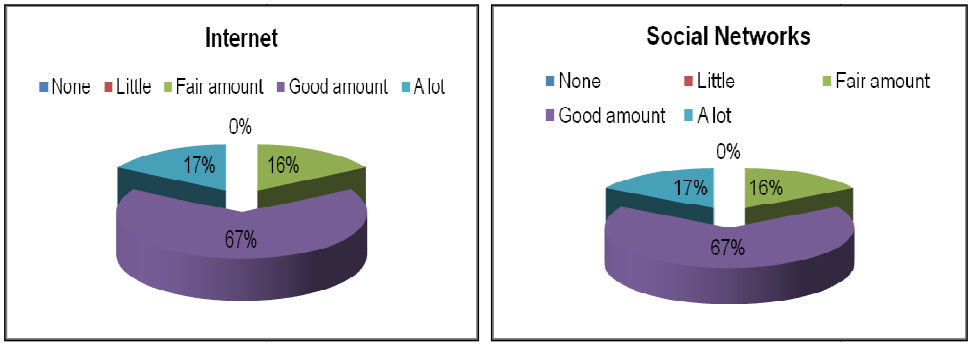
Fig.17



This data, related to the difficulties faced by some of the elder learners, highlights the importance of frequent practice to reach a high level of competences. In some cases, lack of attendance frequency or lack of equipments corresponded to grandparents lesser improvements in the ability to use the PC.

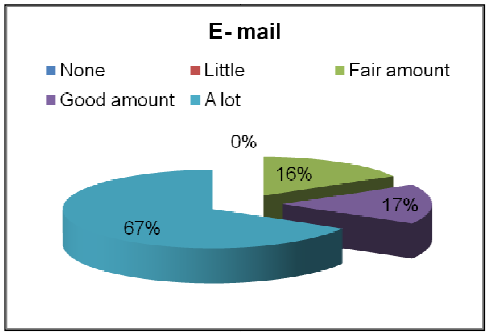
Particularly, to the question what skills did you learn during the course, 100% of grandparents answered they learnt to use the internet: 67% a good amount, 16% a fair amount, and 17% a lot **(Fig.18)**.

Fig.18



100% of the grandparents, even if at different levels, increased their knowledge about social networks, e-mail, main PC programmes such as Word, Excel, Paint and Power Point, and how to make photo albums **(Fig.19)**.

Fig.19



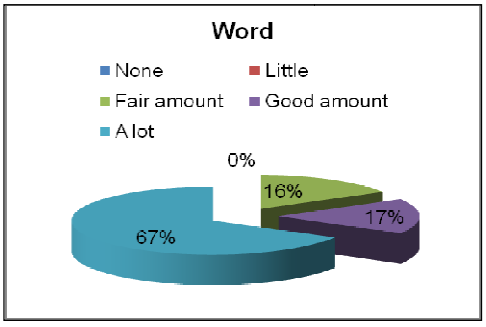


Fig.19

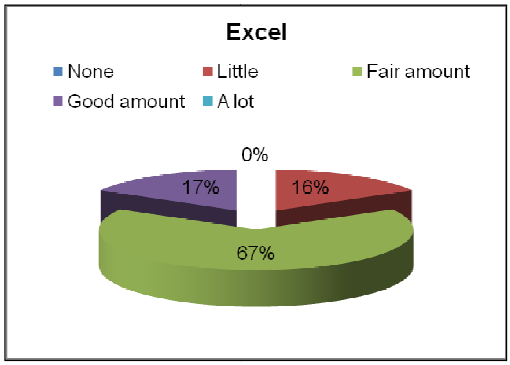


Fig.19

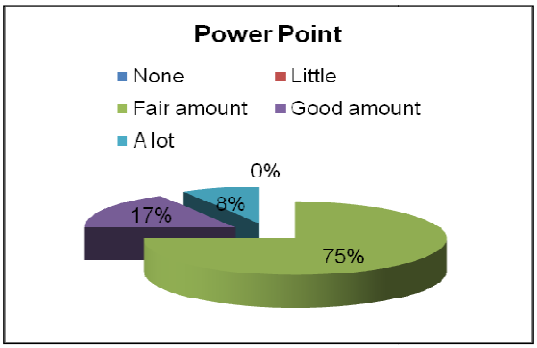
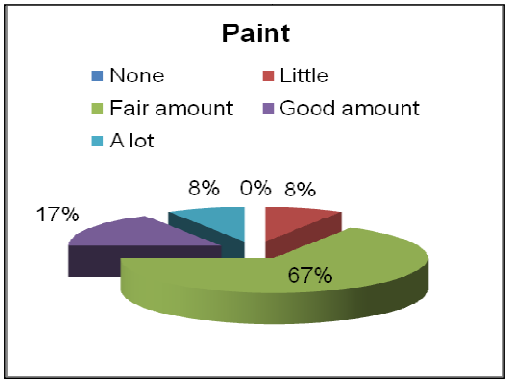
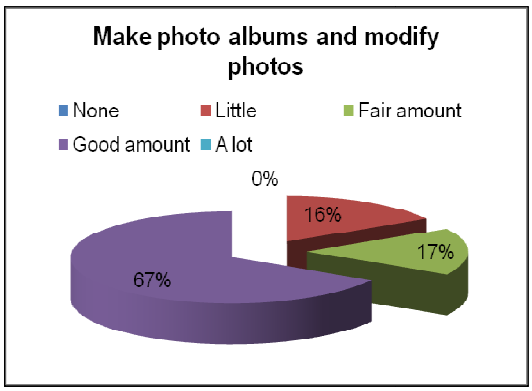


Fig. 19

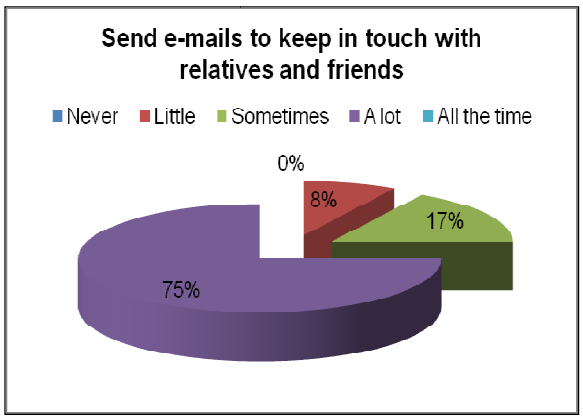


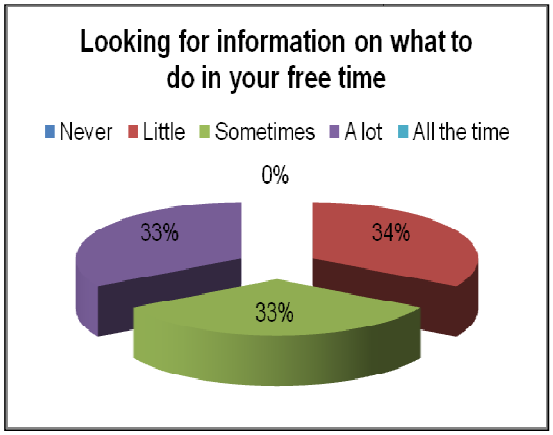


Grandparents were interviewed to evaluate the main changes in their approach to the use of the pc and their motivation to take advantage of the skills acquired in their daily life. 75% of the grandparents, in future, will use the pc to send e-mails to keep in touch with relatives and friends; 33% will use it a lot to look for information on what to do in your free time and 42% to make good albums. 33% will sometimes use it to access public information services and 17 % to purchase items on the internet. Only 37% of the grandparents will never use social networks, while 13% will use them a lot to keep in touch with friends

and relatives, 58% think what they learnt during the courses will help them to make new friends (**Fig.20 and 21**).

Fig. 20





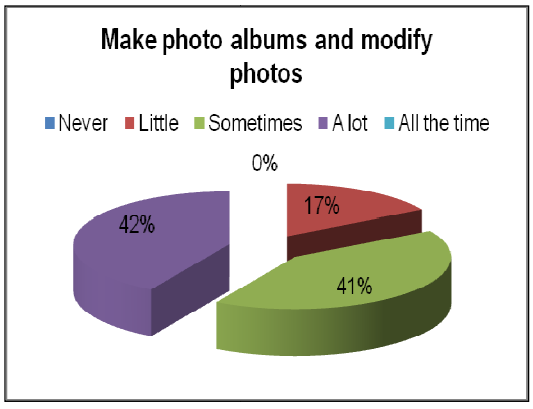
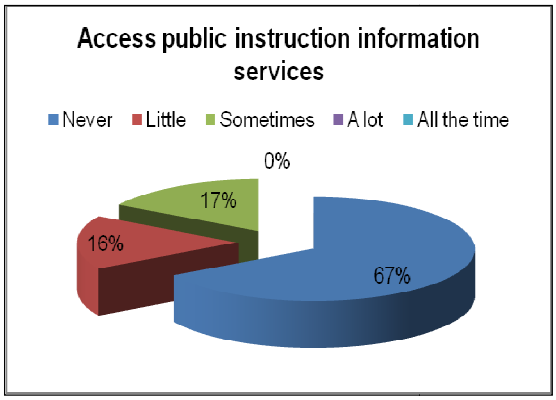
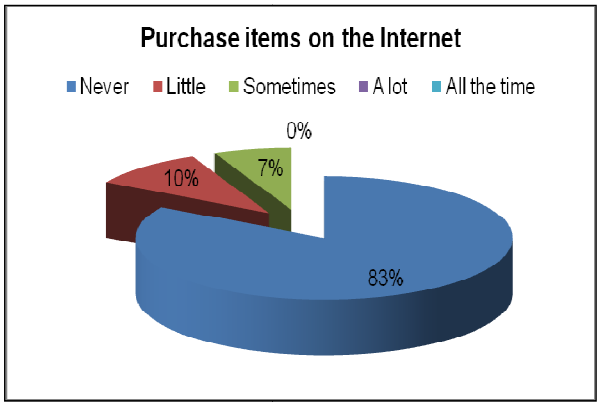
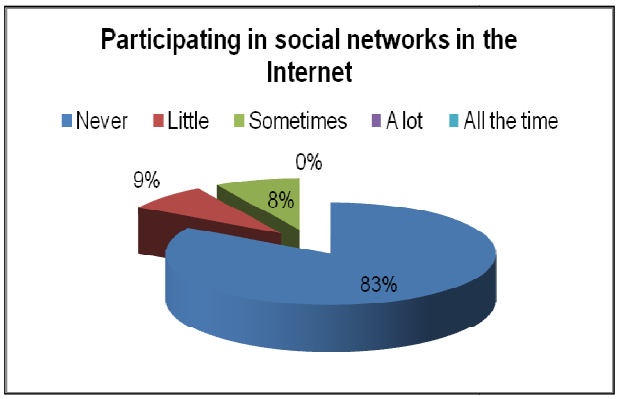
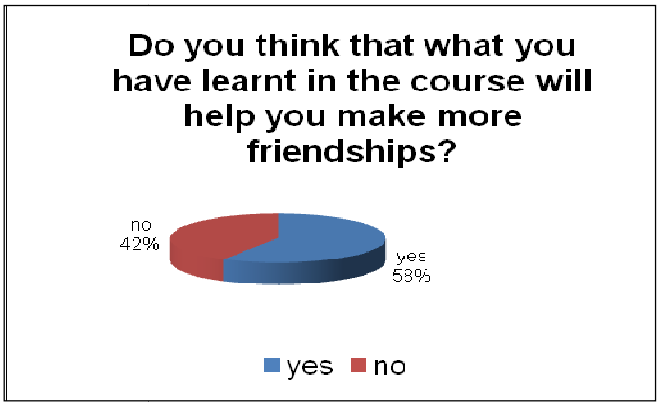


Fig. 21


Access public instruction information services
Never
Little
Sometimes
A lot
All the time
0%
17%
16%
67%

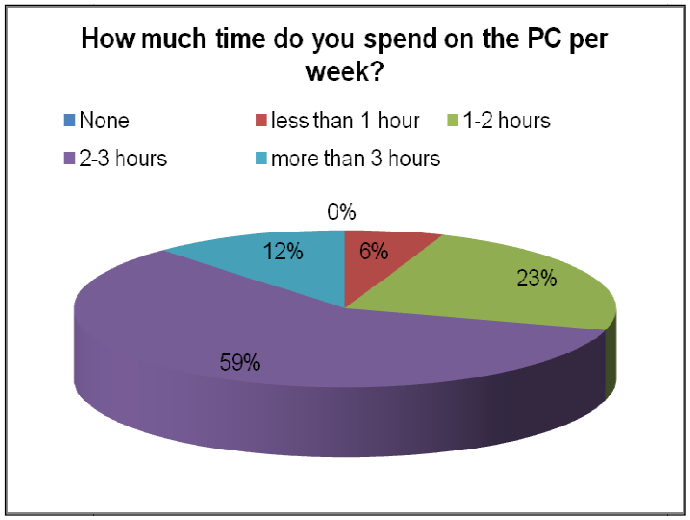

Purchase items on the Internet
Never
Little
Sometimes
A lot
All the time
0%
7%
10%
83%


Participating in social networks in the Internet
Never
Little
Sometimes
A lot
All the time
0%
9%
8%
83%


Do you think that what you have learnt in the course will help you make more friendships?
no
42%
yes
58%
yes
no

15% is now using the computer for more than 2 hours a week while before the project none of them were using it for more than 1 hour. Besides the course, they currently use the pc at the social center 40%, at home 20% or at their friends or relatives house 40%; half of them did not use the pc before (**Fig.22).**

Fig. 22



Evaluation of the value of The Knowledge Volunteers didactic kit

Based on the curricula didactic objectives, methodologies and activities, a didactic kit was developed for 4 levels of the course: ABC of ICT, Social networking, E-government services, and Easy technology accompanied by Guidelines for Users, Tutors and Teachers.

Contents were developed based on the target needs, customizing, and translating them to better respond to the local contest and constraints. Handbooks and Guidelines were used during the courses as supports for teaching and learning paths.

69% of the grandparents declared guidelines and handbook were very useful, liking simplicity and clearness the most and suggesting the addition of more contents and exercises (**Fig.23, 24**).

Fig.23.

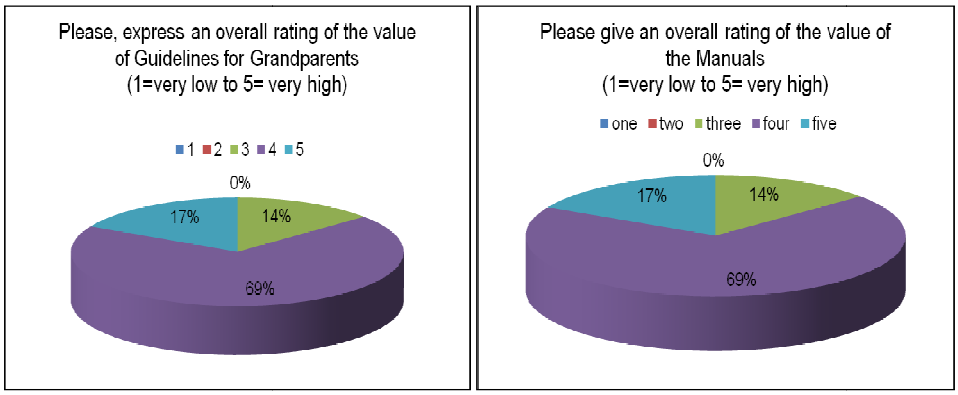
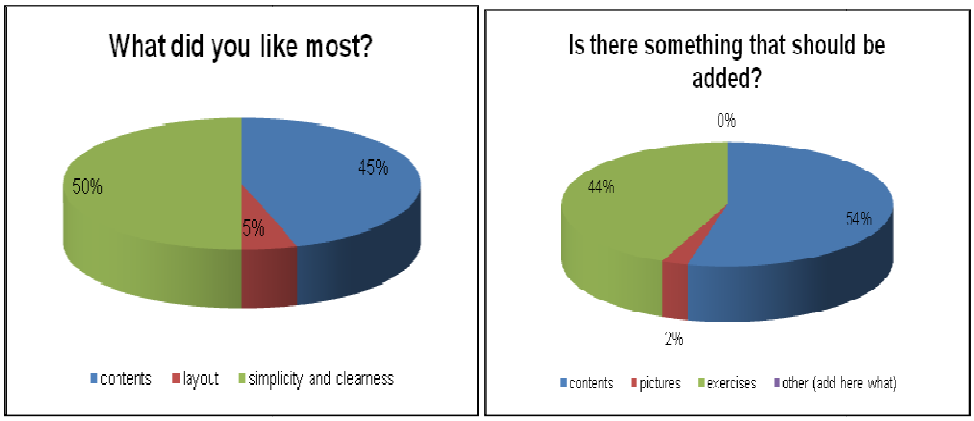
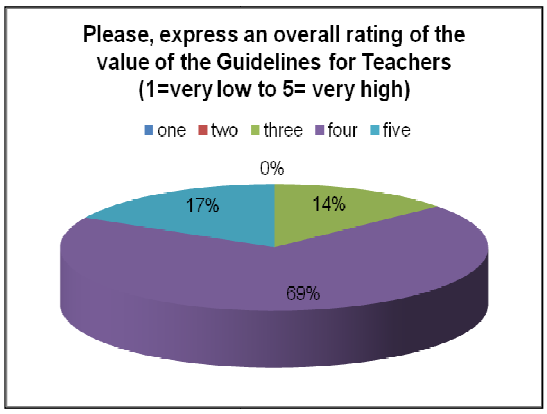


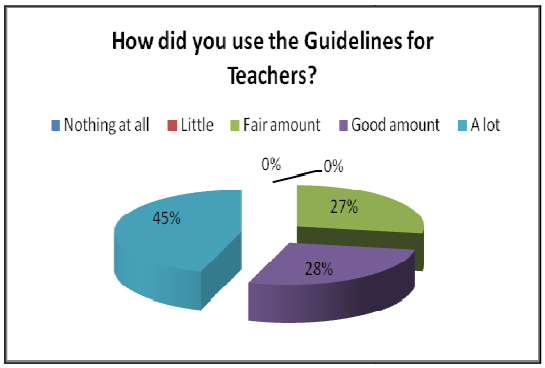
Fig.24



69% of the teachers declared the guidelines provided were helpful **(Fig.25**). They used it a lot as a tool to support courses organization and during lessons to guide grandparents learning and to direct tutors work. Teachers said the kit was characterized by excellent and very good comprehensiveness of contents (17% and 52% respectively) **(Fig.26)**, good amount of exercises (66%), very good quality of layout and graphics (55%), very good clarity of structure and language (52%), excellent accuracy of spelling (66%).

Fig.25





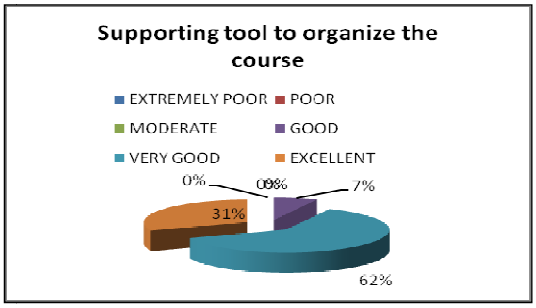
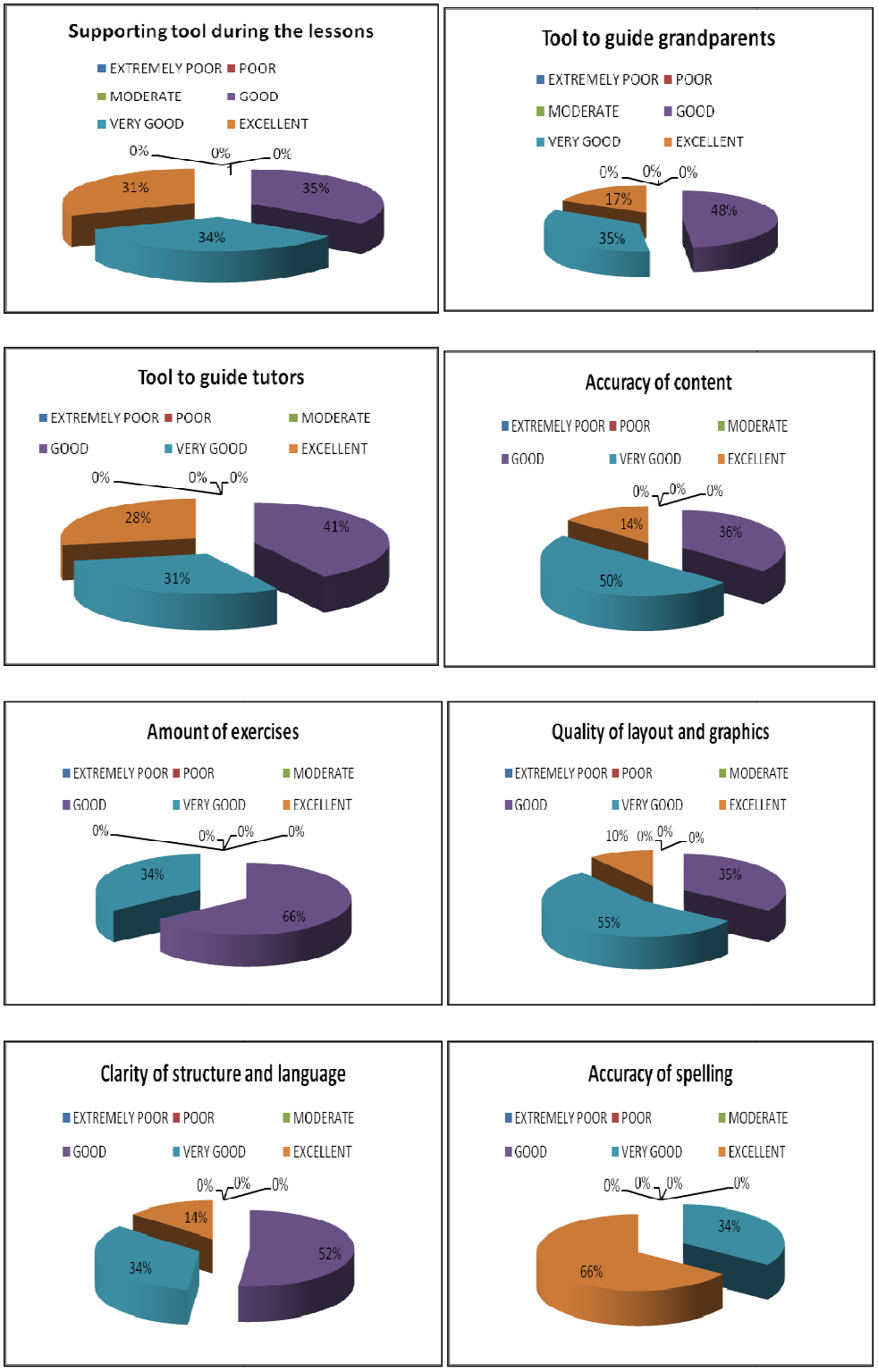
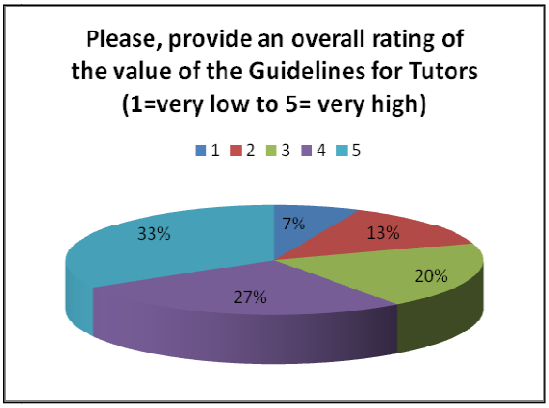


Fig. 26


Supporting tool during the lessons
EXTREMELY POOR
POOR
MODERATE
GOOD
VERY GOOD
EXCELLENT
0%
0%
0%
31%
35%
34%
Tool to guide grandparents
EXTREMELY POOR
POOR
MODERATE
GOOD
VERY GOOD
EXCELLENT
0%
0%
0%
17%
48%
35%
Tool to guide tutors
EXTREMELY POOR
POOR
MODERATE
GOOD
VERY GOOD
EXCELLENT
0%
0%
0%
28%
41%
31%
Accuracy of content
EXTREMELY POOR
POOR
MODERATE
GOOD
VERY GOOD
EXCELLENT
0%
0%
0%
14%
36%
50%
Amount of exercises
EXTREMELY POOR
POOR
MODERATE
GOOD
VERY GOOD
EXCELLENT
0%
0%
0%
0%
34%
66%
Quality of layout and graphics
EXTREMELY POOR
POOR
MODERATE
GOOD
VERY GOOD
EXCELLENT
10%
0%
0%
0%
35%
55%
Clarity of structure and language
EXTREMELY POOR
POOR
MODERATE
GOOD
VERY GOOD
EXCELLENT
0%
0%
0%
14%
52%
34%
Accuracy of spelling
EXTREMELY POOR
POOR
MODERATE
GOOD
VERY GOOD
EXCELLENT
0%
0%
0%
0%
34%
66%

60% of the tutors found the guidelines very useful to prepare the lessons and exercises and, during the courses, as supporting tools to guide the grandparents in practicing the PC. **(Fig.27)**.

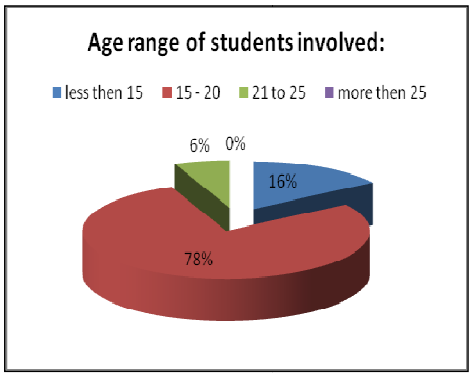
Fig.27

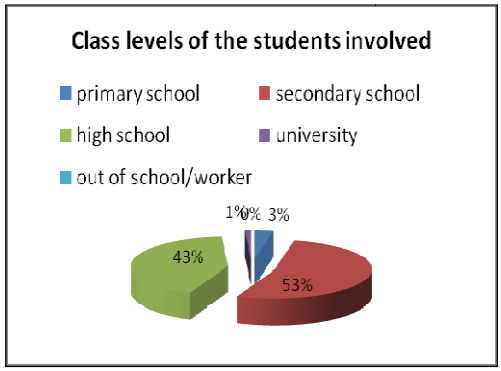


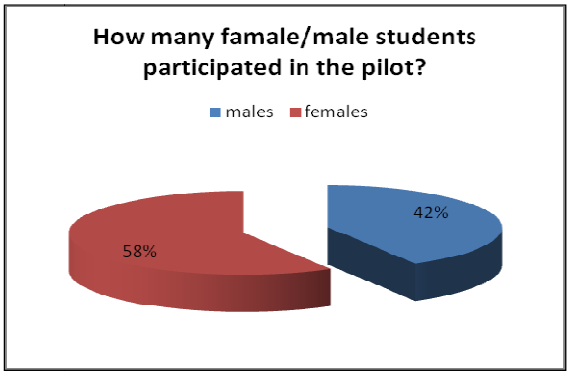
Tutors: role and added value of intergenerational exchange

78% of the young students involved as tutors in the digital literacy training courses frequented secondary or high school and were aged between 15 to 20 year old, while 16% were aged less than 15 and 6% more than 21 and up to 25. 42% were males and 58% females (**Fig.**28).

Fig.28

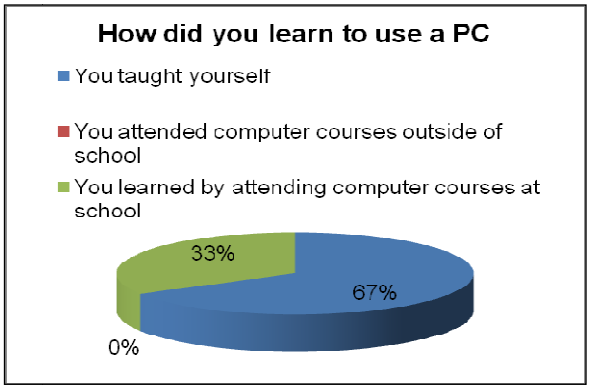


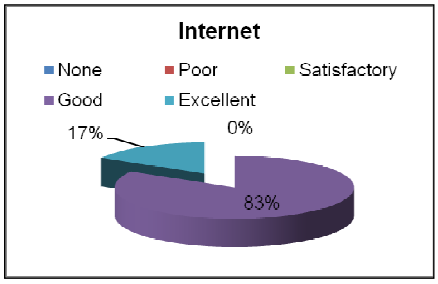


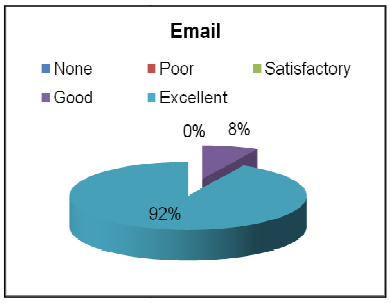


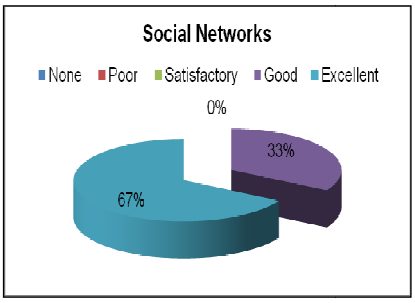
All tutors had good digital competences, acquired trough self training in 67% of the cases or attending school courses (33%). 100% of the tutors had excellent (17%) or good knowledge (83%) of the internet, 92% had excellent capacity to use e-mail and 67% to use social networks. 83% used perfectly word, 67% had good abilities in using excel, paint and powerpoint. 40% had good abilities with touch up programmes and 83% also had good programming skills. 17% were perfectly able to create a website and 13% edit a video **(Fig.29)**.

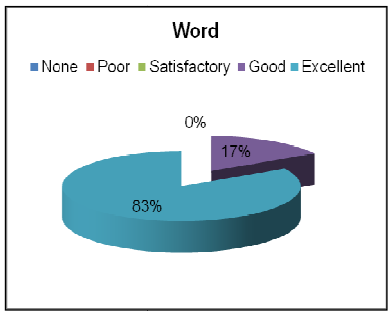
Fig. 29

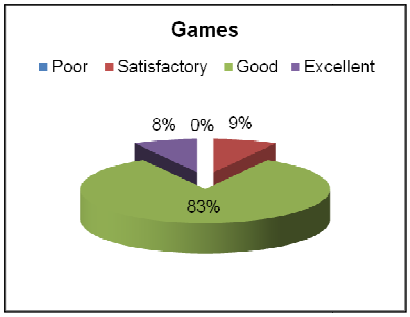

How did you learn to use a PC
You taught yourself
You attended computer courses outside of school
You learned by attending computer courses at school
33%
67%
0%

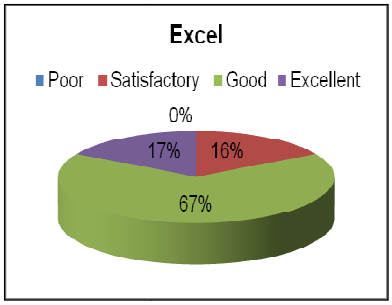

Internet
None
Poor
Satisfactory
Good
Excellent
17%
0%
83%


Email
None
Poor
Satisfactory
Good
Excellent
0%
8%
92%


Social Networks
None
Poor
Satisfactory
Good
Excellent
0%
33%
67%


Word
None
Poor
Satisfactory
Good
Excellent
0%
17%
83%


Games
Poor
Satisfactory
Good
Excellent
8%
0%
9%
83%


Excel
Poor
Satisfactory
Good
Excellent
0%
17%
16%
67%

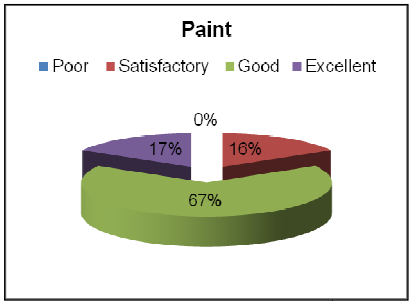
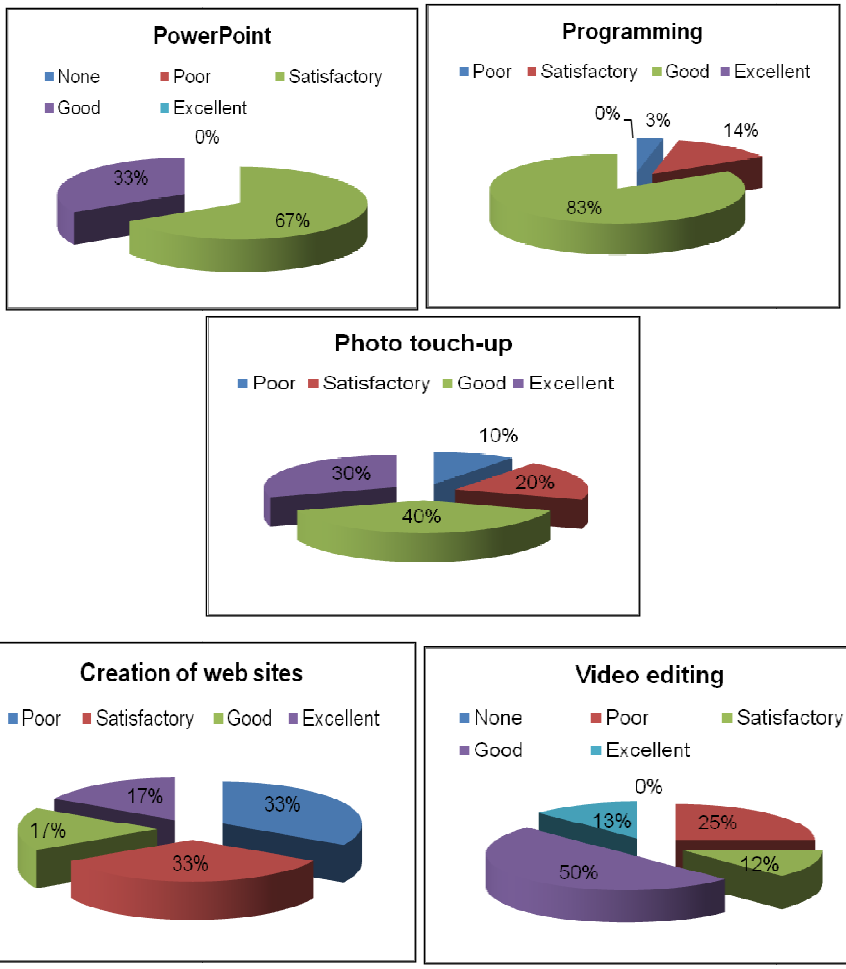
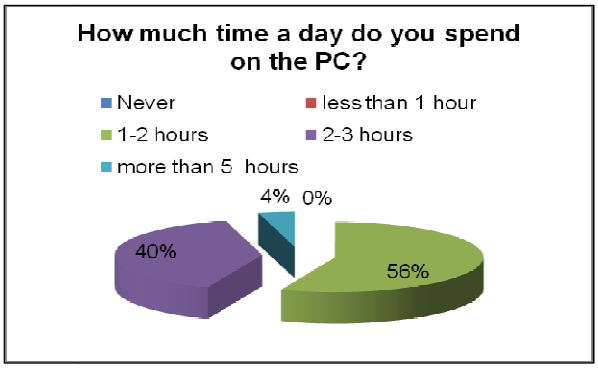

Paint
Poor
Satisfactory
Good
Excellent
0%
17%
16%
67%

Fig.29



56% of the young volunteers tutoring grandparents, declared they use the pc for 1 to 2 hours per week, 40% 2 to 3 hours, and 4% for more than 4 hours per week **(Fig.30)**.

Fig.30



Most of them use the pc at home or at a friend's house, mostly for fun (83%) and practice on social networks (59%) or to copy notes or write school papers, write letters (67%), send emails to keep in touch with friends or relatives, chat (75%) write on blogs (67%). 67% use it also to purchase items on the internet **(Fig.31)**.

Fig.31

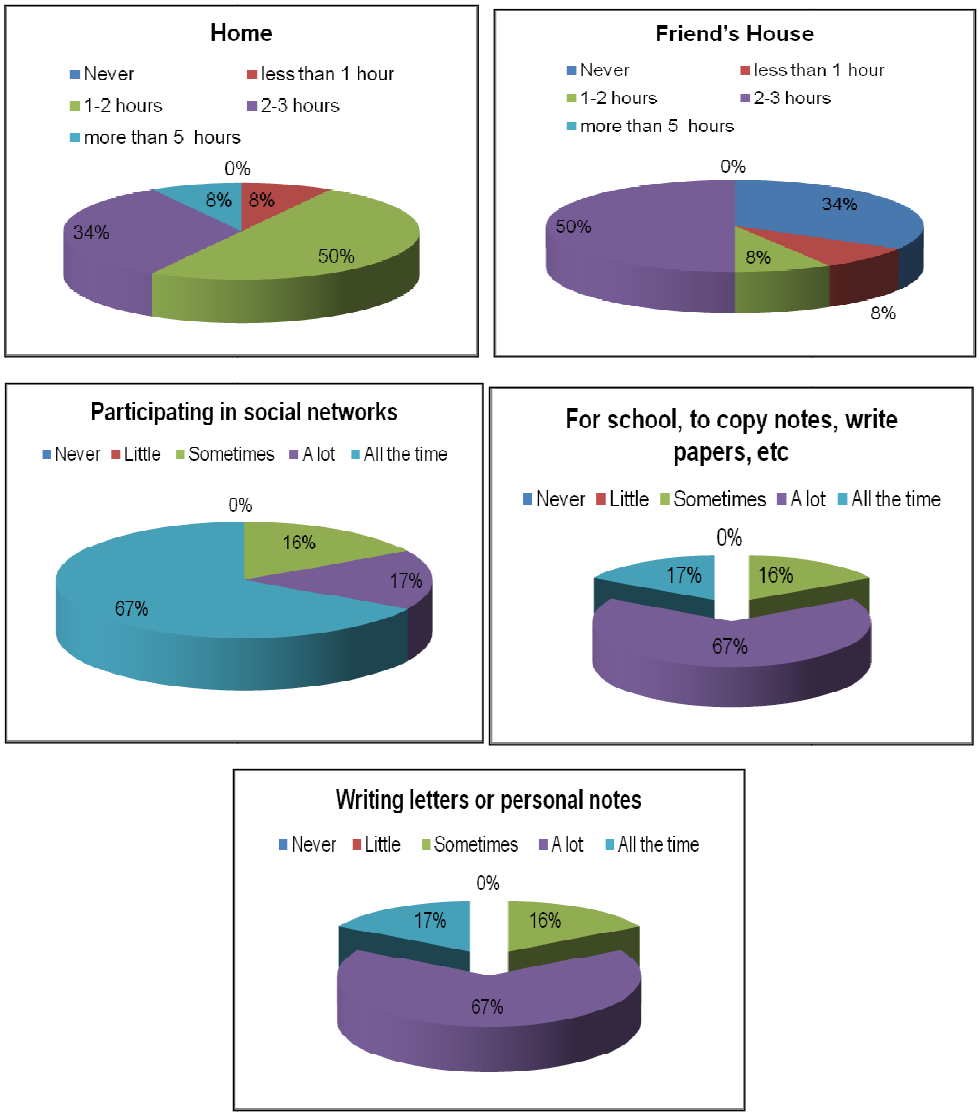
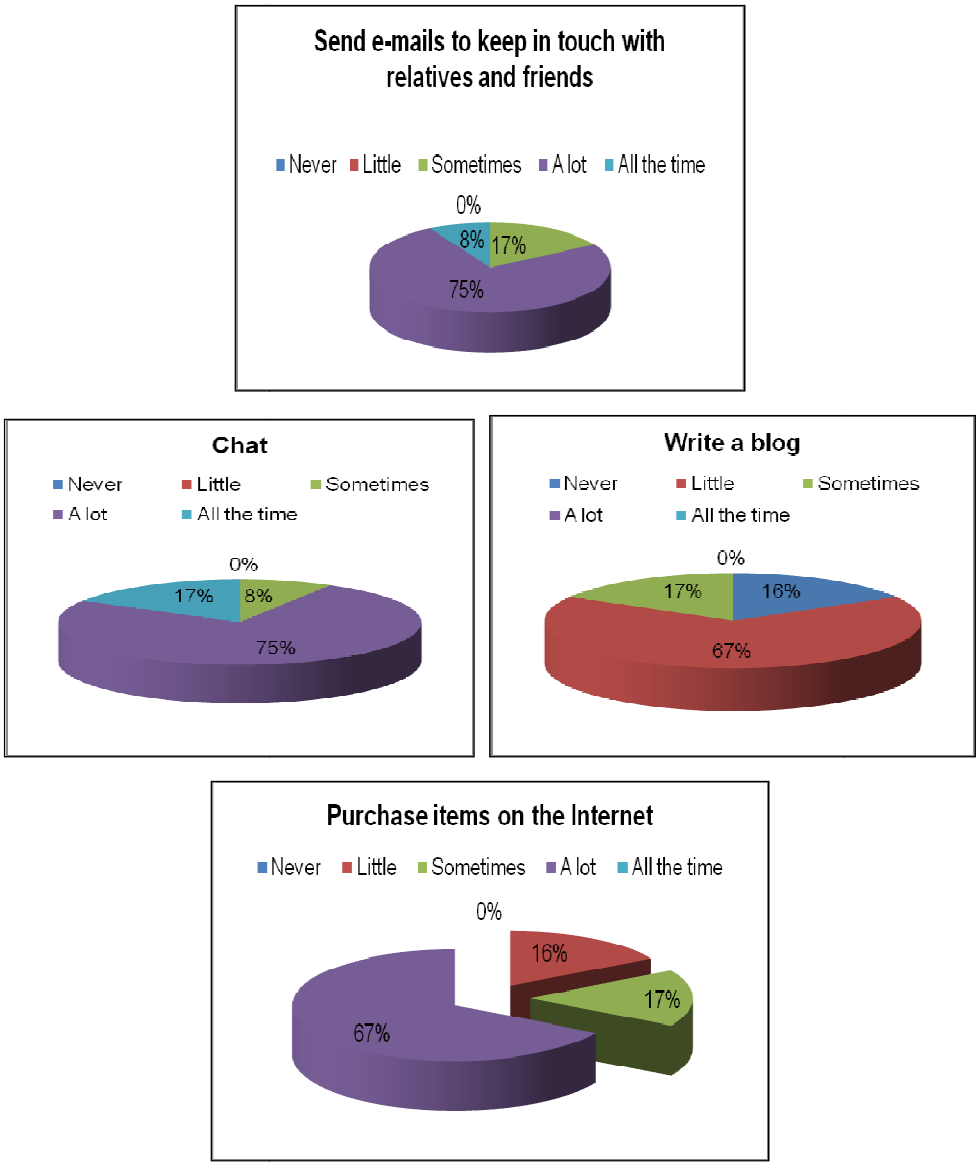


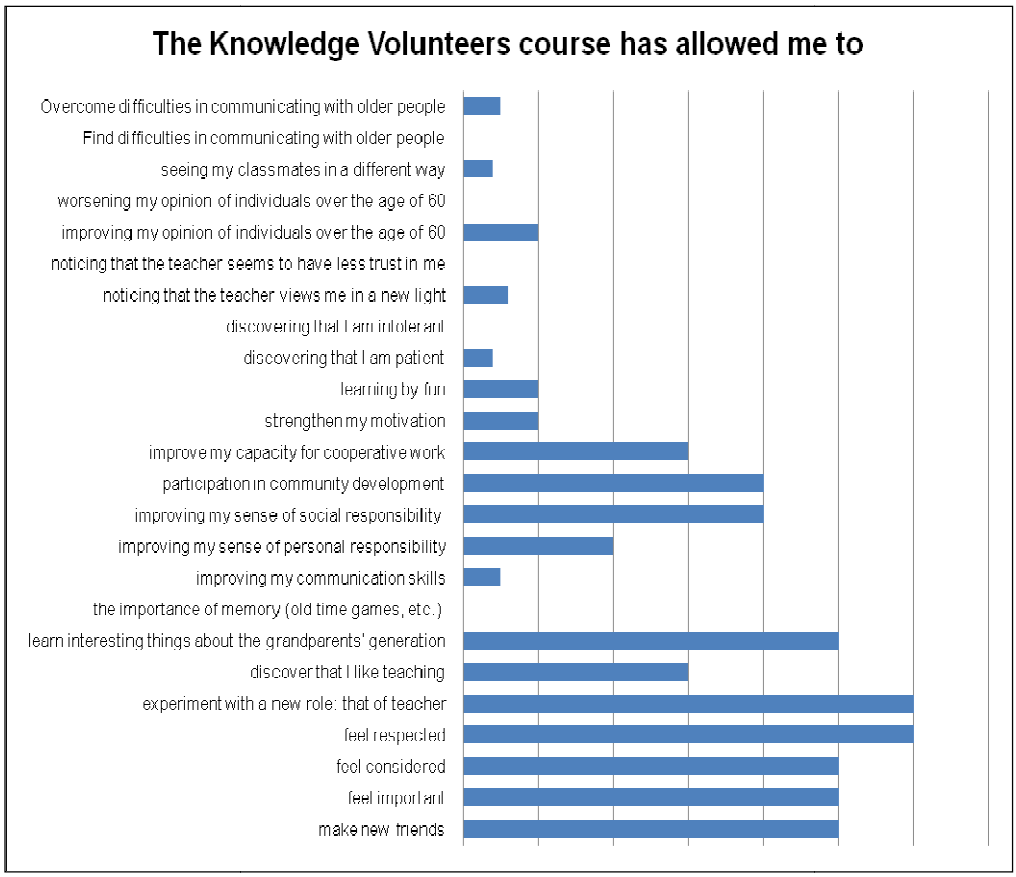
Fig.31



Most of them experienced teaching for the first time and discovered they like it very much. This, alongside the opportunity of intergenerational exchange, was very interesting and useful for the young students involved, who declared they improved their capacity for cooperative work and sense of social and personal responsibility, feeling of participation in community development. During the courses they felt respected, considered and important. The Knowledge Volunteers project had allowed them to overcome difficulties in communicating with older people improving their opinions about over

60s and learning interesting things about the grandparents' generation. Also the course was a chance to make new friends **(Fig.32).**

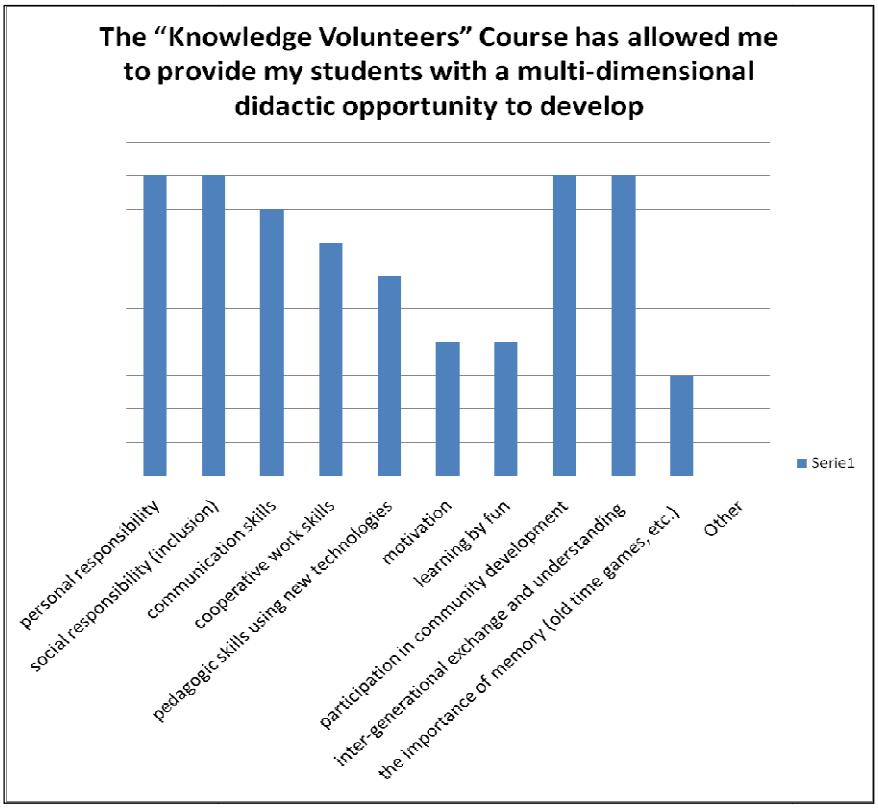
Fig.32



Teachers said The Knowledge Volunteers courses allowed them to provide their students with a multidimensional didactic opportunity to develop personal and social responsibility, which allowed them to strengthen their communication skills and capacity to work cooperatively.

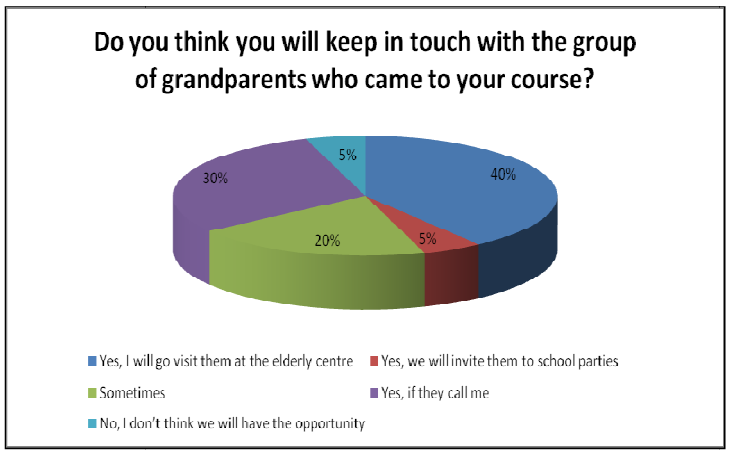
They also believe students understood the importance of intergenerational exchange and of the memory of the past experiences grandparents can tell them **(Fig.33)**.

Fig.33

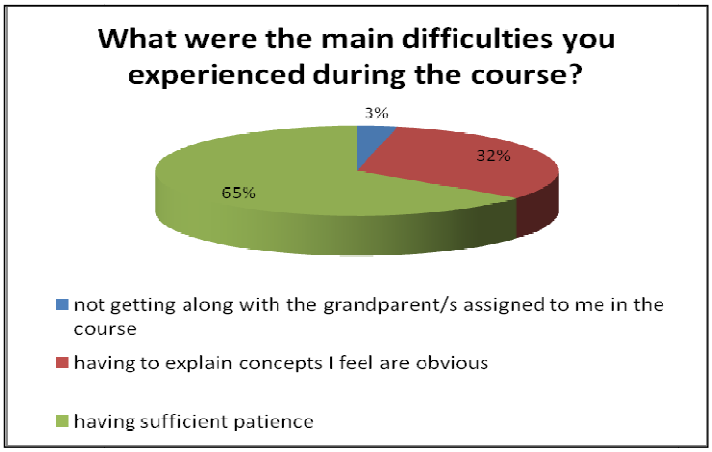


In most of the cases, the courses intergenerational experience allows them to learn interesting things about younger/elder generation and in many cases to establish friendships between youths and elders. 95% of the Tutors declared their wish to remain somehow in contacts with the elders met during the courses. 40% intend to visit them at the elders center **(Fig.34)**.

Fig.34



The difficulties Tutors experienced during the courses were mainly due to the capacity to have sufficient patience to teach grandparents, particularly regarding the need to repeat the lessons many times over because of their learning difficulties **(Fig.35)**.



Czech Republic

In the Czech Republic, the pilot involved Pyramida Centre based at the University of Ostrava and the Ostrava University Seniors Club. **Centrum vizualizace an interaktivity vzdělávání Ostrava** attracted the students of the University of 3rd Age in Ostrava in collaboration with G.Center, the house of seniors community care in Ostrava-Zábřeh. Students enrolled as volunteers were involved through collaboration with the students Silesian University Opava, faculty Karviná.

Courses Organisation

The courses were organized by teachers and organizations following the indications included in the guidelines, which they found very good **(Fig.1)**. The young students organized the lessons following guidelines provided by teachers **(Fig.2).** In most of the cases (75%), courses were organized as frontal standard lessons while only 10% in a more informal way **(Fig.4).**

100% of the volunteers were supported in preparing the lessons through training organized at school by teachers and originators. This training happened before the beginning of the courses' lessons and through a briefing of at least 30 minutes before each lesson. 100% of the tutors also studied the guidelines and manuals before beginning the courses **(Fig.5)**. Each lesson had a duration of more than 2 hours. 100% of the courses were conducted during the normal school hours **(Fig.6)**.

Fig.1

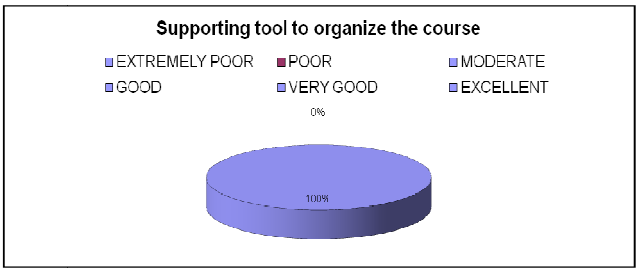


Fig.2

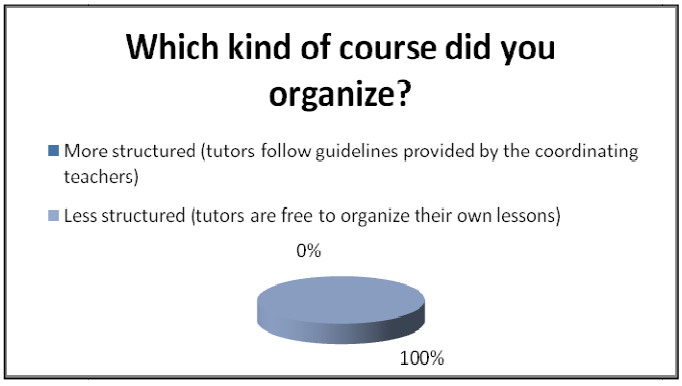


Fig. 3

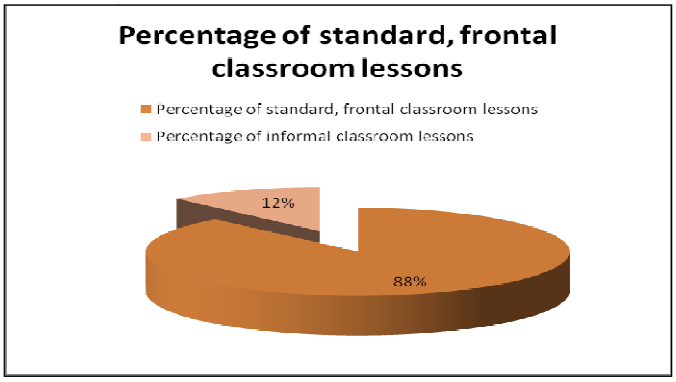
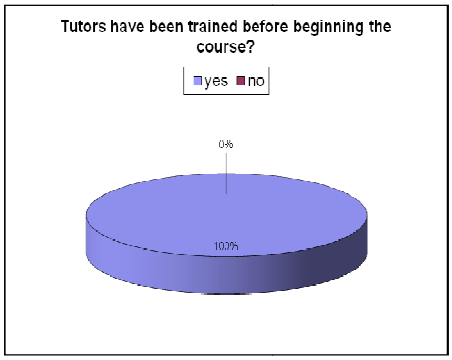
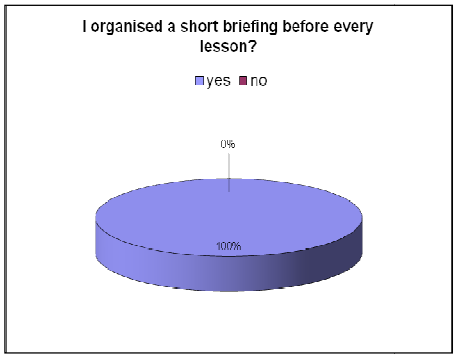
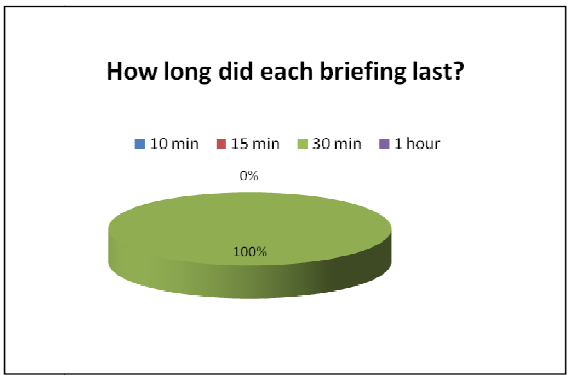

Percentage of standard, frontal classroom lessons
Percentage of standard, frontal classroom lessons
Percentage of informal classroom lessons
12%
88%

Fig. 4


Tutors have been trained before beginning the course?
yes
no
0%
100%


I organised a short briefing before every lesson?
yes
no
0%
100%


How long did each briefing last?
10 min
15 min
30 min
1 hour
0%
100%

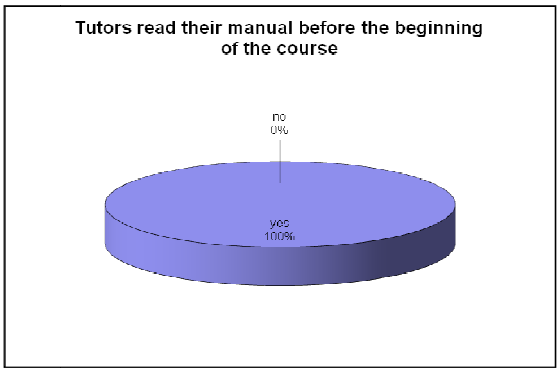

Tutors read their manual before the beginning of the course
no
0%
yes
100%

Fig.5

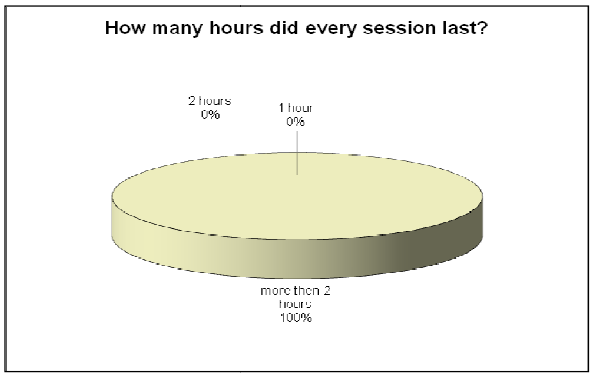
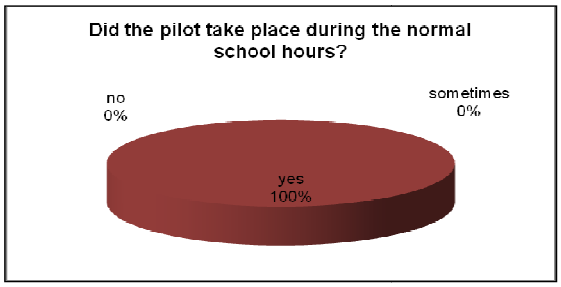


Fig. 6



55% of the elders taking part in the courses were aged between 66 to 70, 35% between 60 to 65, 10% between 71 to 75. **(Fig. 8**). 86% were female while 14% males **(Fig.9)**. Grandparents registered to the courses had a high educational level: 84% had completed high school and 16% a university course of study **(Fig.10)**.

Fig.8

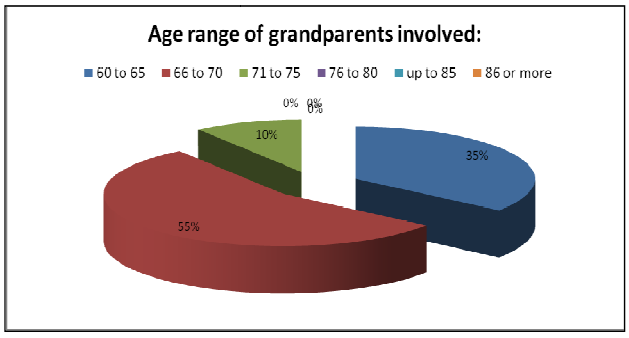


Fig. 9

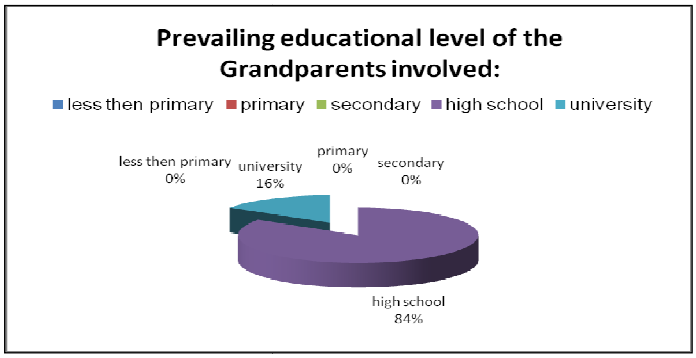
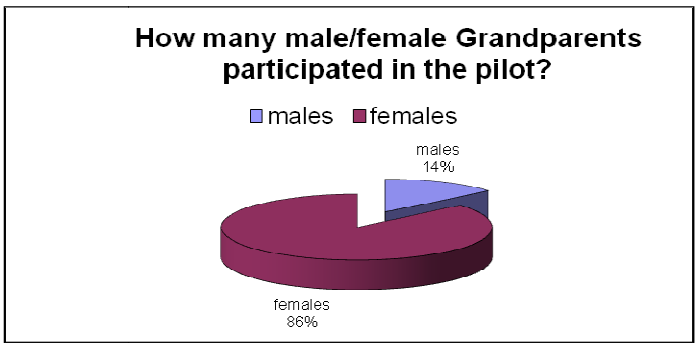
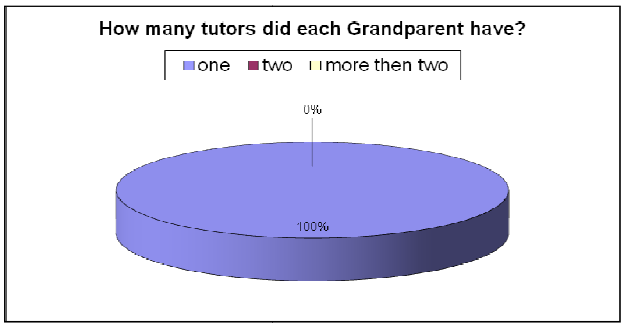


Fig.10



The courses were organized during the school year, as the didactical model requires. Each grandparent was assigned a tutor supervising his/her practice on the PC (**Fig.11.**).

Fig.11



Schools labs, where lessons were organised, were equipped with PCs, as well as printers, projectors, photo cameras and in some cases tablets **(Fig.12).** All equipment was available to learners to practice and for tutors and teachers to support the lessons, printing materials for exercises and showing power points or other supporting materials **(Fig 13).**

Fig.12

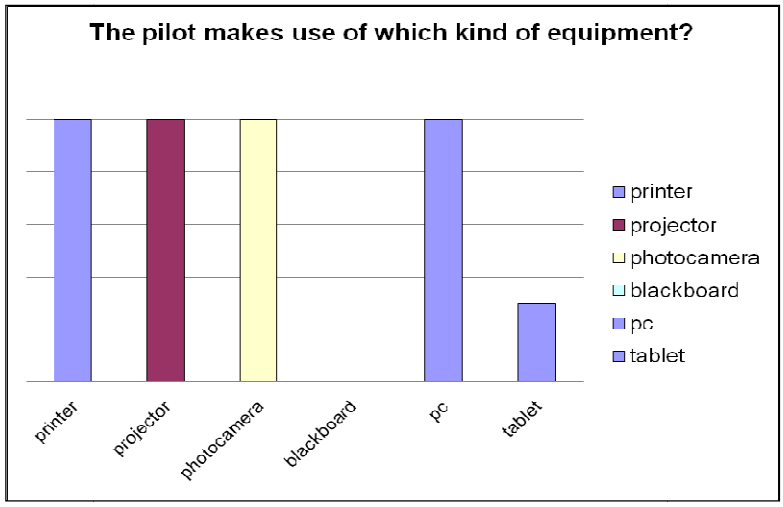
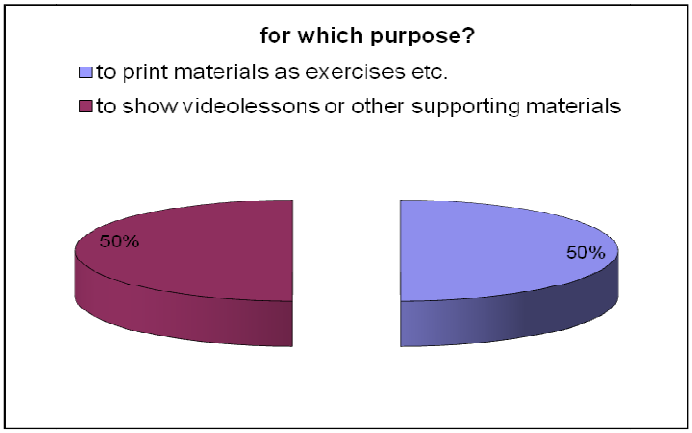


Fig.13



Educational value of The Knowledge Volunteers project

Questionnaires were submitted to grandparents before the beginning of the courses and at the end. The objective of the survey was to evaluate the methodological and didactical aspect of the training curricula and model, testing the intergenerational and peer to peer approach in relation to the skills acquired by grandparents and tutors involved in the project, and evaluating the results in terms of relationships between the elder and younger generations.

The following charts (**Fig. 14.)** provides information on the habit of grandparents in using the PC prior the beginning of the courses and reveals that, on average, they already had a good previous knowledge of ICT thanks to the enrolment of most them in the University of 3rd Age in Ostrava. 29% had satisfactory knowledge of the Internet, 55% had poor knowledge and 16% had no knowledge of the Internet **(Fig.15).** 12% had capacity to use social networks while 33% had poor knowledge and 55% had none **(Fig.16).**

Fig.15

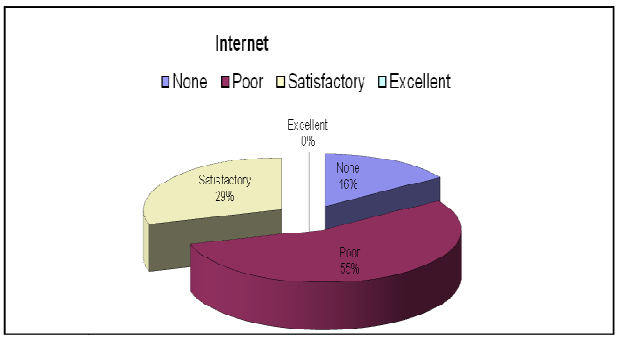
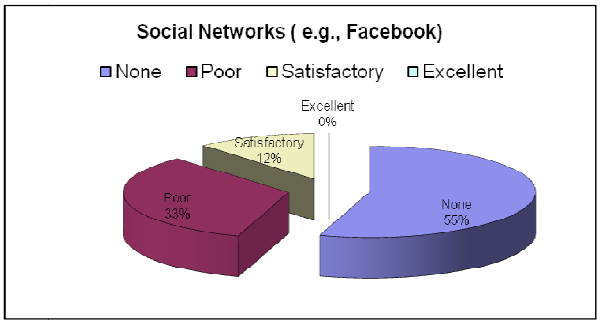


Fig. 16



39% had satisfactory skills regarding the use of word, 18% of excel, 8% of paint and 14% of power point. 33% did not have any knowledge of word, 28% had poor knowledge. 51% had no knowledge and 31% had poor knowledge of excel. 65% of the elders had no experience of power point and 69% declared they had never used paint **(Fig.17 and 18)**.

Fig. 17

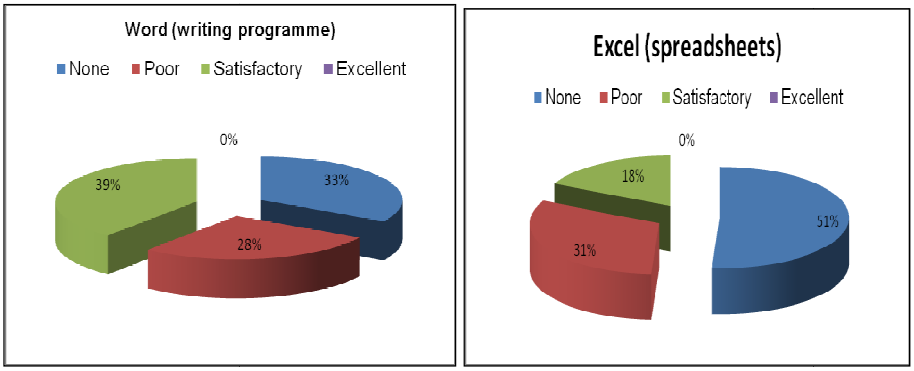
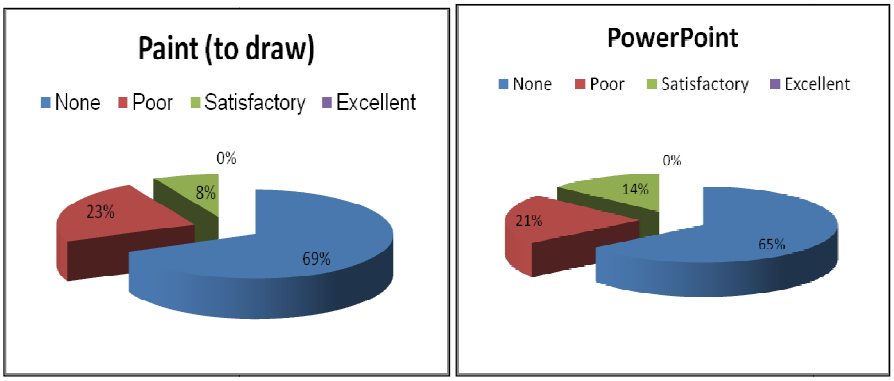


Fig.18



4% of the grandparents used the PC all the time to have fun, 24% of the them used it sometimes for fun. 25% of them used the PC to write letters or take notes and 33% of them used it a lot for this purpose**(Fig.19).** 33% usually use the PC a lot to send e-mails keeping in touch with relatives, but 24% used it a little for this purpose and 71% had never used it to participate in social networks **(Fig. 20).**

Fig.19

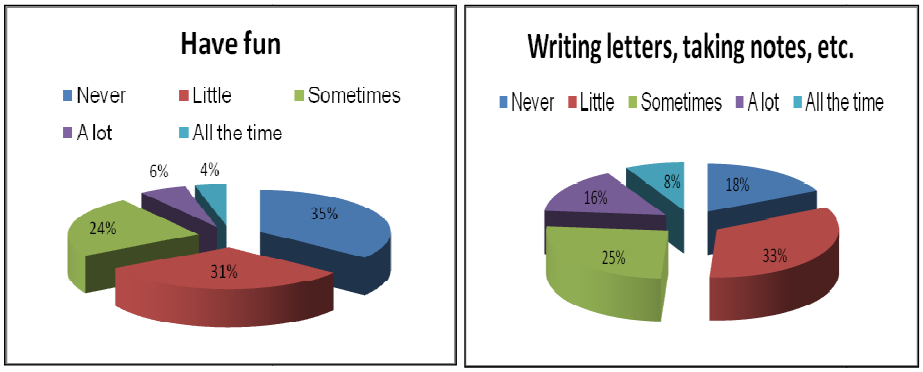
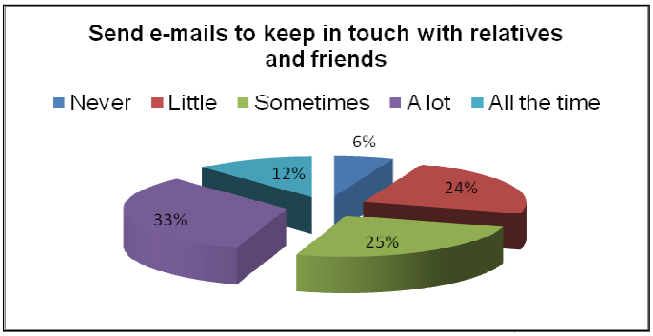
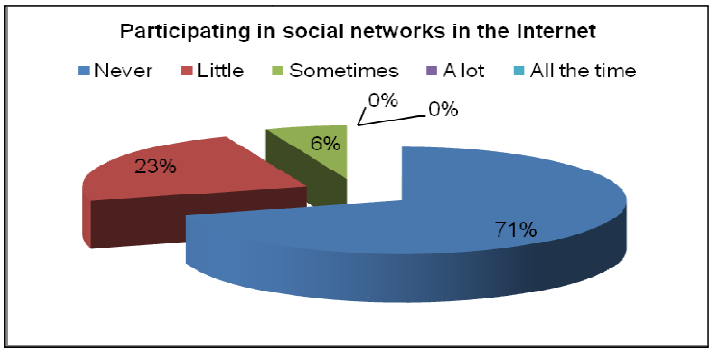


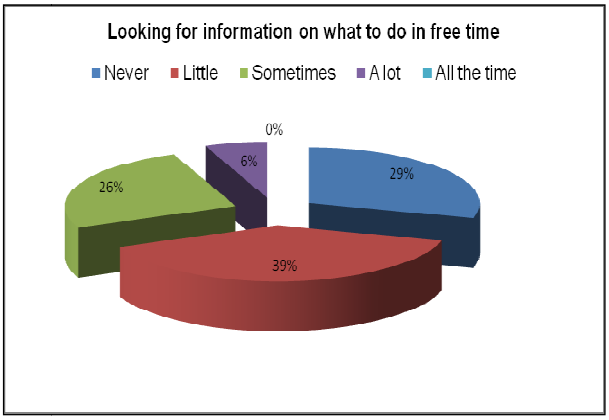
Fig. 20

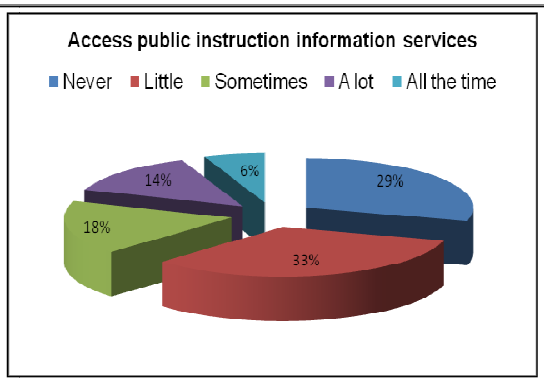




Only 6% of the grandparents interviewed before the beginning of the courses, declared to have used a lot the Internet to look for information on what to do in their free time, while 14% used it to access public information services or remote assistance services (6%) and 12% to purchase sometimes items on line. **(Fig.21).**

Fig.21





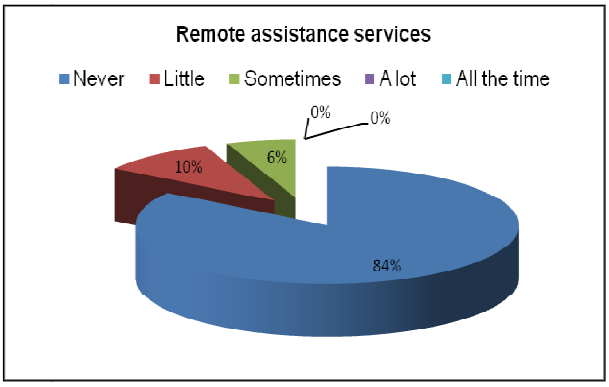
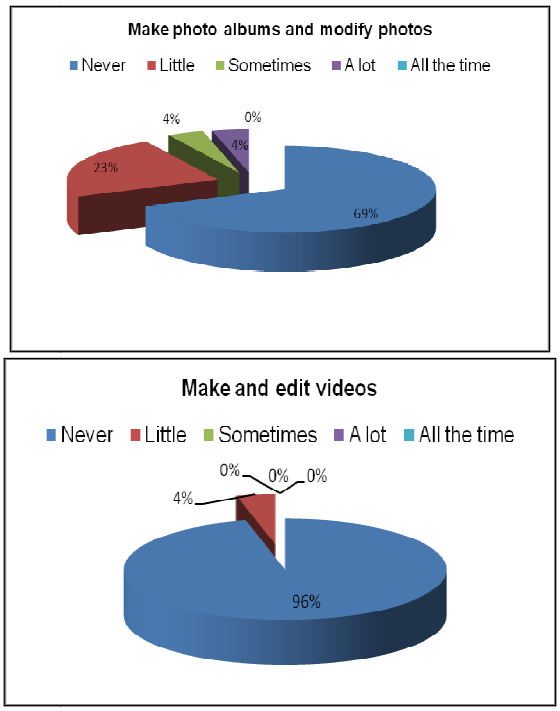


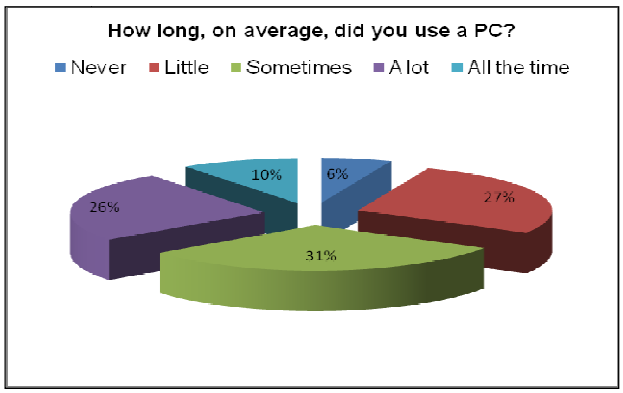
Fig.22 shows that before the courses 69% of the grandparents did not have any knowledge on how to make photo albums or modify photos and 96% had never made and edit videos.

Fig. 22



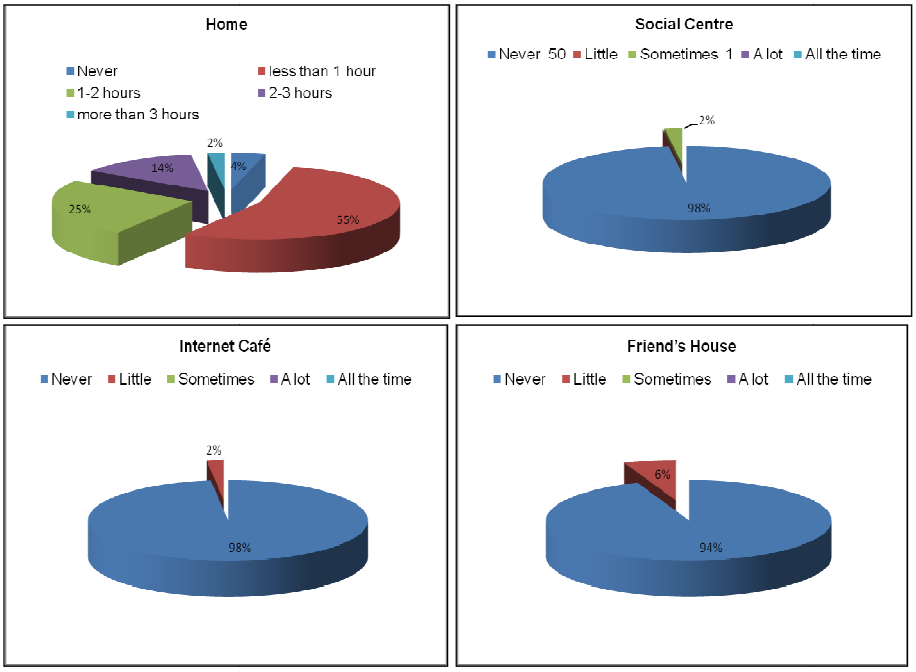
Only 6% of the grandparents never used the PC before attending the courses, 27% use it a little and 31% sometimes. 26% declared to use it a lot. **(Fig.23)**.

Fig. 23



Most of them use it at home for 1 to 3 hours per week, 98% never use it the social center, at the Internet café o at a friend's house (94%) **(Fig.24)**.

Fig.24



Grandparents who already had some knowledge about PC Programmes, declared they learnt about using them at work (49%), practicing on their daughter, grandson/granddaughter PC, or attending another course 12%. **(Fig.25 and 26)**.

Fig.25

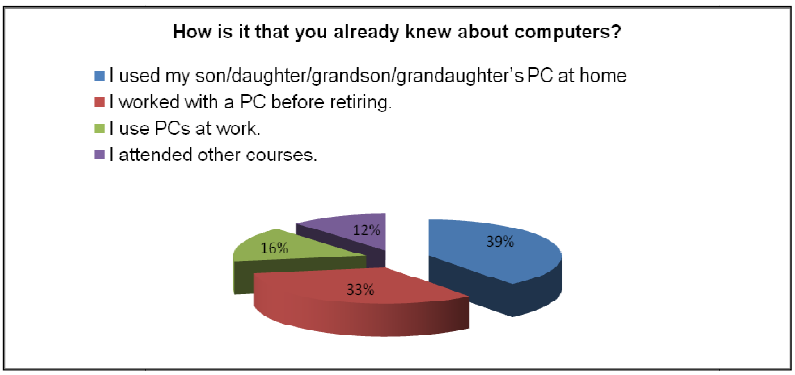
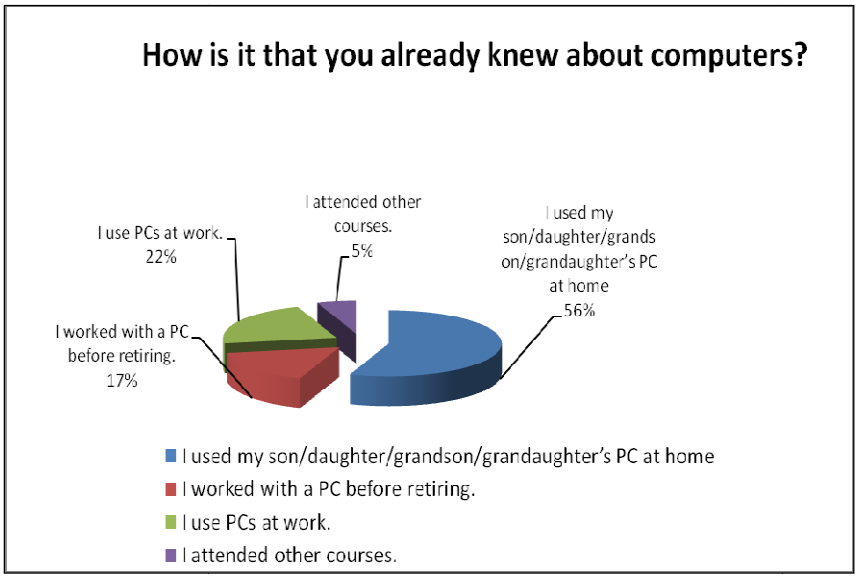


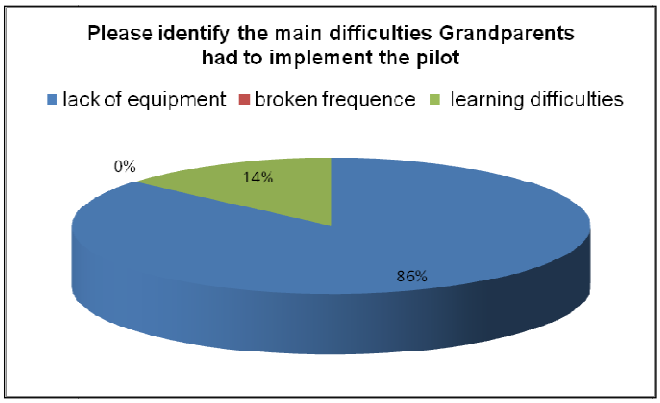
Fig. 26


How is it that you already knew about computers?
I attended other courses. 5%
I use PCs at work. 22%
I used my son/daughter/grandson/grandaughter's PC at home 56%
I worked with a PC before retiring. 17%
I used my son/daughter/grandson/grandaughter's PC at home
I worked with a PC before retiring.
I use PCs at work.
I attended other courses.

Evaluation of the courses

The courses curricula as well as the manuals were adapted continuously to the grandparents learning needs. The lessons were developed to tackle the learning difficulties they met in remembering the topics from one lesson to another or understanding the basic subjects as how the pc works. In many cases such difficulties were linked to lack of equipment (86%) and caused difficulties in practicing and assimilating the lessons. In particular, the beginners faced difficulties in relation to the use the Internet. **(Fig.27 and 28)**.

Fig.27



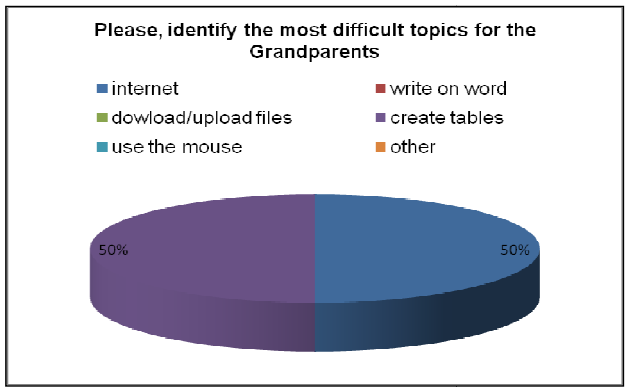
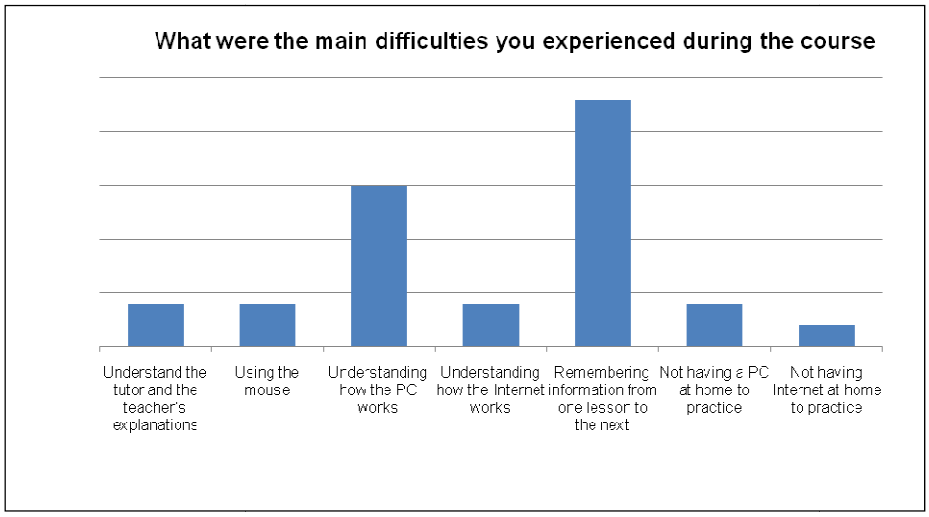
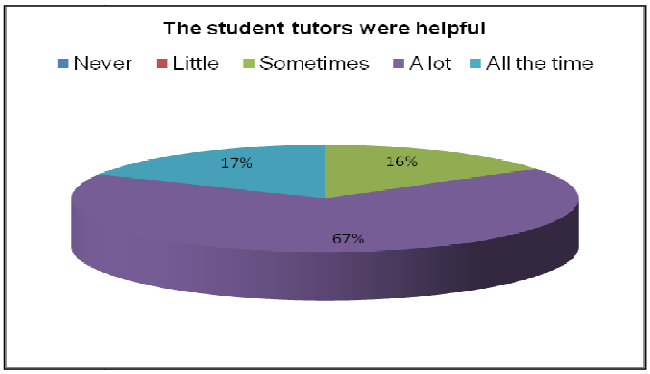


Fig.28



Young students tutored grandparents assisting them in practicing on the PC and preparing exercises and power points presentations on topics and subjects grandparents had difficulties to understand. 67% of the Grandparents said young tutors were very helpful during the courses and 17% declared the volunteers were all the time very useful for them to be supported and accompanied during the lessons **(Fig.29).**

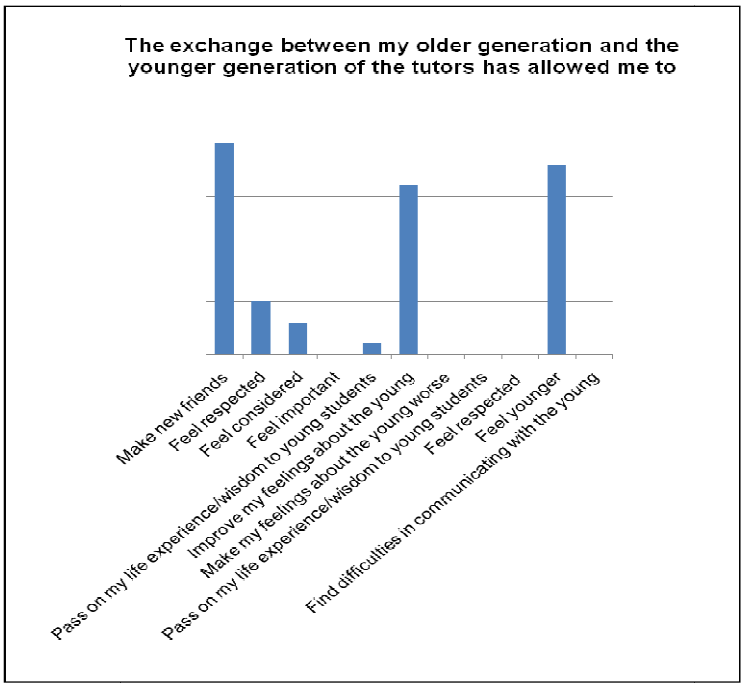
Fig. 29



Courses included frontal lessons and peer to peer teaching methods which promoted the enhancement of intergenerational dialogue. The role exchange approach applied to the courses model, facilitated the

dialogue between generations and allowed young students to feel more considerate and grandparents to improve their feelings about the younger. As a result the grandparents who participated in the courses declared that the exchange between their older generation and the younger generation of tutors allowed them to feel younger and pass their experience to the young students and to improve their feelings about youths. Many of the grandparents also said the course allowed them to make new friendships (**Fig.30**).

Fig.30



The courses were in fact a great chance for grandparents to meet and socialize, making new friends among the older and the younger generation. 84% of the Grandparents declared they met many or several interesting people during the courses (**Fig.31),** in some cases they made more than five new friends from the older generation and several from the younger generation (**Fig.32 and 33).** 42% of the grandparents wish to visit often or very often the newly-made friends **(Fig.34).** 78% of the Grandparents declared they believe that what

they have learnt during the courses will also help them to make new friends in the future **(Fig.35).**

Fig.31

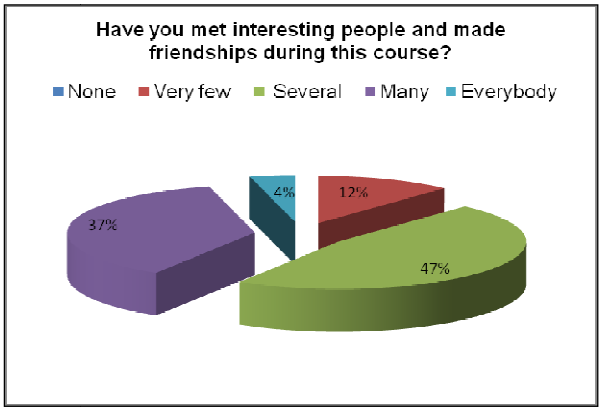


Fig. 32

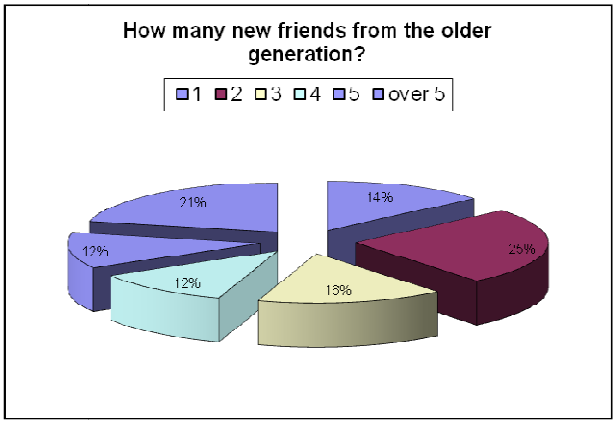
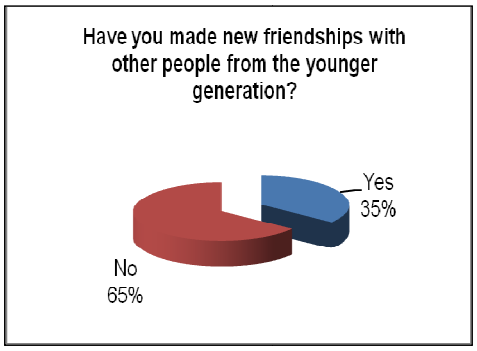


Fig. 33



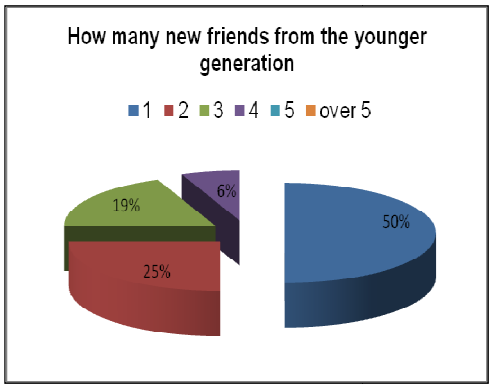


Fig 34.

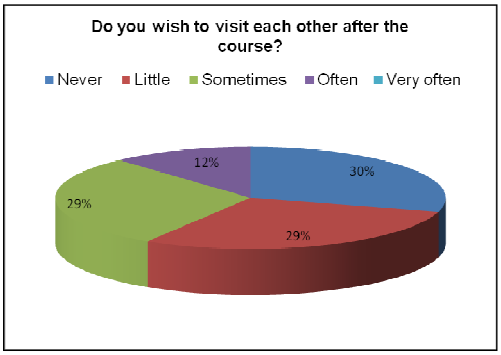
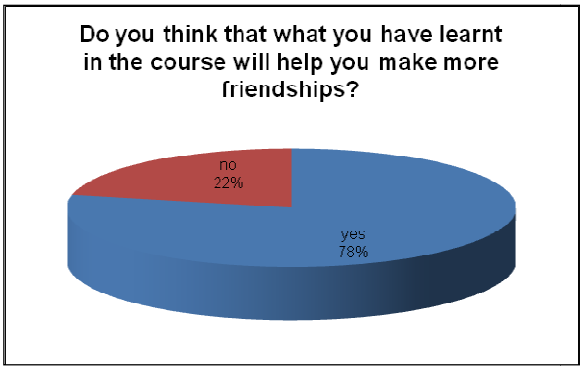


Fig. 35



In terms of digital literacy knowledge and competences, 35% of the Grandparents said thanks to the courses they improved a lot their PC skills, 0% did not improved their digital literacy level (**Fig.36**).

In general all learners increased their capacity and knowledge about the Internet, 16% of them improved a lot **(Fig. 37)**. 77% of the grandparents attending the courses learnt how to keep in touch with friend and relatives using social networks and 90% though emails **(Fig. 38)**.

More than 60% of the elders became able to use main PC programmes such as word, excel and power point, while 14% can now use paint **(Fig. 38)**. More than 60% of the elders are still not able to edit video and photos even if 10% declared to have acquired some skills on regards **(Fig.39)**.

Fig. 36

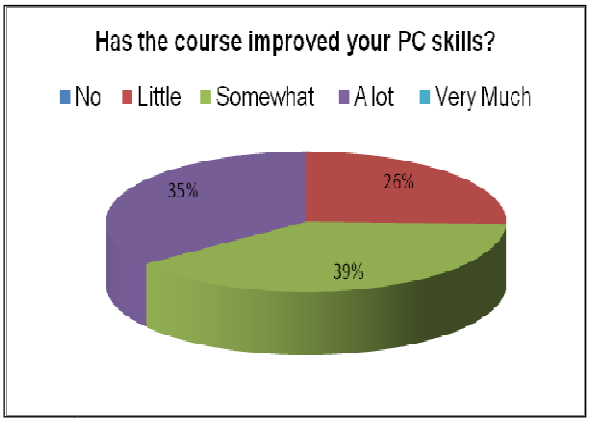
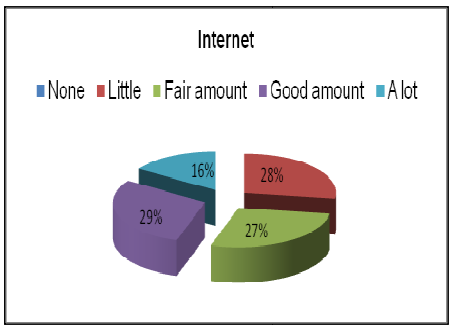
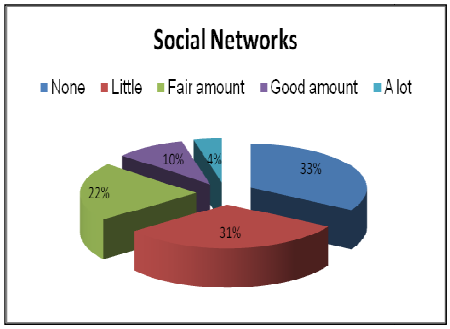
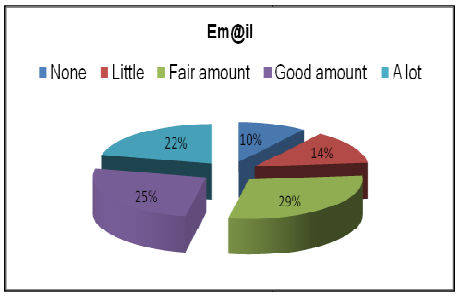
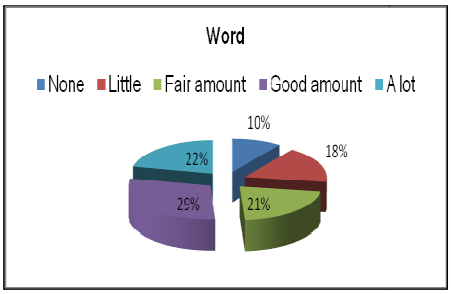

Has the course improved your PC skills?
No
Little
Somewhat
A lot
Very Much
35%
26%
39%

Fig. 37


Internet
None
Little
Fair amount
Good amount
A lot
16%
28%
29%
27%


Social Networks
None
Little
Fair amount
Good amount
A lot
10%
4%
33%
22%
31%


Em@il
None
Little
Fair amount
Good amount
A lot
22%
10%
14%
25%
29%


Word
None
Little
Fair amount
Good amount
A lot
10%
22%
18%
29%
21%

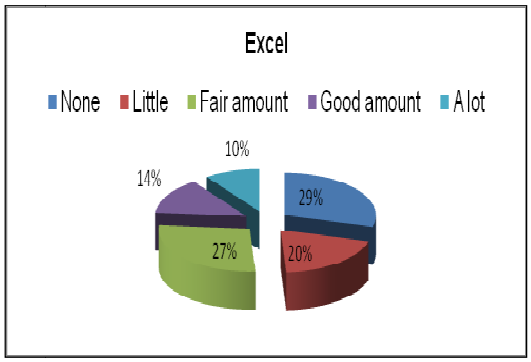
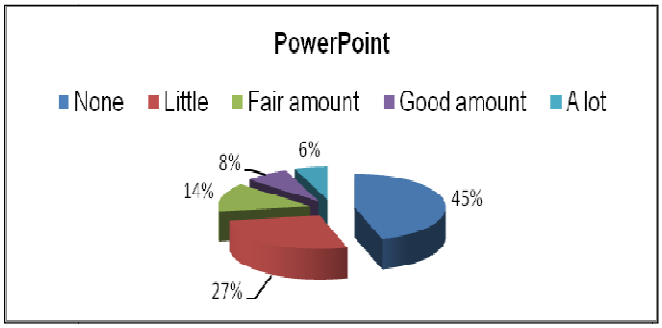

Excel
None
Little
Fair amount
Good amount
A lot
10%
14%
29%
27%
20%

Fig. 38


PowerPoint
None
Little
Fair amount
Good amount
A lot
6%
8%
14%
45%
27%

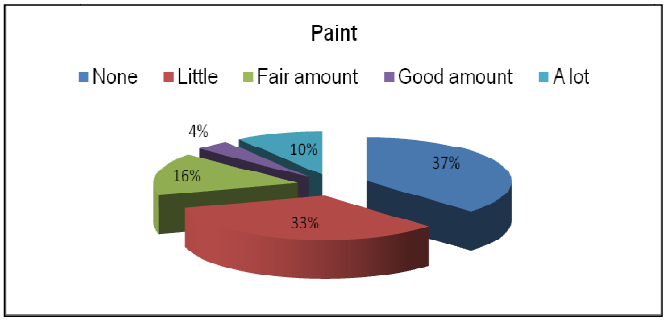
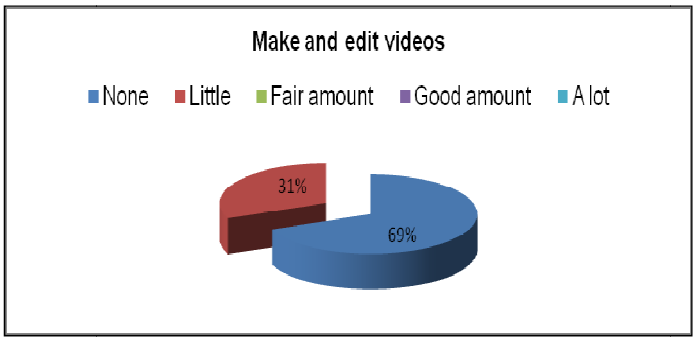
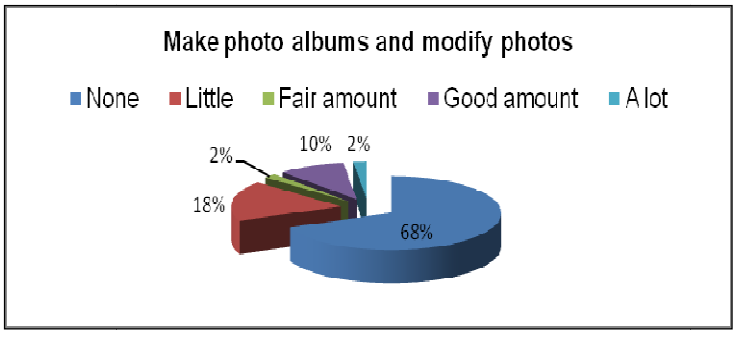

Paint
None
Little
Fair amount
Good amount
A lot
4%
10%
16%
37%
33%

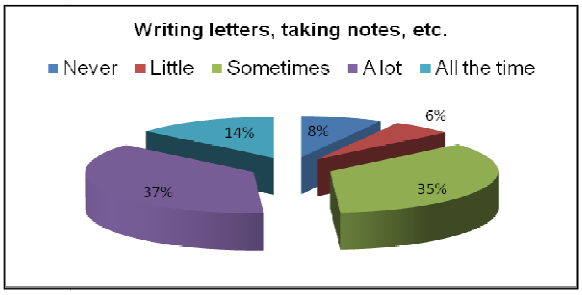
Fig. 39

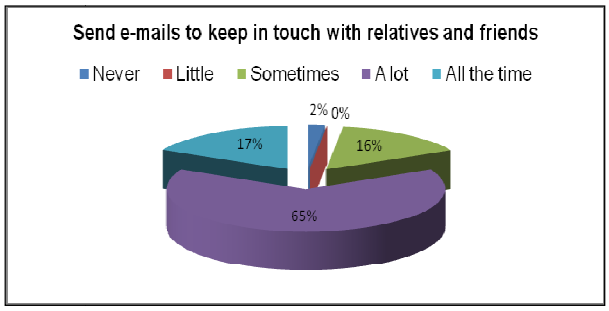

Make and edit videos
None
Little
Fair amount
Good amount
A lot
31%
69%


Make photo albums and modify photos
None
Little
Fair amount
Good amount
A lot
10%
2%
2%
18%
68%

Grandparents were interviewed to evaluate the main changes in their approach to the use of the pc and their motivation to take advantage of the skills acquired in their daily life. 14% of the grandparents, in future, will use the pc all the time and 37% will use it a lot to write letter and take notes. Only 8% will never use the PC for this purpose. 17% will use emails all the time to keep in touch with friends and relatives, 37% will use email a lot, and 35% sometimes. 47% will use the Internet at least sometimes to look for information about what to do in the free time, 35% will search for information on the internet a lot, and 4% all the time. Furthermore, 25% will use the Internet a lot to access public information services, 6% all the time **(Fig.40 and 41).**

Fig.40





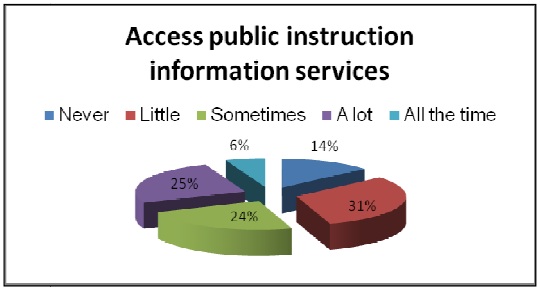
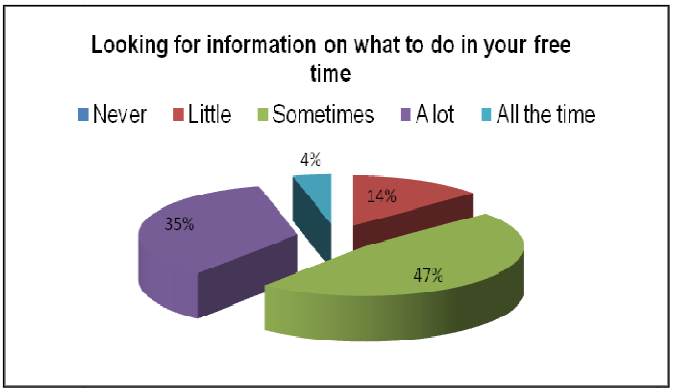
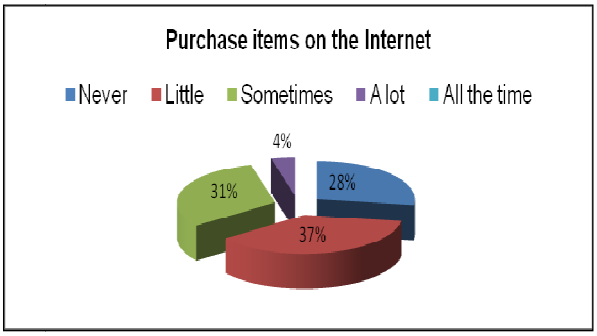


Fig.41



Only 28% declared they will never use the Internet to purchase items, but 4% will use it a lot for this purpose and 31% sometimes. 24% will start participating in social networks, 47% will use at least a little the social networks. 8% will use the PC to play games or generally to have fun, only 12% declared they will never explore the opportunities to have fun using the PC (**Fig.42 and 43**).

Fig.42



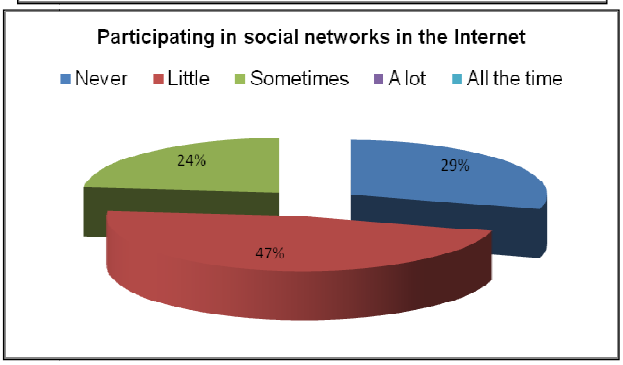
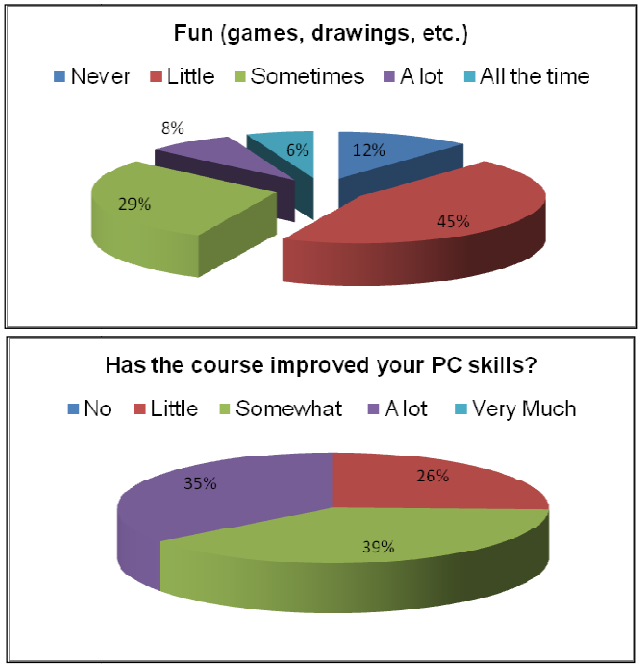
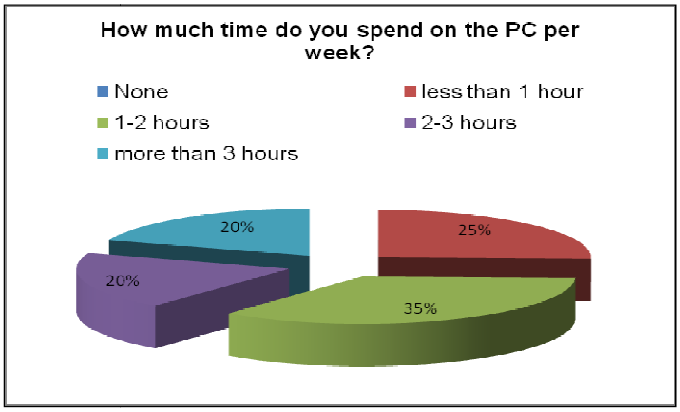


Fig.43



After completing the courses, grandparents generally increased the time they spend on the PC: 20% of them declared to use it more than 2 hours per week, none of them declared not to use the PC (**Fig.44**).

Fig.44



Evaluation of the value of The Knowldge Volunteers didactic kit

The Fondazione Mondo Digitale provided guidelines based on its experience of previous digital literacy projects. These were used to develop both the curricula's didactic objectives and the courses model and methodologies, applying and adapting the intergenerational approach to the specific local needs and constraints of grandparents and volunteers involved. A didactic kit was developed for the 4 levels of the course, including manuals and guidelines for volunteers, teachers, and organisers: ABC of ICT, Social networking, E-government services, and Easy technology accompanied by Guidelines for Users, Tutors and Teachers. Contents were developed based on the target needs, customizing, and translating them to better respond to the local contest and constraints. Handbooks and Guidelines were used during the courses as supports for teaching and learning paths. 69% of the grandparents declared guidelines and handbook were useful, particularly if used as supporting tools during the lessons (**Fig.45 and 46**).

Fig. 45

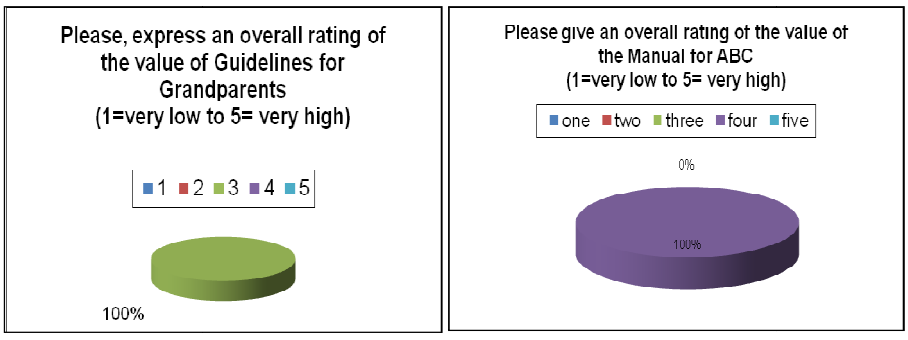
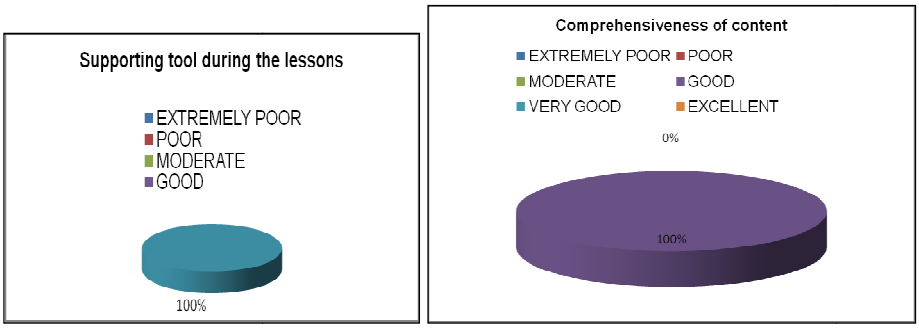


Fig.46



Contents were judged comprehensive and accurate, clear in the structure and language. Exercises and pictures were indicated by grandparents as important ameliorants to add to the manual and handbooks (**Fig.47 and 48**).

Fig.47

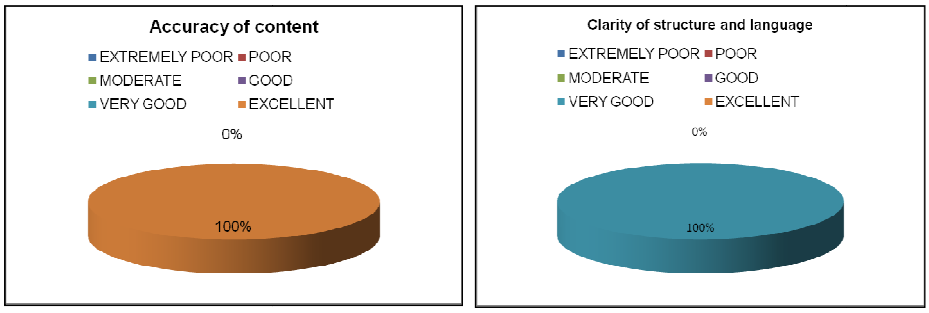
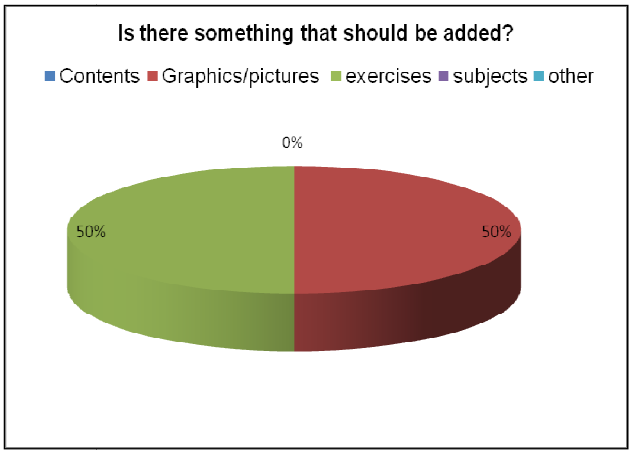


Fig.48



17% of the teachers declared the Guidelines for Teachers were extremely helpful, 69% said they were very helpful, **(Fig.49**), particularly as a tool to support course organization, to organise tutors trainings before the starting of the courses, as a tool to brief volunteers, and as a guide during the lessons to grandparents. **(Fig.50)**. Teachers said the kit was characterized by very good comprehensiveness of contents, quality of layout and graphics, clarity of structure and language **(Fig.51**), but signalled the need for more exercise as part of the manuals contents in order to enhance the opportunities for grandparents and tutors to practice together the use of the PC **(Fig.52**).

Fig.49

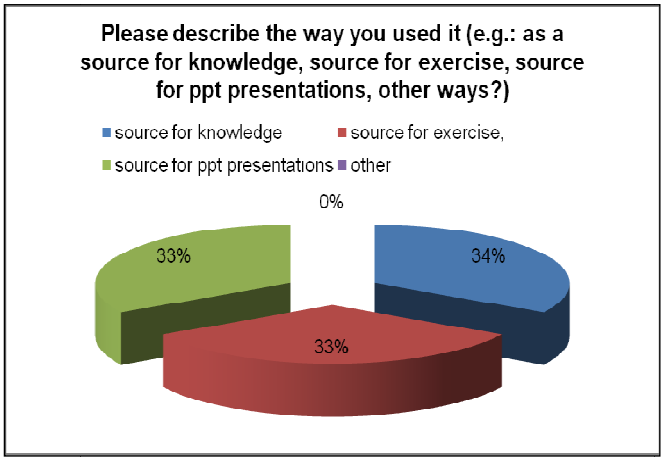
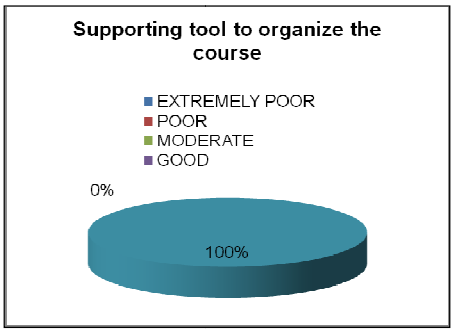


Fig.50



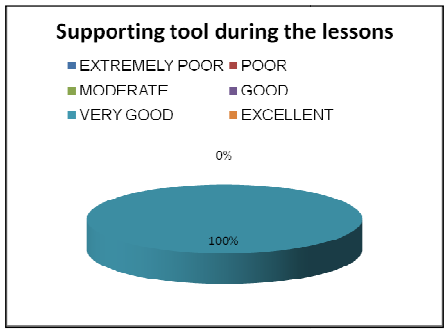


Fig.50

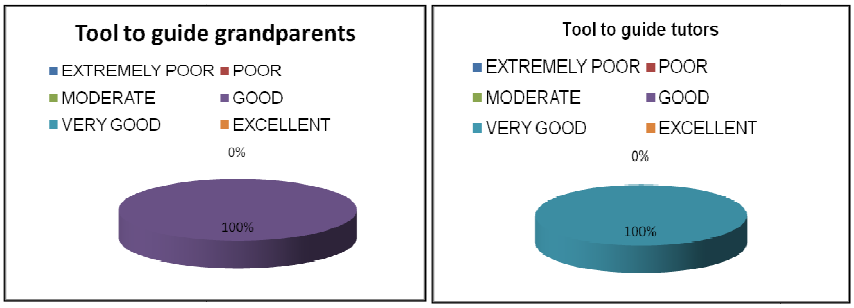
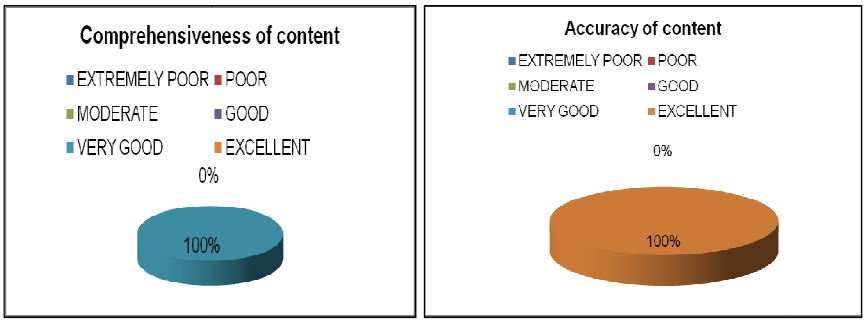


Fig.51



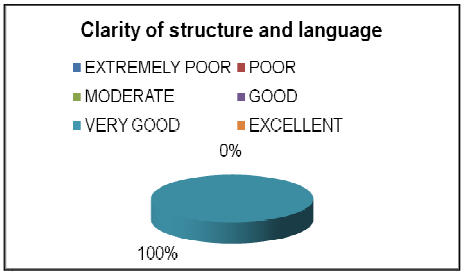
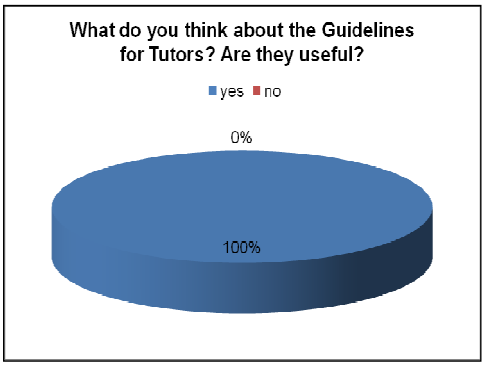
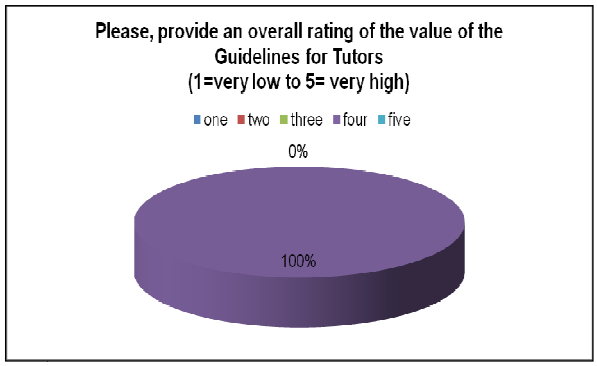


Fig.52

The Guidelines for Tutors were generally found by Tutors very useful, simple and clear in the contents, even if an increase in exercises was recommended to facilitate the volunteers' preparation of additional material in order to support grandparents to remember from one lesson to another though the practice of the PC (**Fig.53 and 54**).

Fig.53





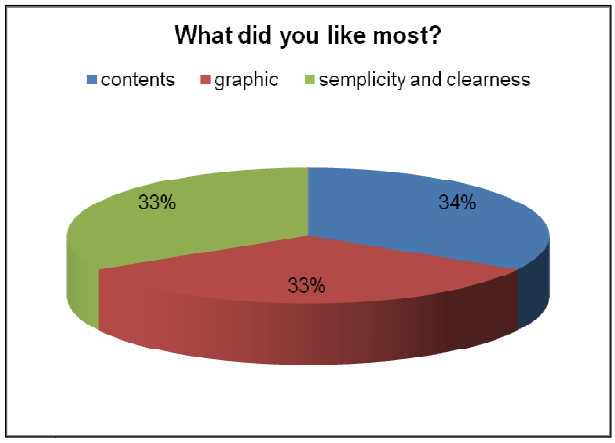
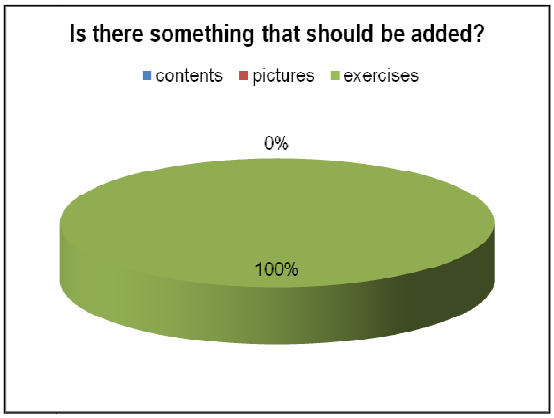
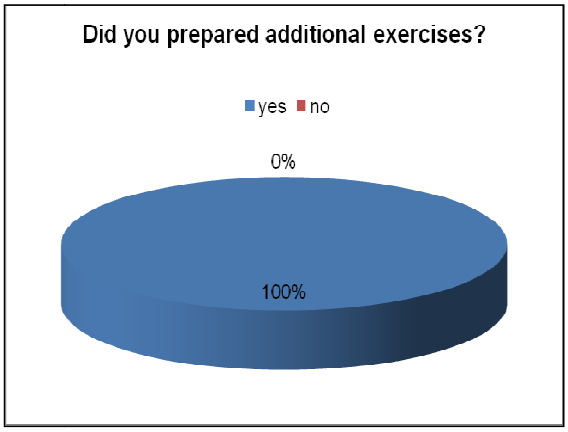


Fig.54

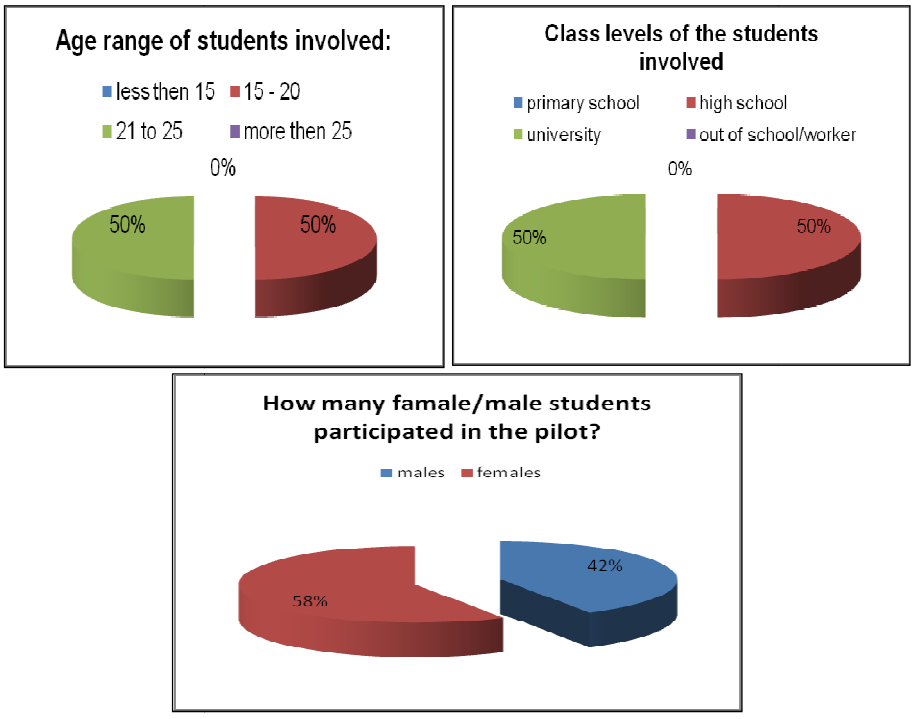

Is there something that should be added?
contents
pictures
exercises
0%
100%


Did you prepared additional exercises?
yes
no
0%
100%

Tutors: role and added vakue of intergenerational exchange

Young students involved as tutors in the digital literacy training courses were aged between 15 to 25 years old, frequenting a regular course of study at high school or university. 58% were females while 42 males (**Fig.55**).

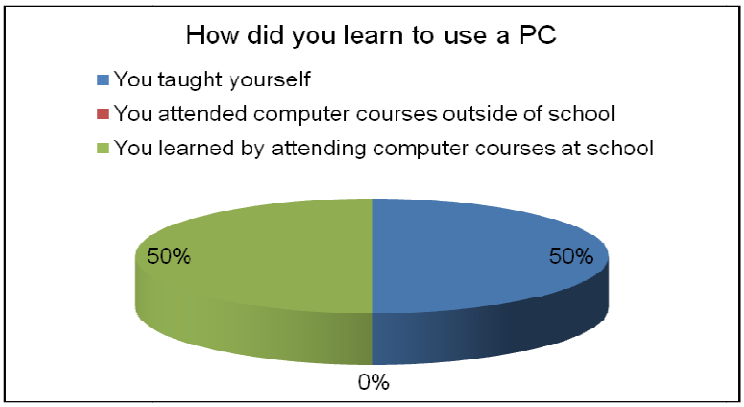
Fig.55

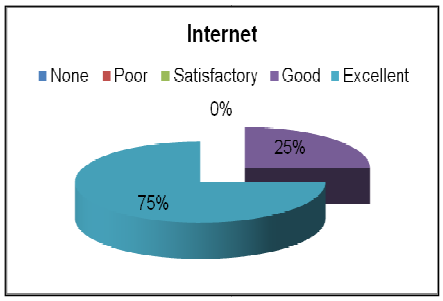


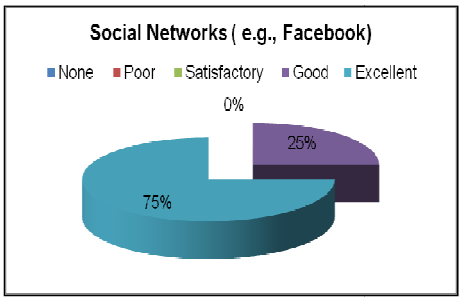
All tutors had good digital competences, acquired trough self training 50% or attending ICT school courses. 100% of the tutors had excellent (75%) or good knowledge (25%) of the Internet, 75% had excellent knowledge about how to use social networks and e-mail, as well as programmes such as word and power point. 50% had good capacity to use excel while the other 50% had a sufficient ability to use it.

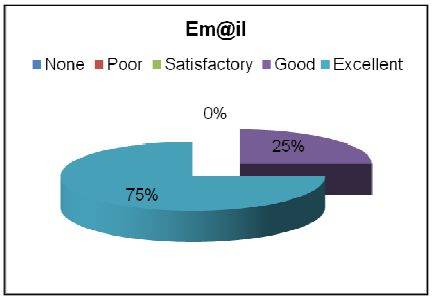
On average, all the volunteers had skills related to the use of programmes such as paint and 25% to 33% had good programming skills being perfectly able to create a website or edit a video **(Fig. 56 and 57).**

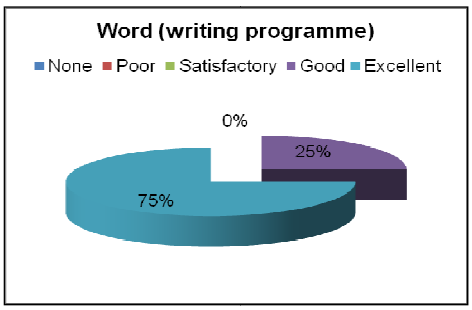
Fig.56











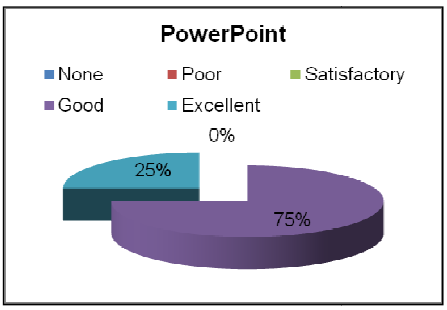
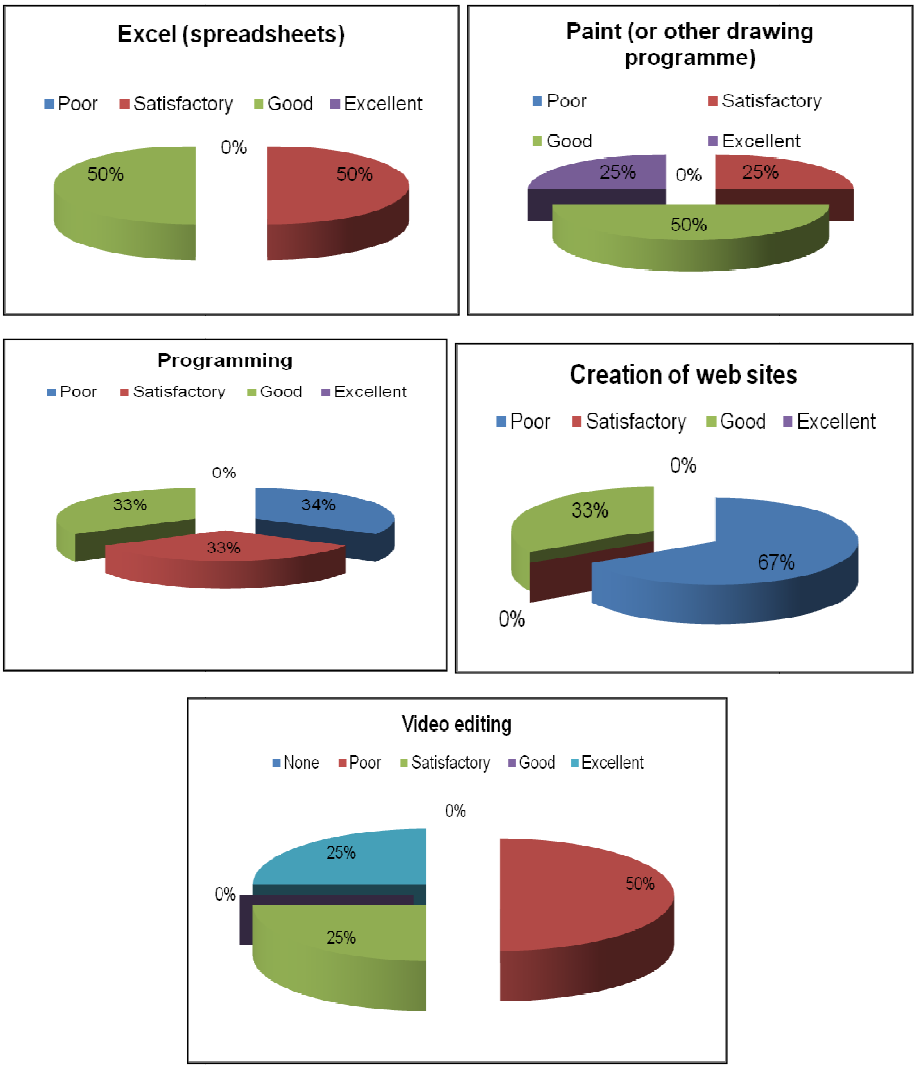


Fig.57



56% of the Young volunteers tutoring grandparents, declared they use the pc for 2 to 5 hours per week, most of the time at home, at the library or at the internet café, sometimes at school (**Fig.58**).

Fig.58

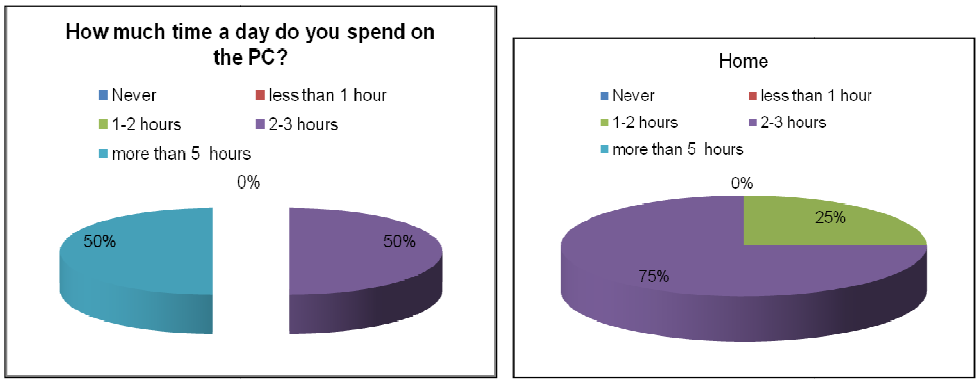
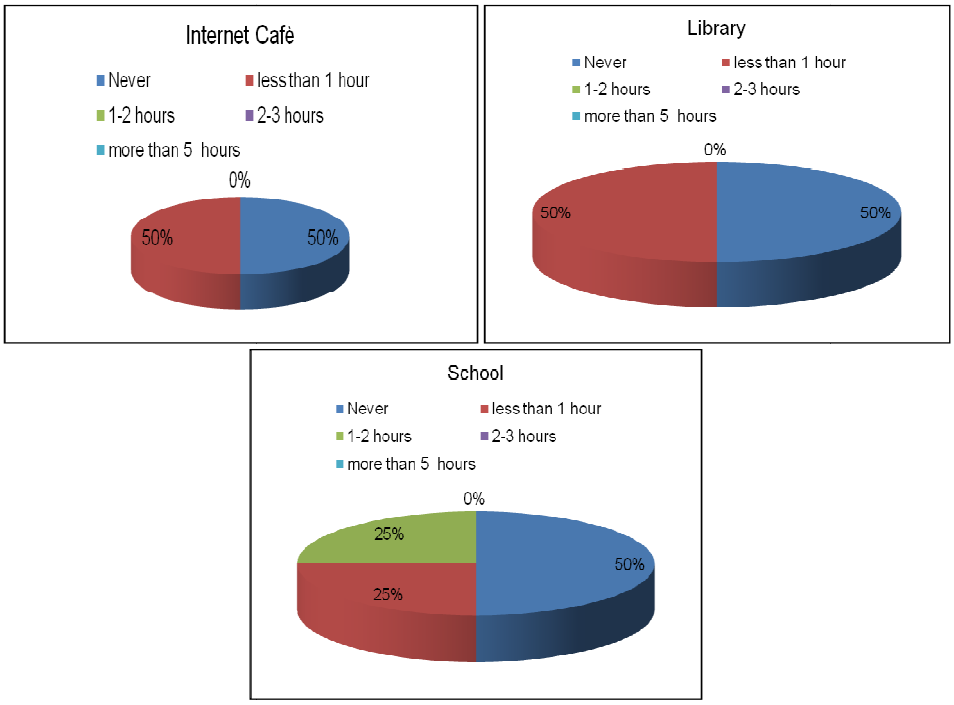


Fig.58



In their daily life, volunteers use the PC for school, to copy notes and write papers, or to have fun with games ,or keep in touch with friends by email or chatting. All of them use the PC to write letters and personal notes, 50% of them sometimes also use it to write blogs (**Fig.59**)

Fig.59

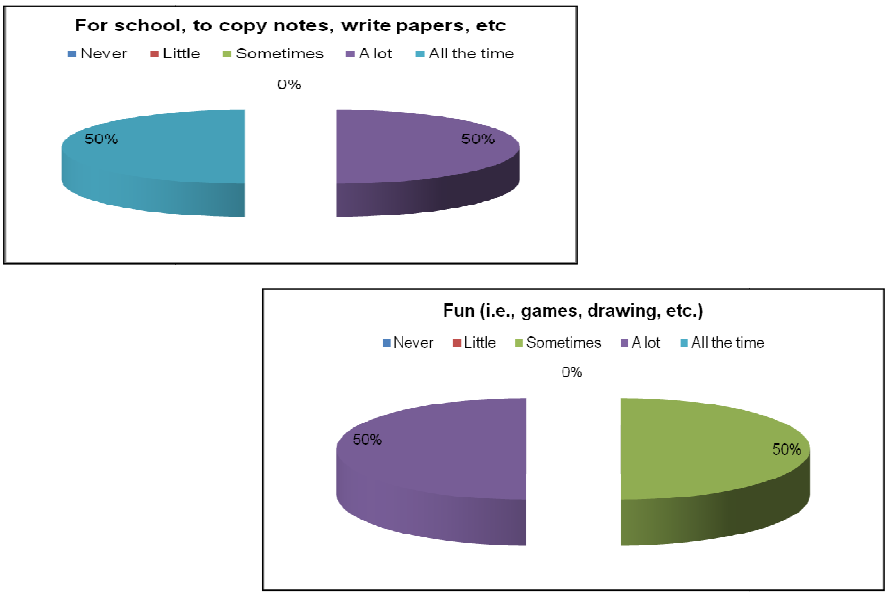
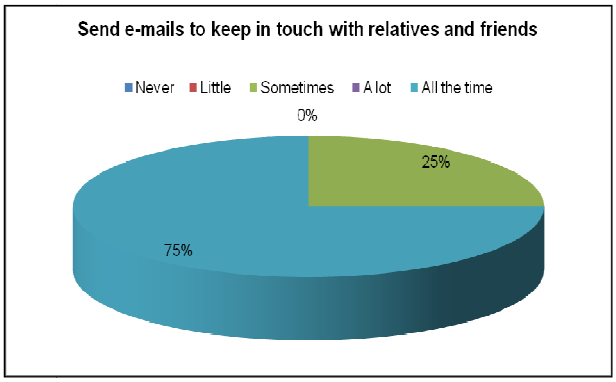
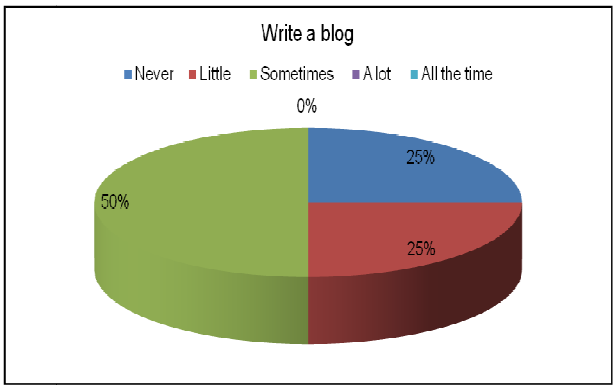
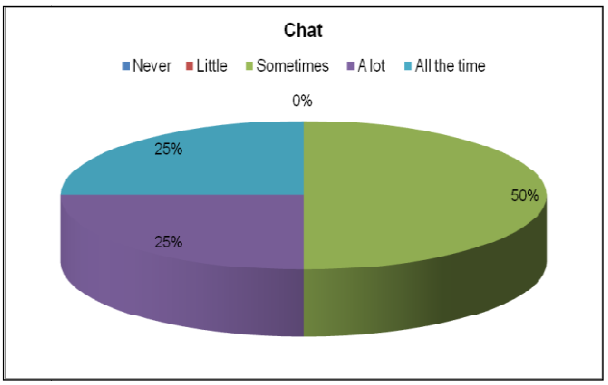
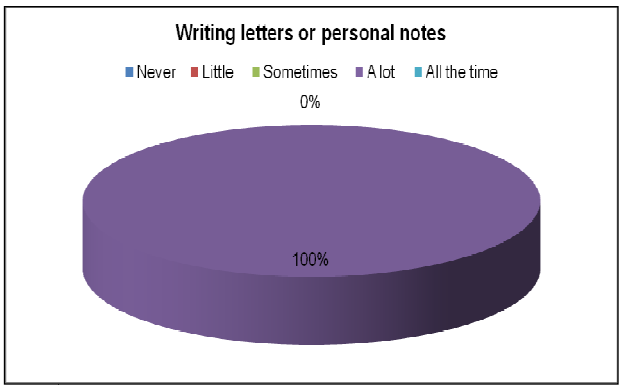


Fig.59


Send e-mails to keep in touch with relatives and friends
Never
Little
Sometimes
A lot
All the time
0%
25%
75%

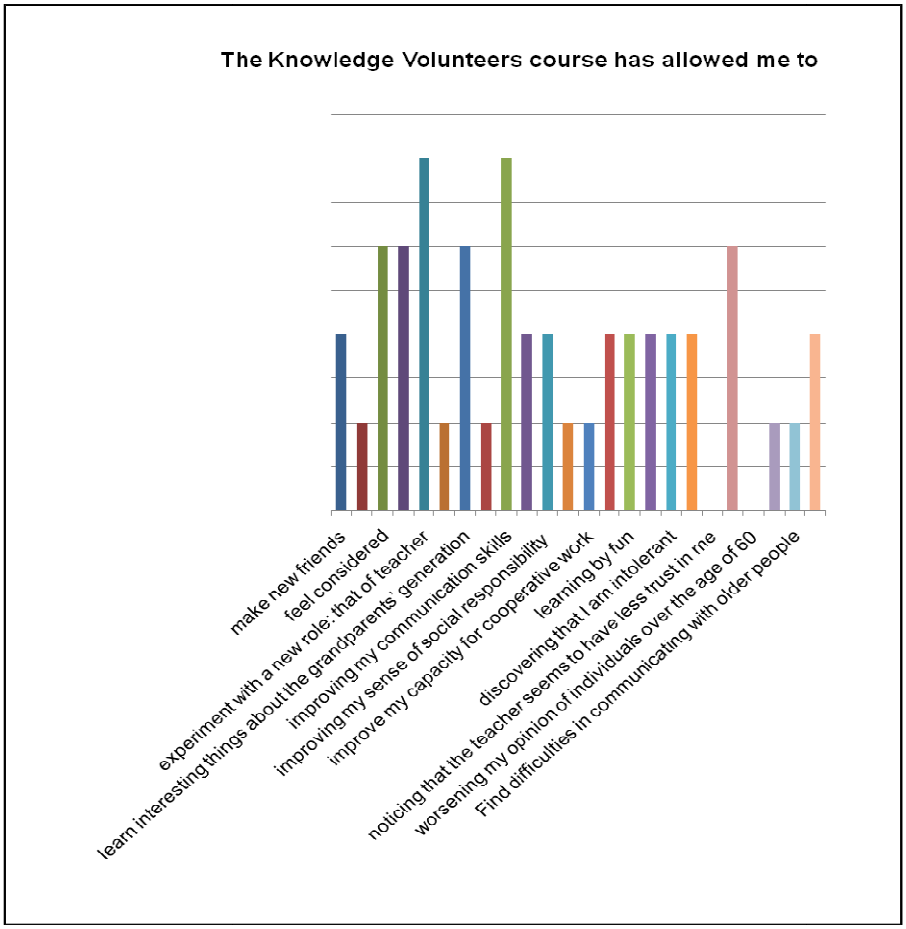

Write a blog
Never
Little
Sometimes
A lot
All the time
0%
25%
50%
25%


Chat
Never
Little
Sometimes
A lot
All the time
0%
25%
50%
25%


Writing letters or personal notes
Never
Little
Sometimes
A lot
All the time
0%
100%

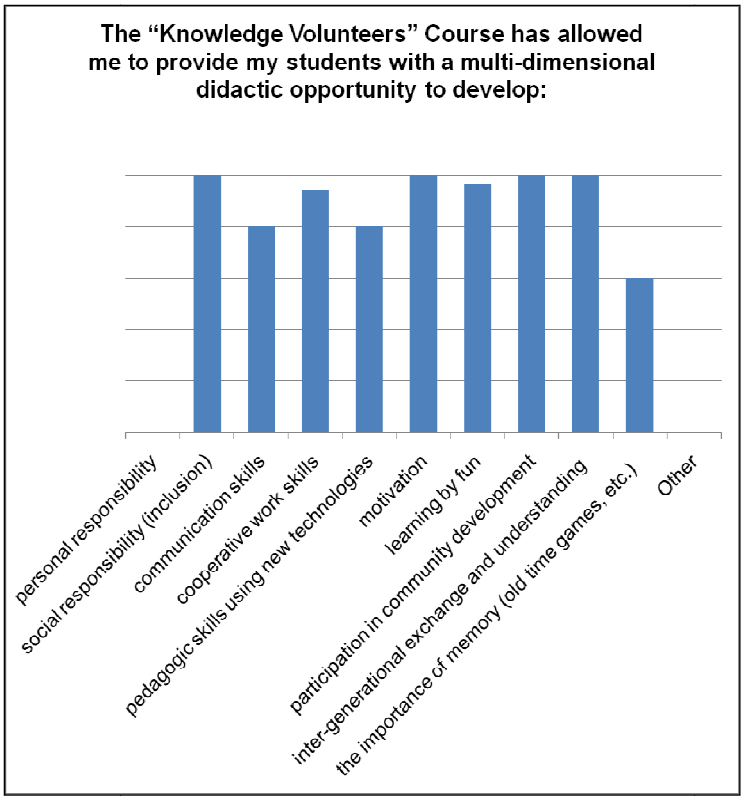
The Knowledge Volunteers courses model, based on role exchange, allowed the young volunteers to become teachers of elders. The intergenerational exchange enhanced the dialogue between different interests and experiences. As a result, young students had the opportunity to implement their sense of responsibility and capacity of cooperative work, strengthening their motivation and learning by fun, and feeling a sense of participation in community development. During the courses they felt respected, considered and important and overcame difficulties in communicating with older people, improving their opinions of the over 60s, and learning interesting things about the grandparents' generation. Also, the courses were a chance to make new friends among the young and the elder generation (**Fig.60**).

Fig.60



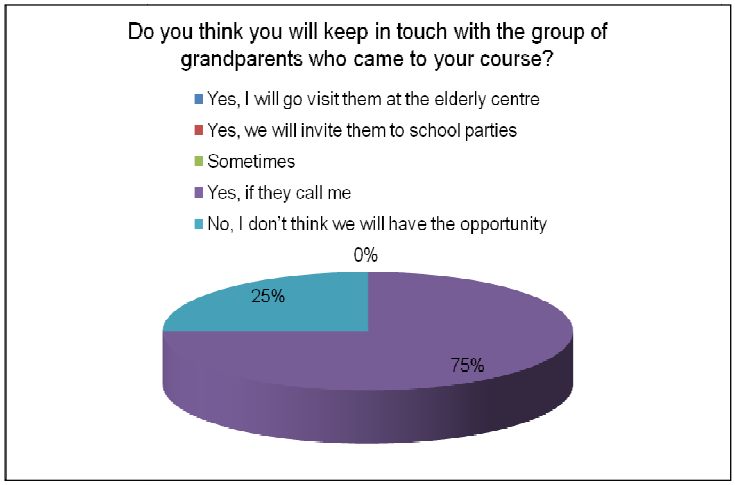
Teachers said the The Knowledge Volunteers courses allowed them to provide their students with a multidimensional didactic opportunity to develop personal and social responsibility, which allowed them to strengthen their communication skills and capacity to work cooperatively. They also believe the students understood the importance of the intergenerational exchange and of the memory of the past experiences grandparents can tell them **(Fig.61)**.

Fig.61



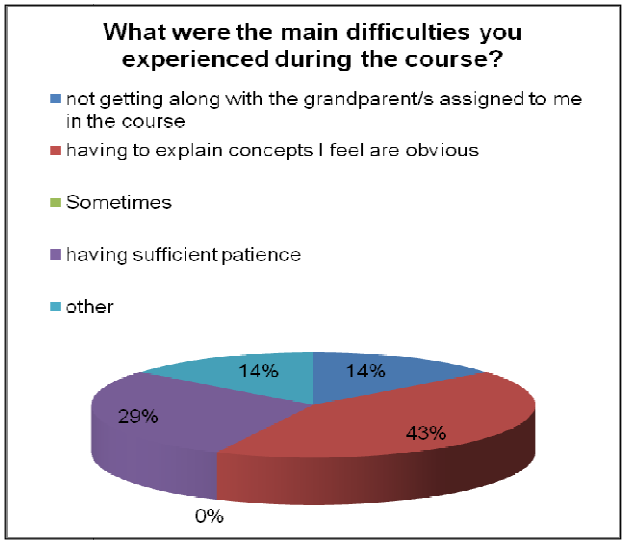
In most of the cases, the courses intergenerational experience allowed the tutors to learn interesting things about younger/elder generation and in many cases to establish friendships between youths and elders. 95% of the Tutors declared their wish to remain somehow in contact with the elders met during the courses. 40% intend to visit them at the elders center **(Fig.62)**.

Fig. 62



The difficulties Tutors experienced during the courses were mainly related to the capacity to have sufficient patience in teaching grandparents, having to explain concepts they felt obvious or having to repeat subjects several times in order to tackle the grandparents difficulties to understand and remember the lessons. **(Fig.63)**.

Fig.63



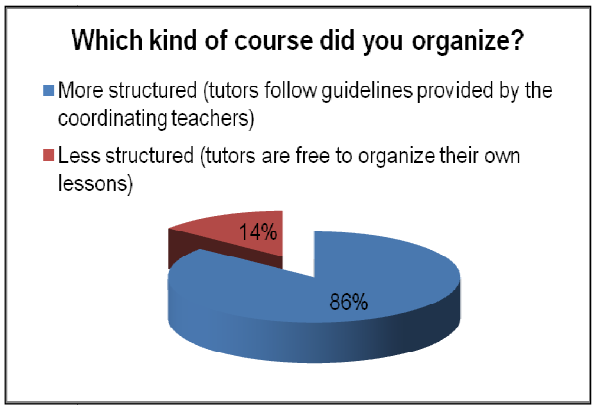
Greece

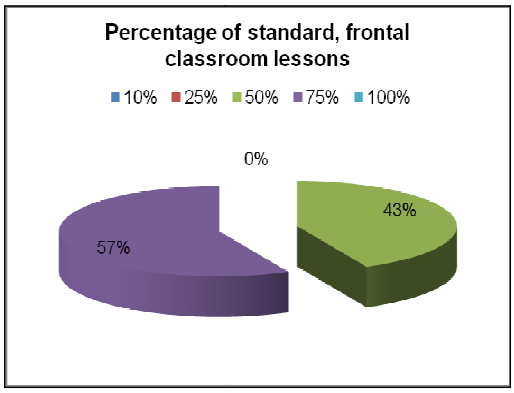
In Greece, the project courses organized by 50+Hellas involved teachers and students from primary, secondary and high school and from Universities, building on new relationships and partnerships. Elder centers and social centers were also involved thanks to the organisation networks at local level.

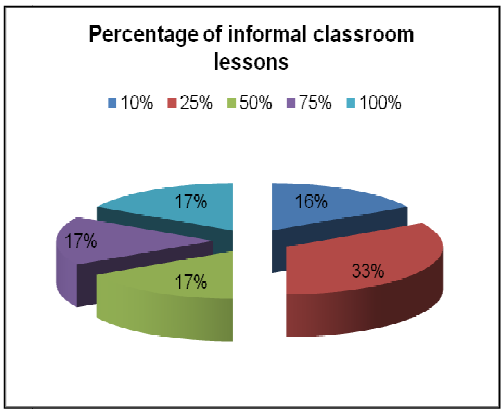
Courses Organisation

86% of the courses were organised in more structured ways, even if peer to peer teaching models combined standard frontal lessons with more informal sessions. Tutors taught grandparents and assisted them with the practice of the PC. In many cases the lessons were prepared by the tutors themselves, assisted by teachers (**Fig.1**).

Fig.1







All the volunteers were provided with training at school before the start of the courses to help them to prepare the lessons and teaching and assisting grandparents in the practice of the PC. Teachers also organised a briefing with the volunteers of about 10 minutes before every lesson. Tutors prepared the lessons themselves, reading the manual and guidelines and using them during the lessons as supporting tools together with extra exercises they prepared (**Fig.2**).

Fig.2

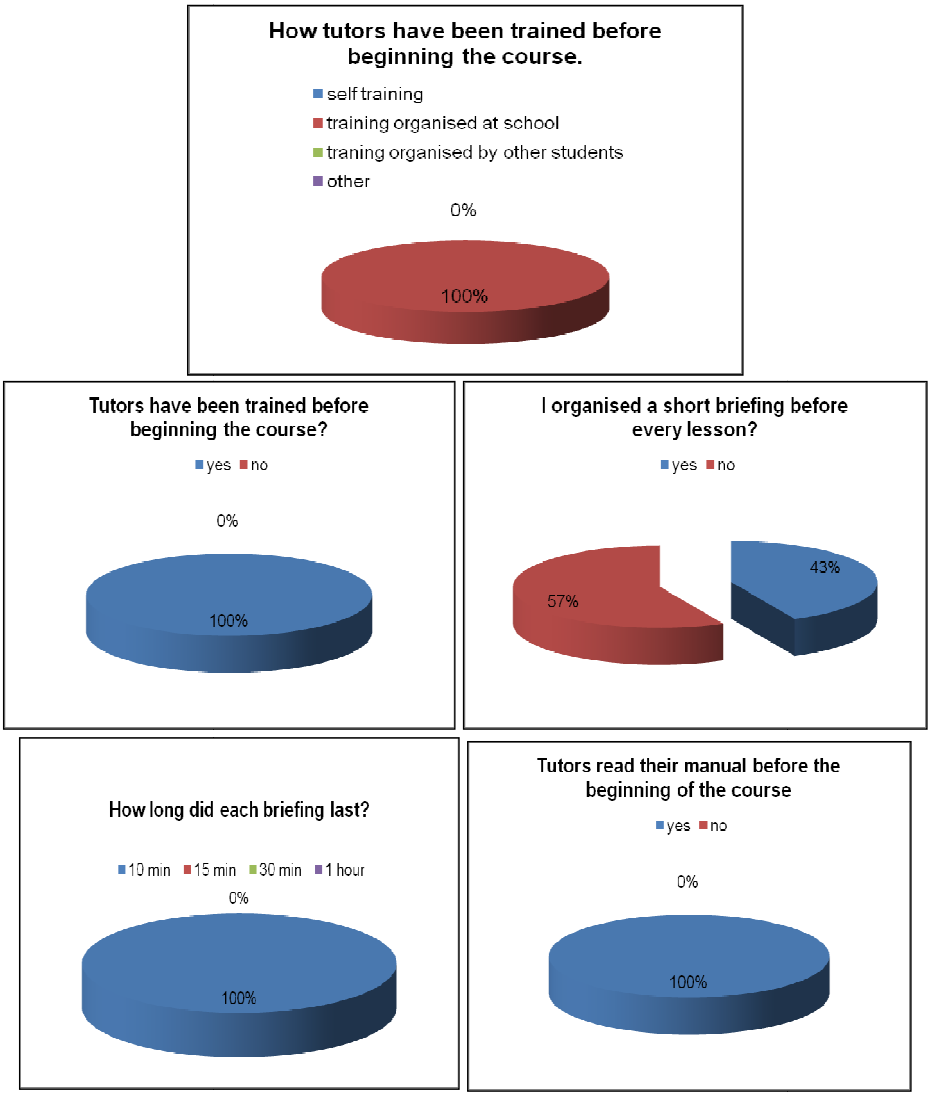
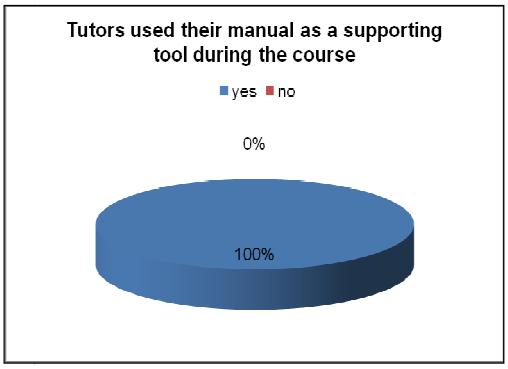
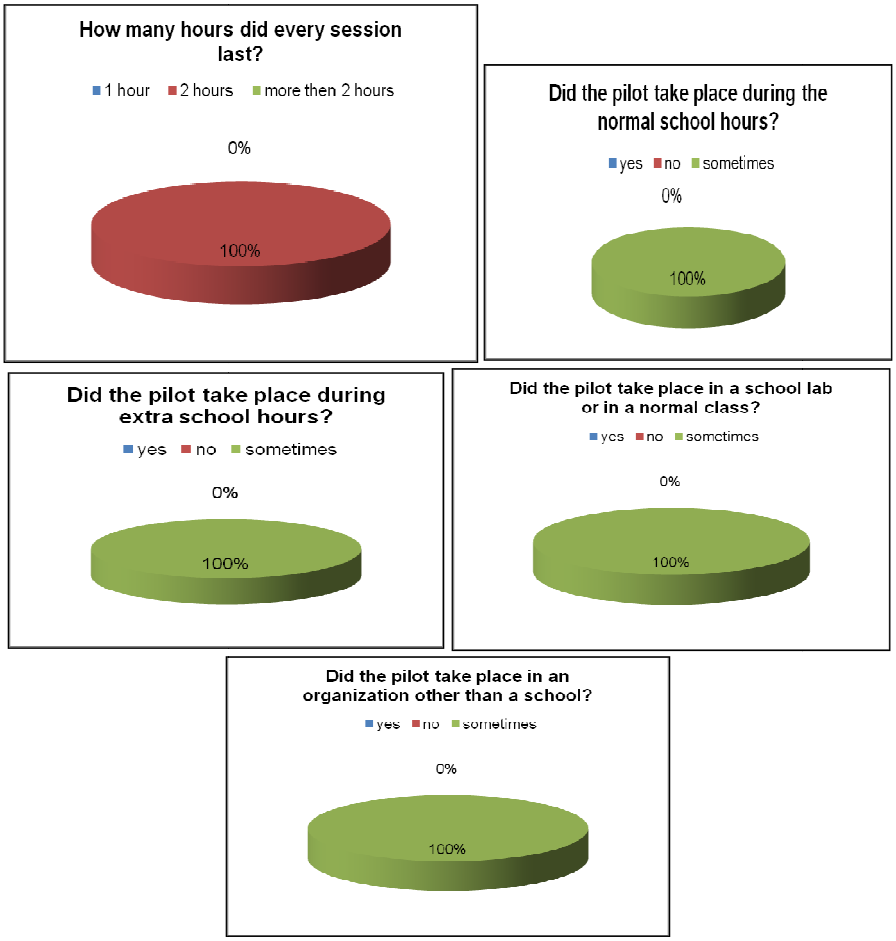


Fig.2



Courses' lessons had duration of about 2 hours each; school classes or school pc laboratories hosted them, and in other cases they were hosted by social centers or training centers. Sometimes lessons took place during the normal school hours, other times out of the school time (**Fig.3**).

Fig.3



Classes hosting the lessons were provided with equipment other than PCs, such as projector to support the teaching, printers, photo cameras and sometimes scanners to allow tutors and grandparents to practice together.

Fig.3

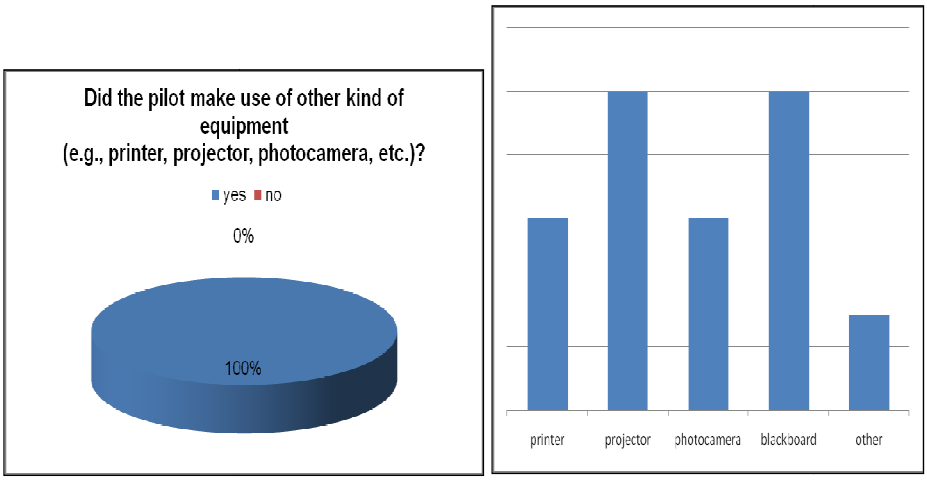
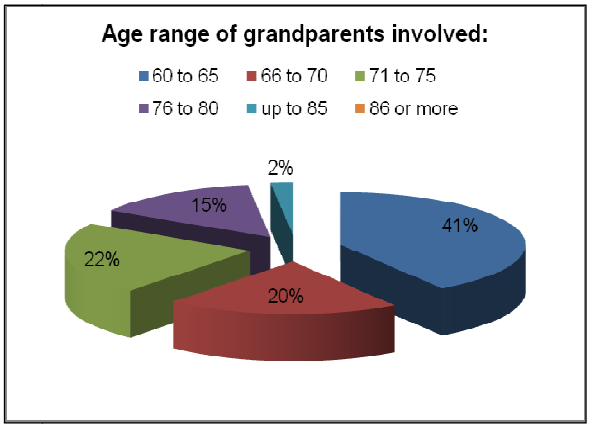


Fig.4



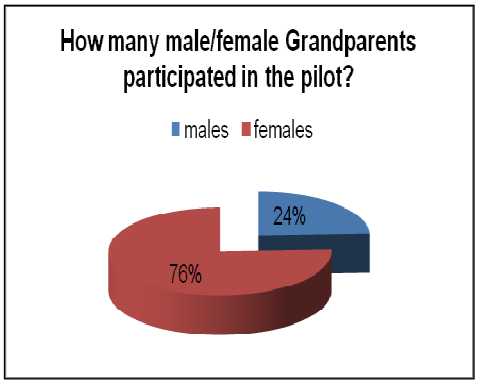
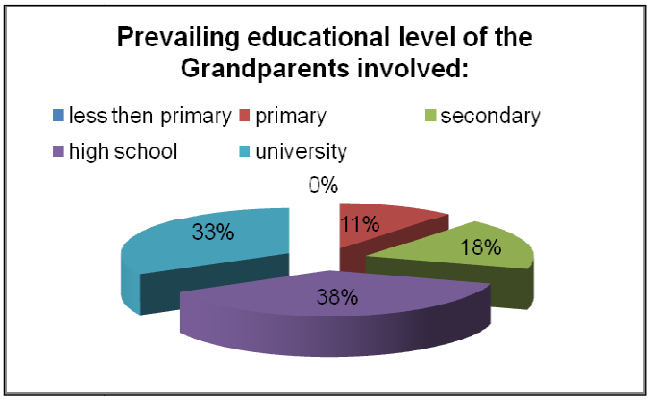


Fig.5



41% of the grandparents enrolled in the courses were aged between 60 to 65 years old, 22% 71 to 75, 20% 66 to 70, 15% 70 up to 80 and 2% also up to 85. Female participants were 76% and males 24%. Regarding their prevailing educational level, 33% of them had completed university, 38% high school, 18% secondary school, and 11% primary school (**Fig.5**).

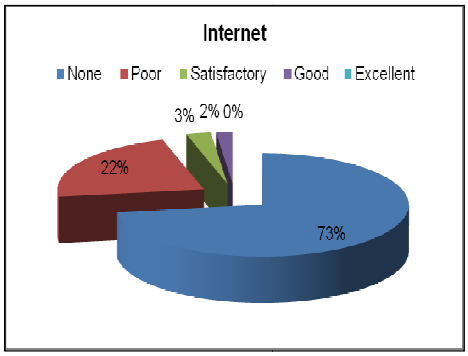
Educationa value of The Knowledge Volunteers Project

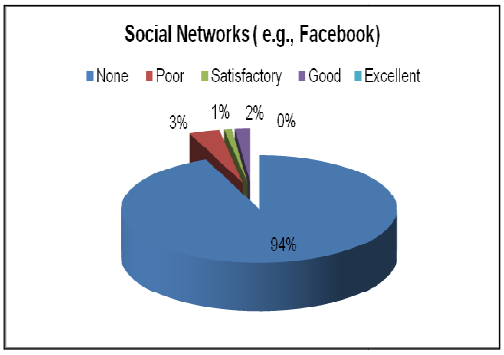
Questionnaires were submitted to grandparents attending courses, before the beginning of the courses and at the end. Interviews as part of the real time evaluation were also organized during the courses.

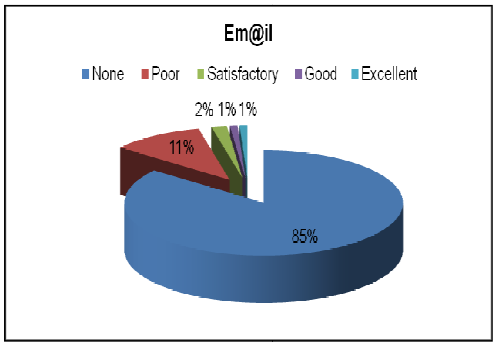
The objective of the survey was to evaluate the methodological and didactical aspect of the training curricula and model and to test the intergenerational and peer to peer approach, particularly, in relation to the skills acquired by grandparents involved in the education path, the changes in their use of the pc, and the main evolution in the relationships between elders and youths.

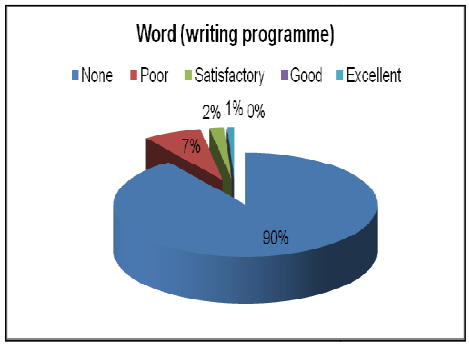
The data gathered shows the high level of educational value of the project from different points of view.
The following charts refer to grandparents' habits in using the PC and in general ICT before their enrolment in the project courses.
Only 5% of elders used a PC to write letters or emails and look for information on what to do in their free time, while 95% of elders did not use a PC at all for this aim.
About 73% of the elders did not have any experience nor knowledge of the Internet, 94% never used social networks and 85% never used email.
90% of them did not know how to use writing programmes such as word and never used excel before.
98% did not have any previous familiarity with power point programme and 96% did not have any capability to use a programme like paint **(Fig.6)**.

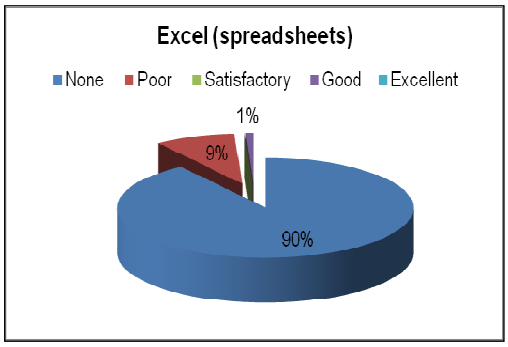
Fig.6

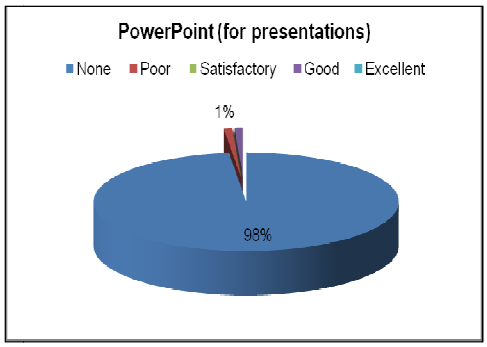

Internet
None
Poor
Satisfactory
Good
Excellent
3%
2%
0%
22%
73%

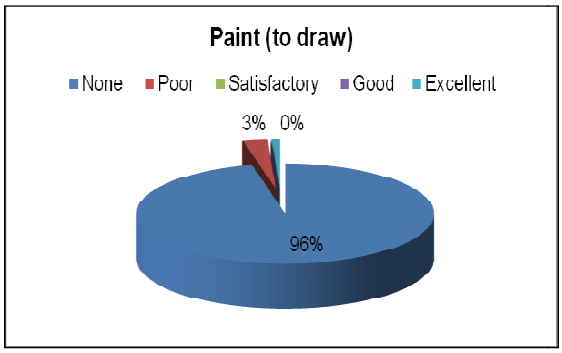

Social Networks (e.g., Facebook)
None
Poor
Satisfactory
Good
Excellent
3%
1%
2%
0%
94%


Em@il
None
Poor
Satisfactory
Good
Excellent
2%
1%
1%
11%
85%


Word (writing programme)
None
Poor
Satisfactory
Good
Excellent
2%
1%
0%
7%
90%

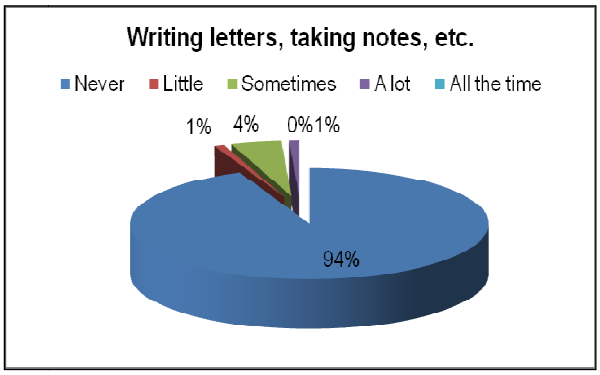

Excel (spreadsheets)
None
Poor
Satisfactory
Good
Excellent
1%
9%
90%

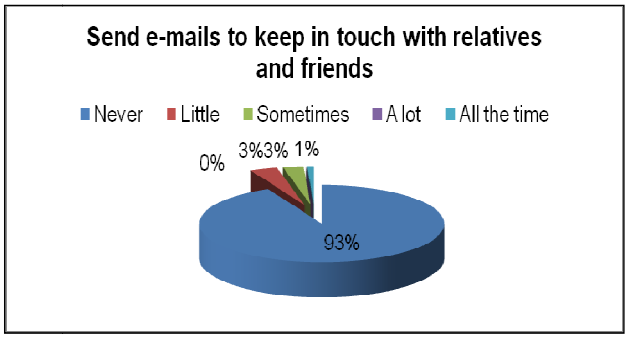

PowerPoint (for presentations)
None
Poor
Satisfactory
Good
Excellent
1%
98%

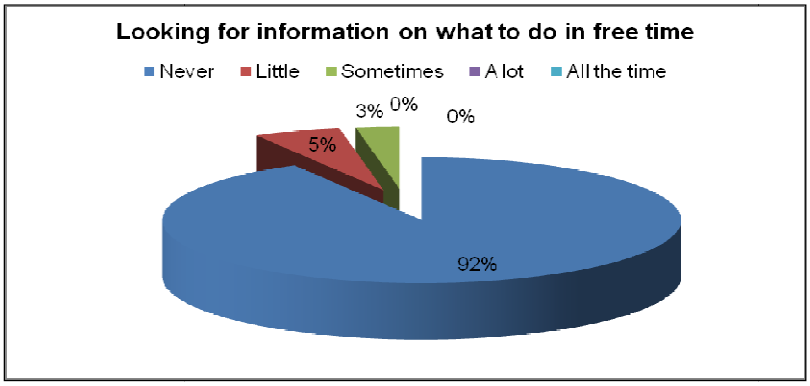


Before attending the courses, only 5% of the grandparents had sometimes used word to write letters or notes. 6% had sent e-mails, 6% had accessed public information services and 8% had looked for information on what do in the free time **(Fig.7)**.

Fig.7







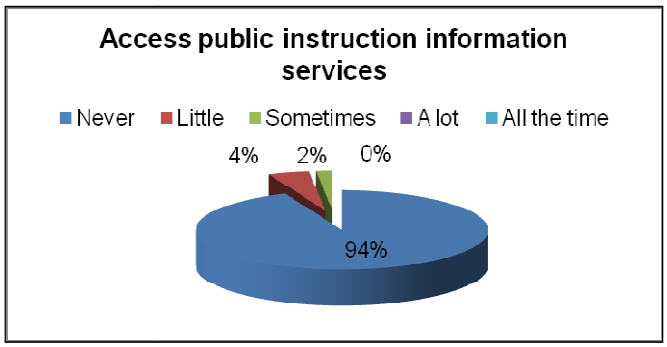
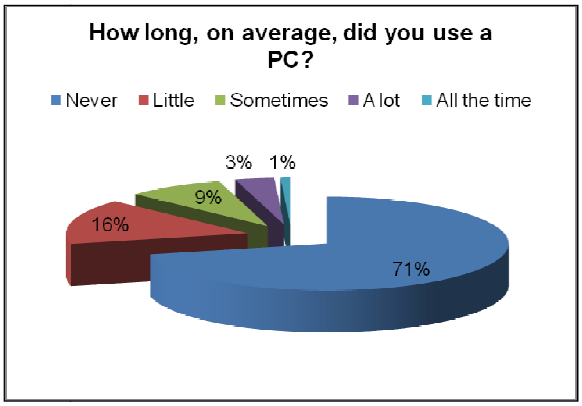
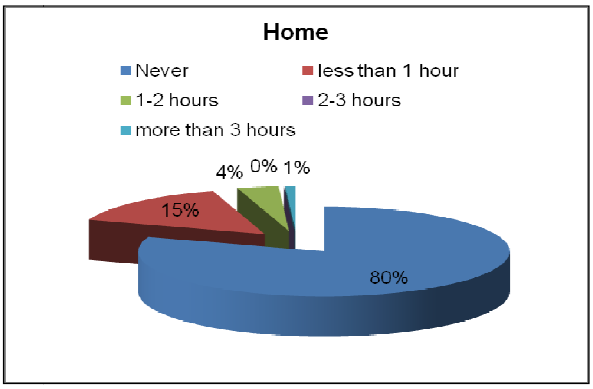


Fig. 7

71% of the grandparents interviewed at the beginning of the courses, declared that they had never used the PC. Only 3% said to use it a lot, while 9% sometimes and 16% a little. Around 20% of the elders used the PC at home at for not more than 2 hours per week. 2% used it a little and 1% all the time. 1% said they used a little the PC at a friend's house. None of them have used it at the library, or at school. **(Fig.8)**.

Fig.8





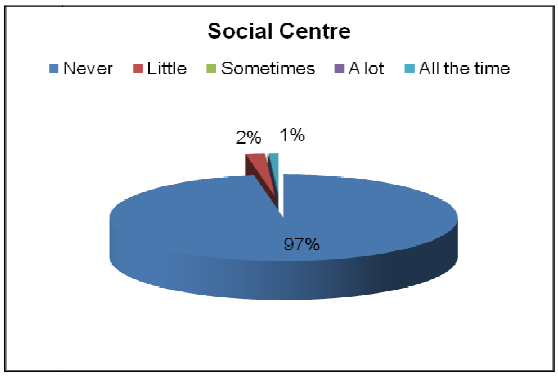
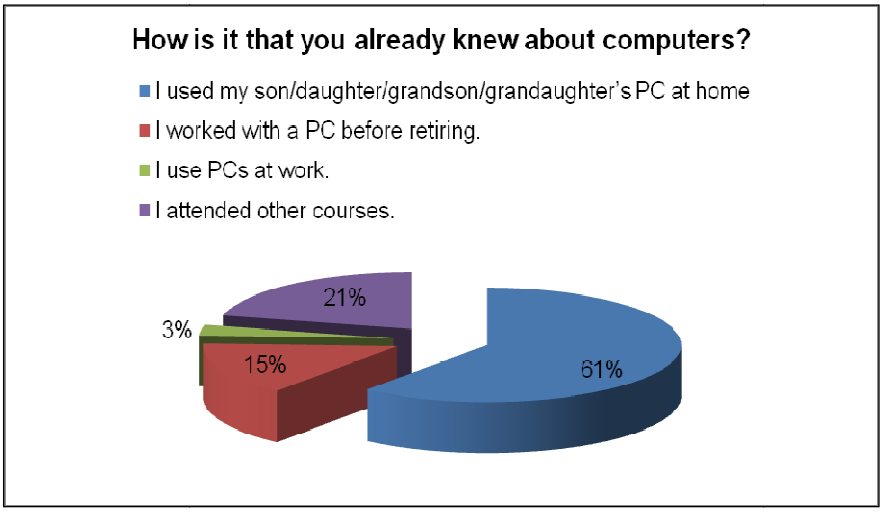


Fig.8

Grandparents who already had some knowledge about PC Programmes or make use of the Internet, declared they already knew about computers because they used their daughter/son or granddaughter/grandson PC at home. 21% acquired some skills attending other previous courses and 18% because they currently use the PC for work or used it for this reason before retiring **(Fig.9)**.

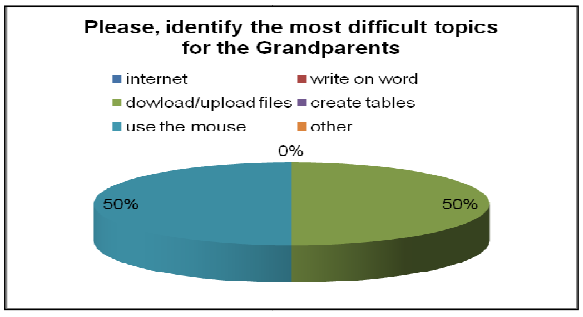
Fig.9



Evaluation of the courses

The courses curricula as well as lessons programmes were adapted continuously to the learning needs of the grandparents. Extra exercises were developed by teachers and volunteers for grandparents' practice during the lessons or at home. The poor previous knowledge of the grandparents required the application of a high degree of personalization of the lessons. In many cases, it was necessary to repeat the lessons, dedicating more time to the peer to peer practice. In many cases, grandparents faced learning and memorising difficulties. Especially for grandparents with no digital literary competences, the most difficult topics were how to use the mouse and how to download files or create folders. The grandparents' learning difficulties required an increment in the number of lessons dedicated to the basic literacy programme. This, together with the lack of equipment in schools and laboratories hosting the lessons, made it sometimes very difficult for teachers and volunteers to enhance the level of the lessons based on more complex subjects **(Fig.10 and 11)**.

Fig.10



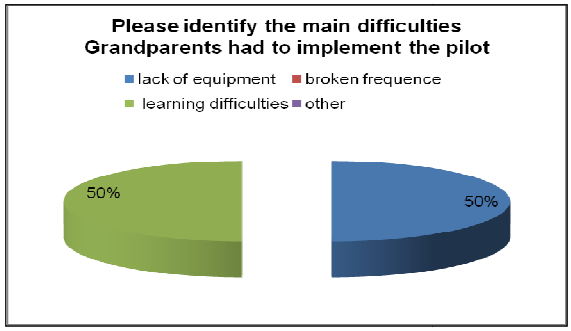
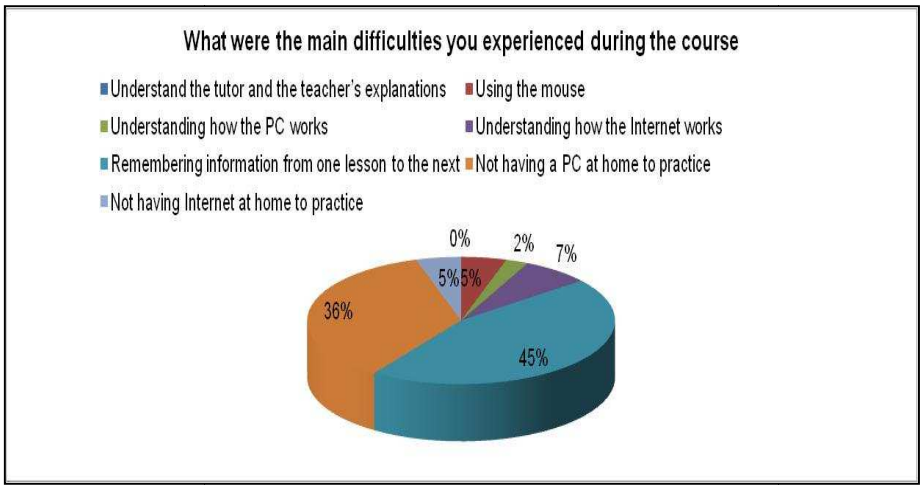
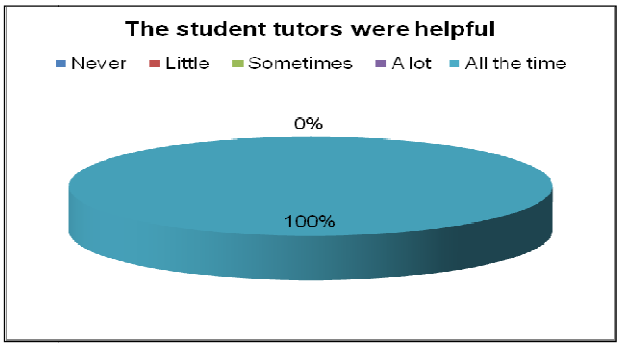


Fig.11



Young students, in the role of tutors, supported the grandparents during their learning and practice, including through frontal lessons and peer to peer teaching methods. 100% of the Grandparents attending the courses declared that tutors helped them to acquired skills and knowledge about ICT (**Fig.12**).

Fig.12

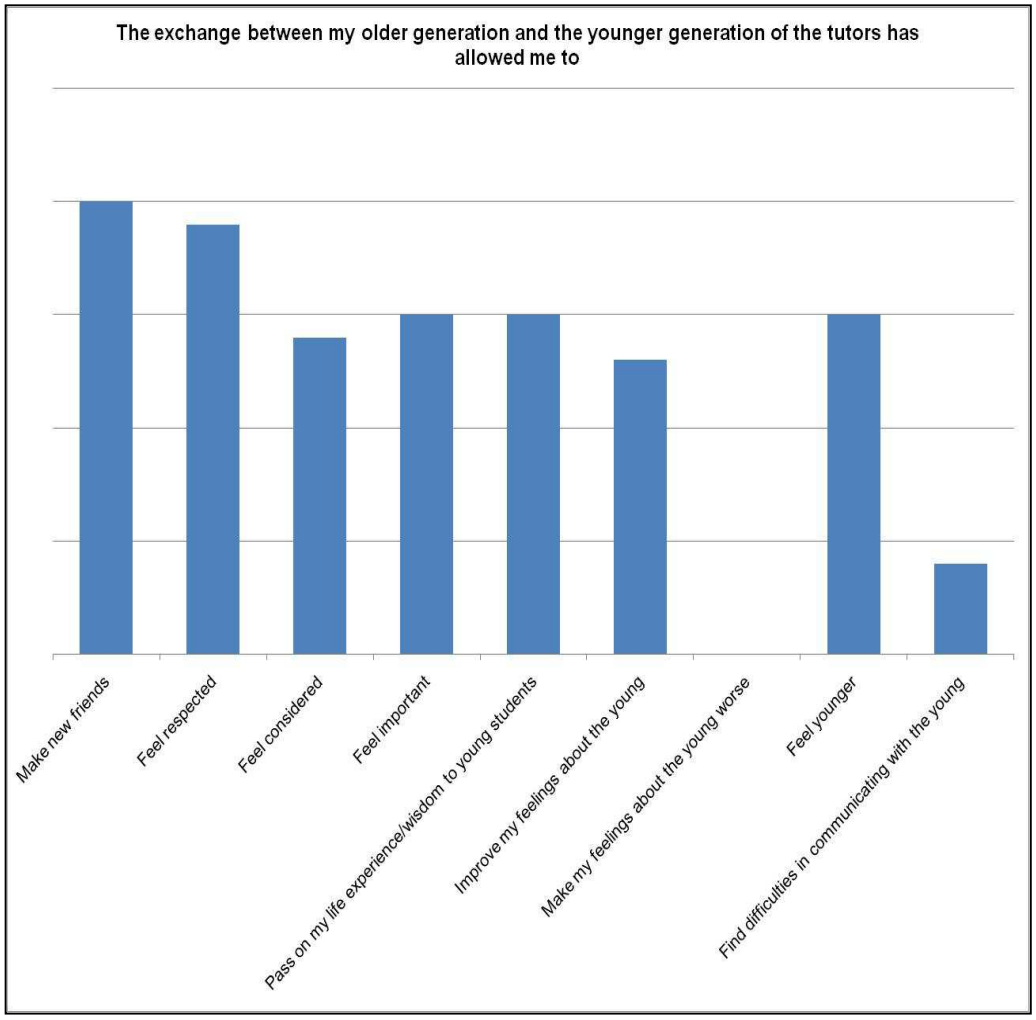


The teaching and learning approach based on intergenerational learning, networking and role exchange, was the key important aspect of the project teaching and learning methodology. Intergenerational exchange and socialisation opportunities were important added-value to the project. TKV promoted social relationships through the active involvement of different generations who shared experiences.

Youths helped grandparents become aware of their opportunities to participate actively in society. This made them feel considered, important and respected, in some cases even younger.

By communicating, both generations changed their opinion about the other generation. Only a few grandparents had difficulties to communicate with younger volunteers (**Fig.13).**

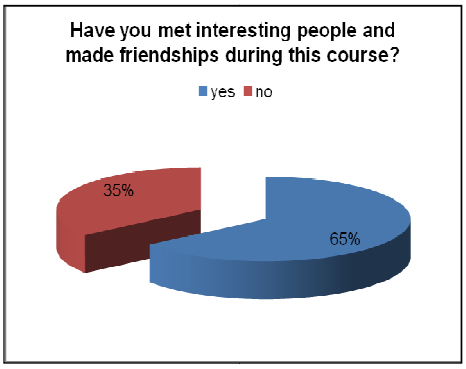
Fig.13

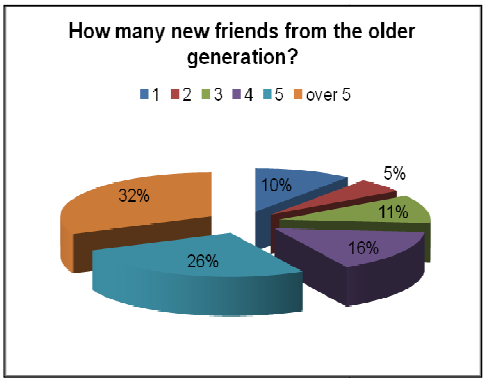


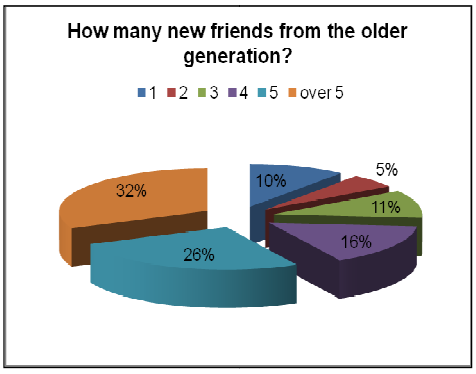
The courses were a chance for grandparents to meet and socialize, making new friends among the older and the younger generation. 64% of the elders met interesting people and made friendships during the courses, from the older and also from the younger generation.

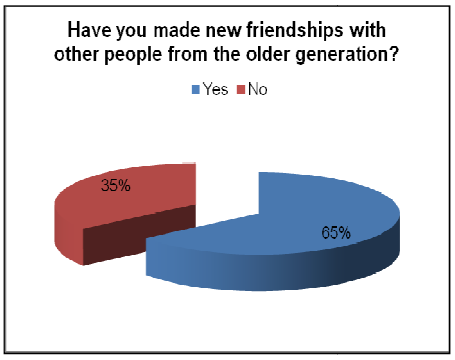
In 32% of the cases elders met more than 5 new friends from the older generation and more than 5 new friends from the younger generation. All grandparents said they will continue visiting their new friends after the end of the courses, 13% will do this often and 7% very often (**Fig.14**).

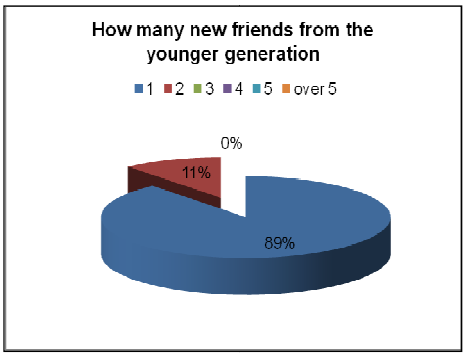
Fig.14

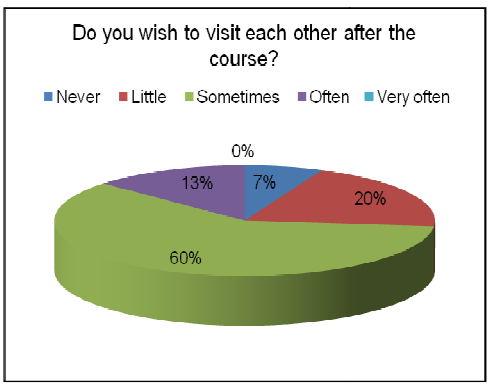






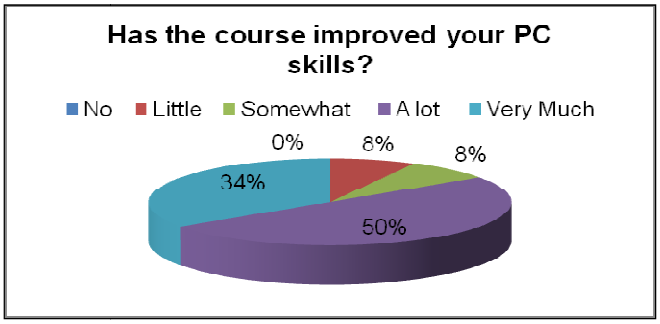






In terms of digital literacy knowledge and competences, interviews and questionnaires revealed that, thanks to the courses, grandparents enhanced their level of digital literacy competences and changed their habits in using the PC. 34% of Grandparents said they improved very much their PC skills, 50% a lot; only 8% improved somewhat and 8% a little **(Fig.15).**

Fig.15

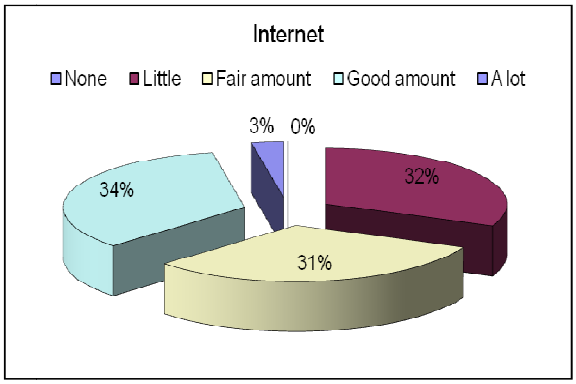


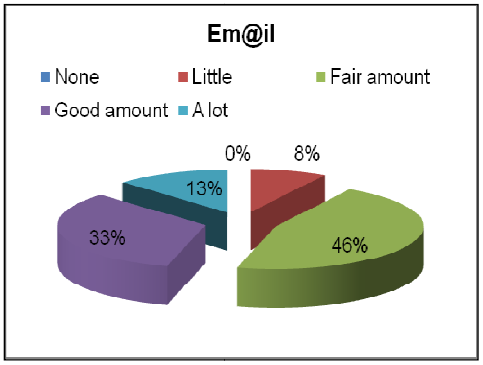
This data, related to the difficulties faced by some of the elder learners, highlights the importance of frequent practice to reach a high level of competences. In some cases, the lack of equipment corresponded to the grandparents' lesser improvements in their ability to use the PC. Also grandparents' age directly influenced the capacity to reach a high level of competences and this is most likely associated to the difficulty of memorization characterising the eldest.

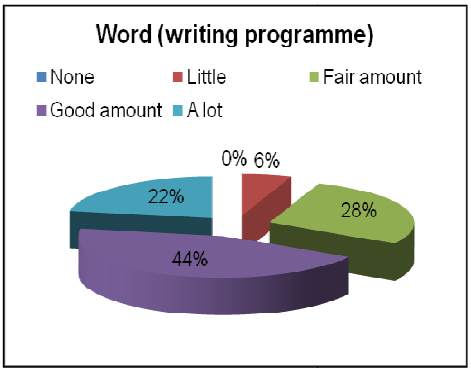
100% of the grandparents learnt to use the internet, all of them became able to use email with an overall high level: 13% a lot, 33% a good amount, 46% fairly. 6% of the grandparents at the end of the courses declared they learnt little about how to use the word programme, while 22% learnt a lot, 44% a good amount, 28% a fair amount **(Fig.16)**. The enhancement of skills and abilities correspond to changes in attitudes regarding the use of the PC: 81% of grandparents said in future they will use the PC for fun, 78% to write letters o take notes, 97% to send emails to keep in touch with friends and relatives, 85% will also use the Internet to look for information on

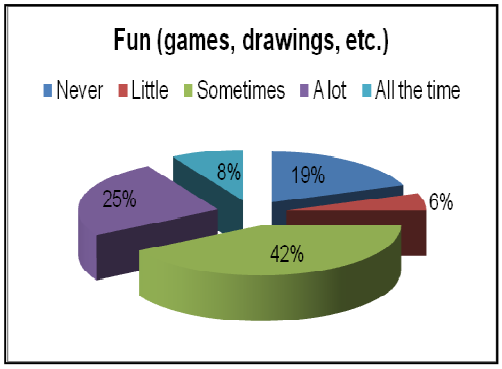
what to do in their free time, 65% to access to public information services, 49% to purchase items on line **(Fig.17)**.

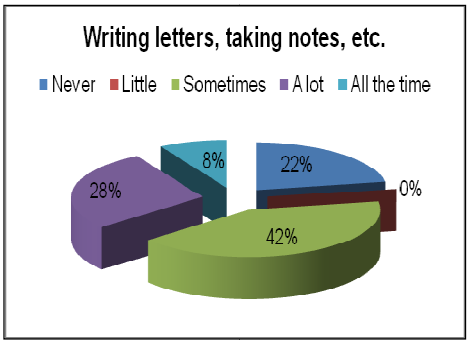
Fig.16











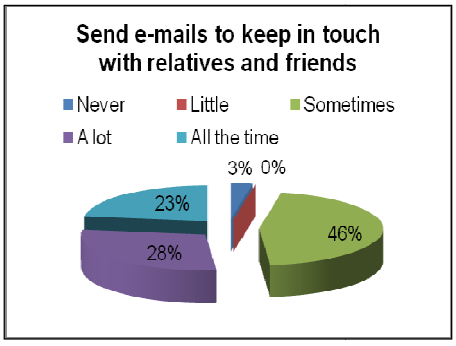
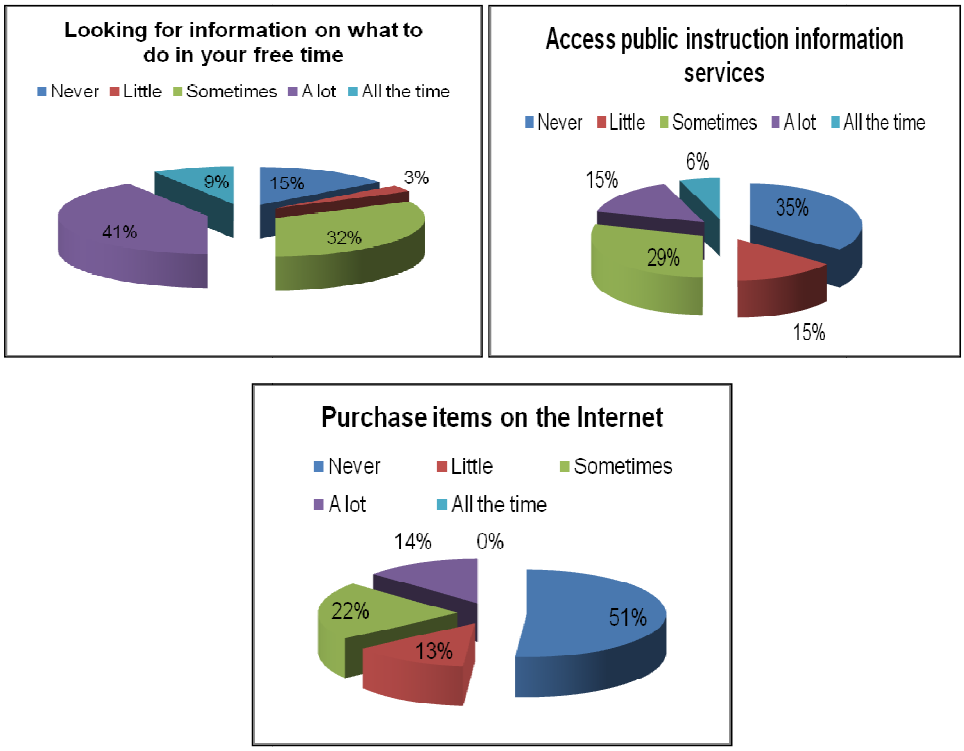


Fig.17



After completing the courses, 37% of the grandparents said they now use the PC for 2-3 hours per week, 44% for 1 to 2 hours per week, 19% for less than one hour. As an average, all the grandparents frequenting the courses now use the PC weekly (**Fig.18).** Most of them use the pc at home 71% while 23% use it at the social center or at a friends' or relative's house 6% (**Fig.19**).

Fig.18

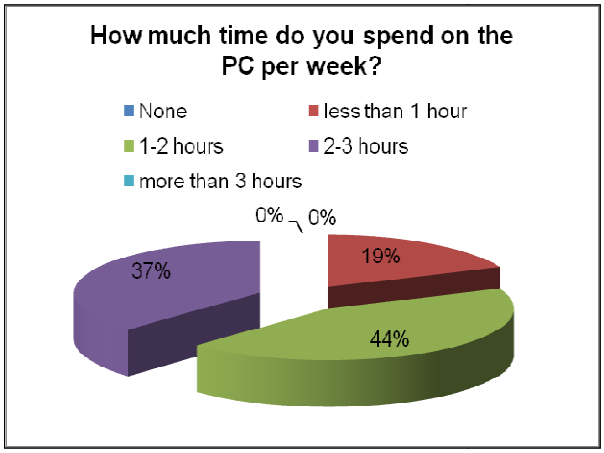
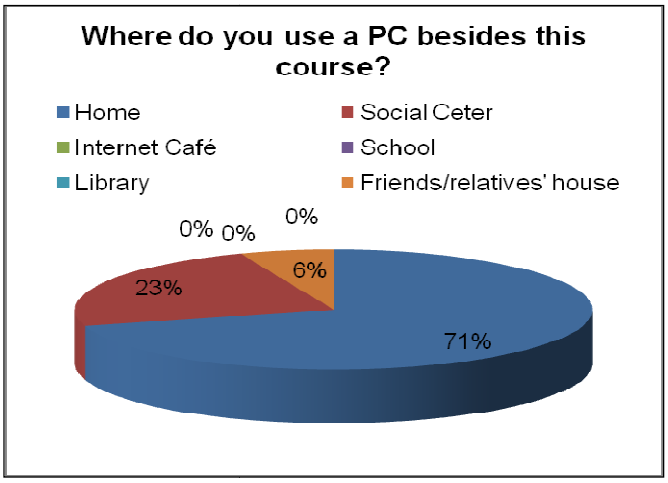


Fig. 19


Where do you use a PC besides this course?
Home
Social Ceter
Internet Café
School
Library
Friends/relatives' house
0%
0%
0%
6%
23%
71%

Evaluation of the value of The Knowledge Volunteers didactic kit

Based on the curricula didactic objectives, methodologies and activities, a didactic kit was developed for 4 levels of courses: ABC of ICT, Social networking, E-government services, and Easy technology accompanied by Guidelines for Users, Tutors and Teachers.

Contents were developed based on the target needs, customizing, and translating them to better respond to the local context and constraints.

Handbooks and Guidelines were used during the courses as supports for teaching and learning paths.

100% of the grandparents declared guidelines and handbooks were very useful, even if suggesting to convenience of adding more content and exercises in order to facilitate practice (**Fig.20 and 21**).

Fig.20

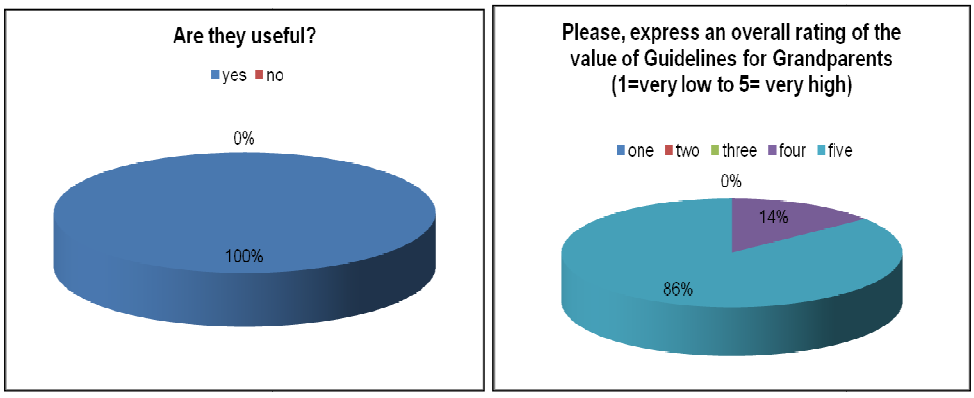
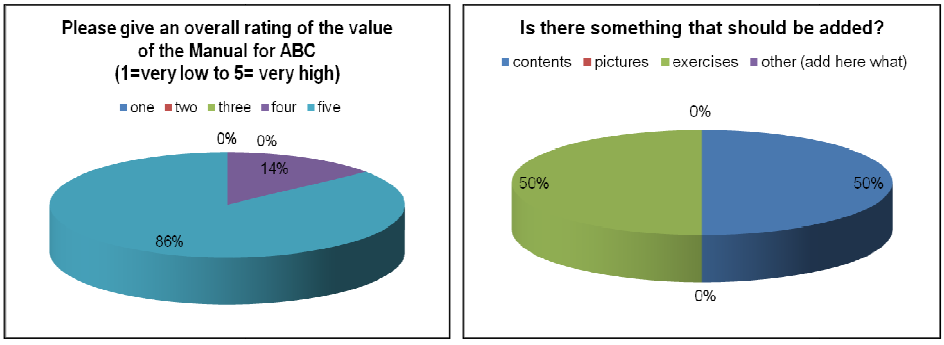
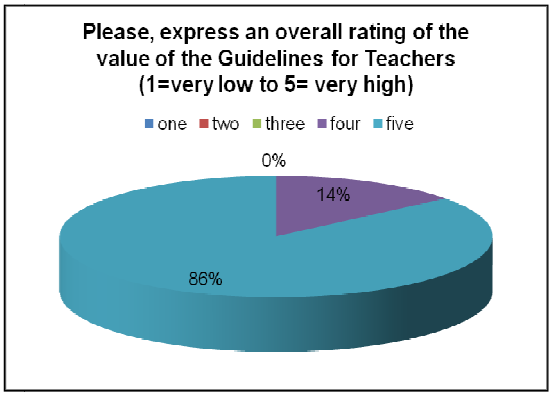


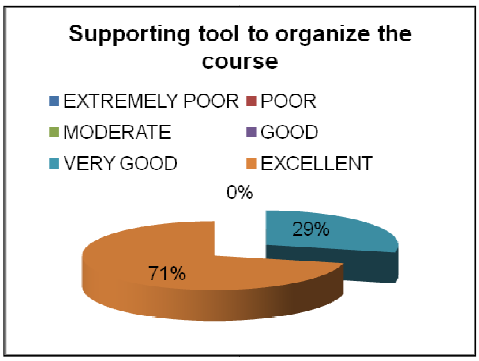
Fig.21

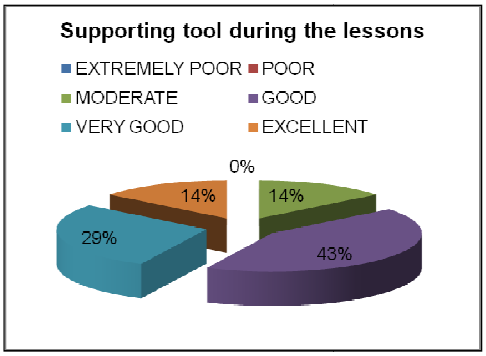


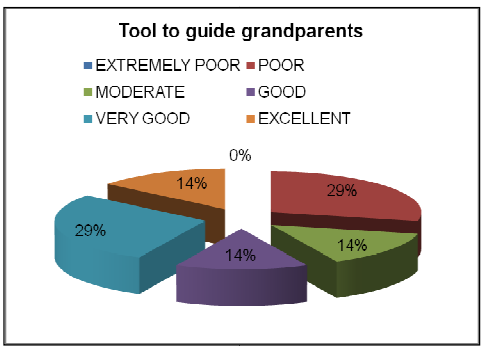
100% of teachers declared the guidelines provided have been a very valuable tool, excellent as a support to organise the lessons (71%). They were also valued highly during the lessons both to guide grandparents in the learning process and to guide the tutors in their teaching approach and methodology **(Fig.22)**.

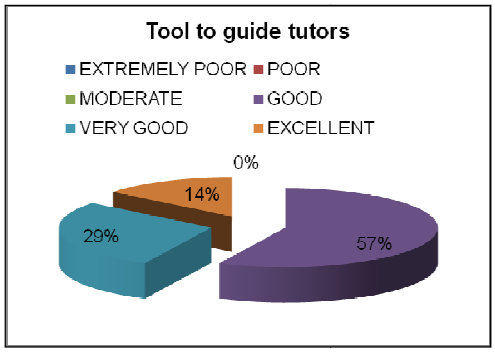
Fig.22







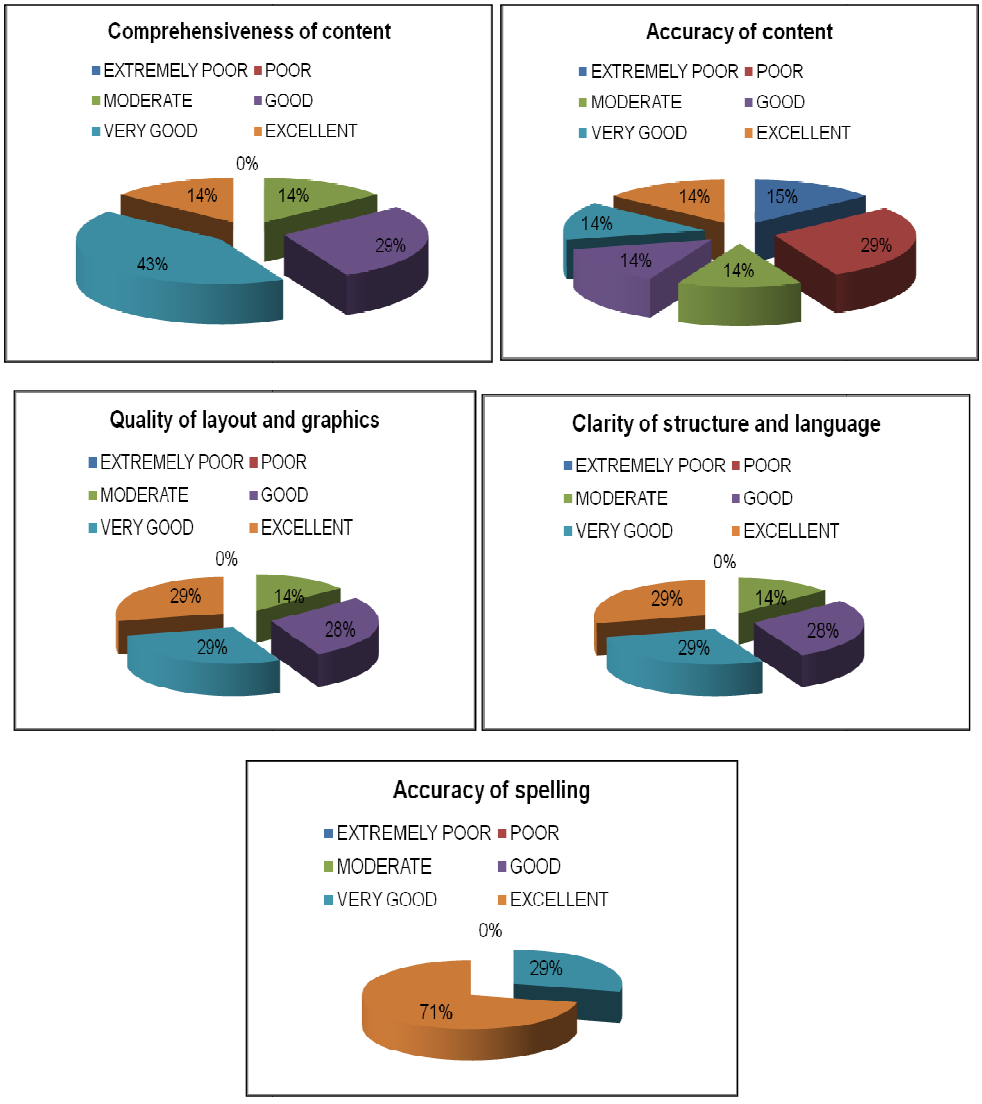




Teachers said the kit was characterized by excellent (14%) / very good (43%) comprehensiveness of contents, accuracy of contents, good quality of layout and graphics, very good clarity of structure and

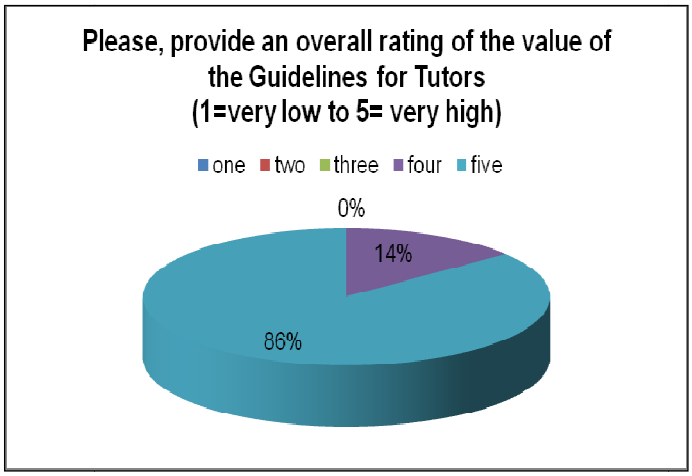
language (52%), excellent accuracy of spelling (66%). 60% of the tutors found the guidelines very useful. **(Fig.23).**

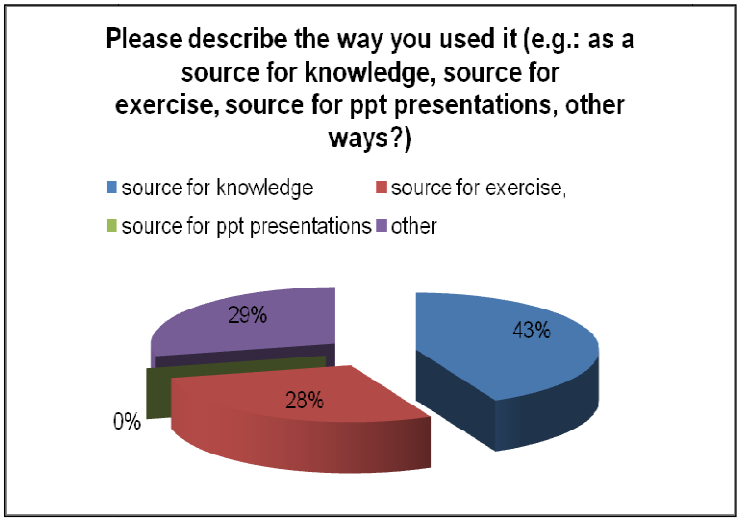
Fig. 23



The Guidelines for Tutors were also judged very valuable by teachers and volunteers. They used the guidelines to organise the courses as well as during the lessons as a source of knowledge 43%, source of exercises 28%, and guide to prepare the lessons and the exercises for grandparents to practice (**Fig. 24**).

Fig. 24

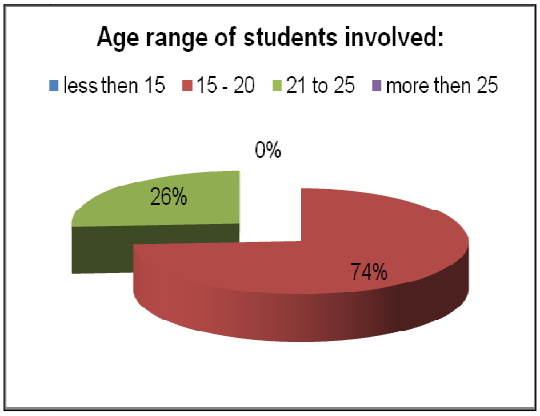

Please, provide an overall rating of the value of the Guidelines for Tutors (1=very low to 5= very high)
one
two
three
four
five
0%
14%
86%

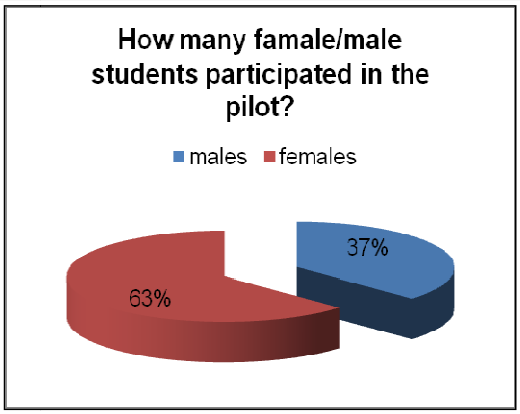

Please describe the way you used it (e.g.: as a source for knowledge, source for exercise, source for ppt presentations, other ways?)
source for knowledge
source for exercise,
source for ppt presentations
other
29%
43%
28%
0%

Tutors: role and added value of intergenerational exchange

74% of the young students involved as tutors in the digital literacy training courses were aged between 15 and 20, while 26% were aged more than 21 and up to 25. 37% were males and 63% females **(Fig.25).**

Fig. 25

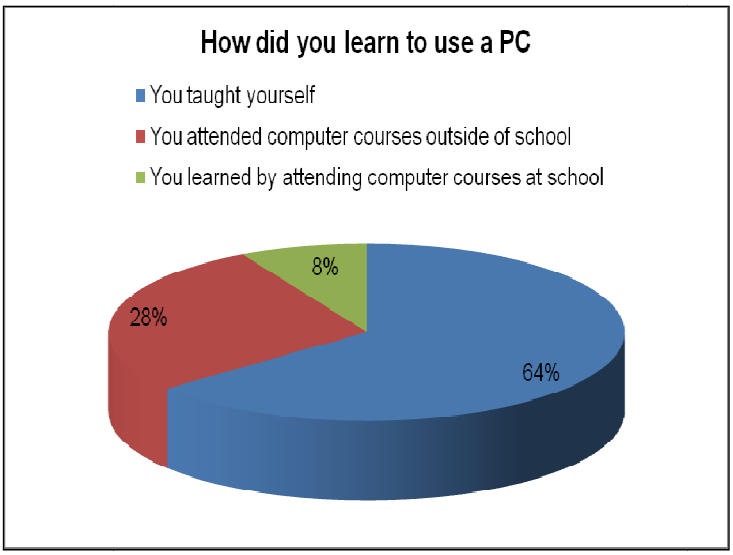


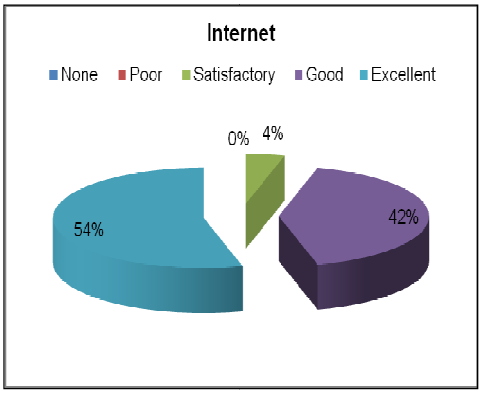


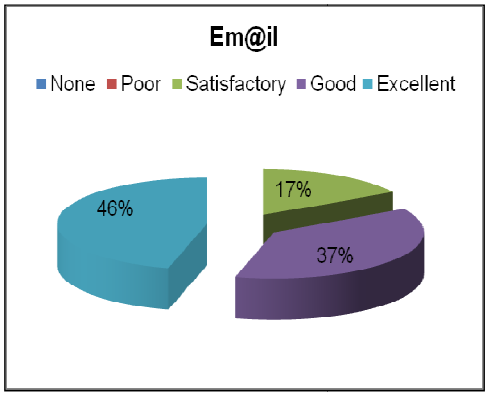
All tutors had good digital competences, acquired trough self-training 64%, or attending other courses, at school (8%) or organised by other organisations or institutions (28%). Most tutors had excellent (54%) or good knowledge (42%) of the Internet, 46% had excellent or good (37%) capacity to use e-mail and 44% excellent or 42% good knowledge about social networks. 54% used perfectly word and 42% used it well. Many had excellent or good abilities in the use of excel (17% and 31% respectively), while 38% and 35% had excellent or good power point

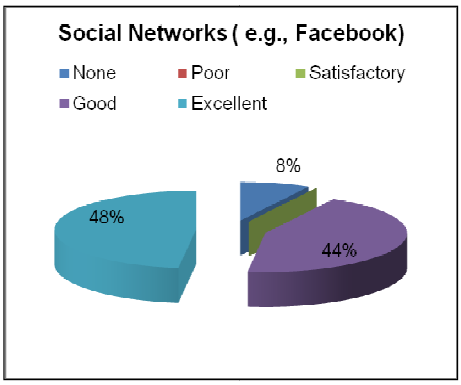
abilities; 85% had excellent or good abilities in paint or other touch up programmes. 22% and 39% % of the volunteers also had good or satisfactory programming skills, and 33% were able to create a website and edit a video **(Fig.26 and 27)**

Fig.26









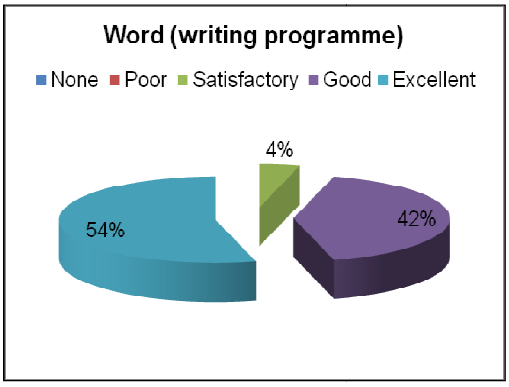
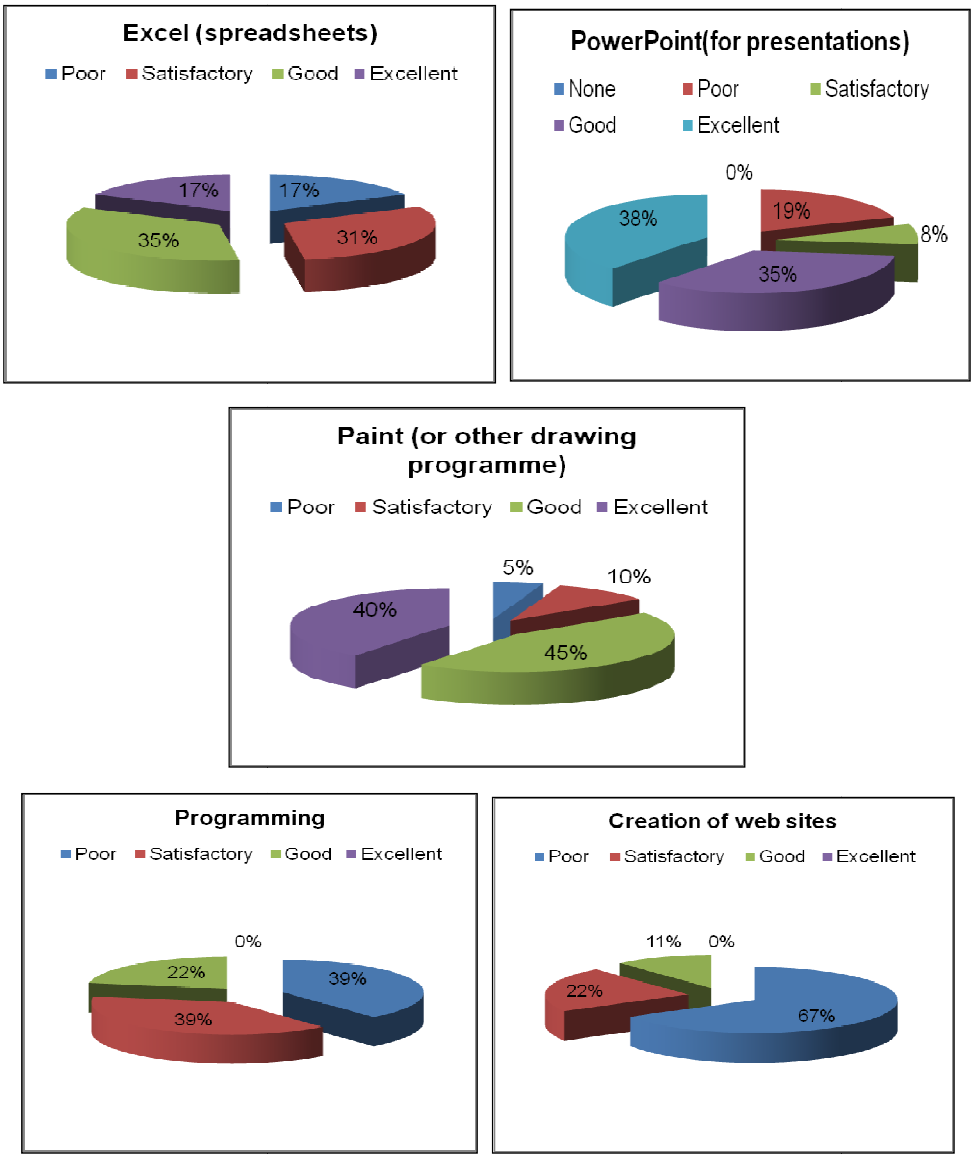


Fig.27

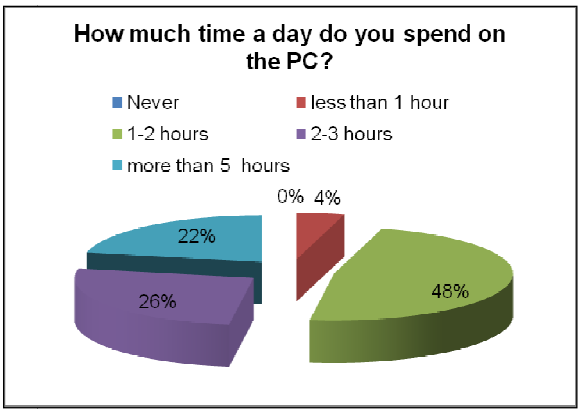


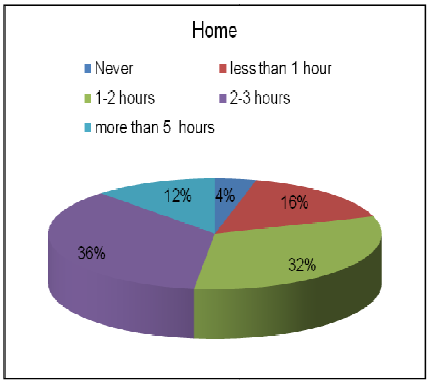
48% of the Young volunteers tutoring grandparents, declared they use the pc for 1 to 2 hours per week, 26% for 2 to 3 hours, and 22% for more than 5 hours per week. Most of them use the pc at home but all of them use it also at school, at the library or at the Internet café as well as at their friend's houses.

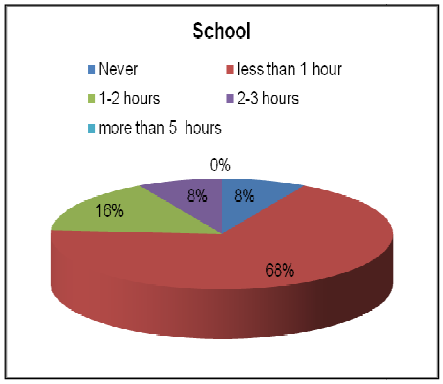
100% of the young volunteers use the pc all the time or a lot to write personal notes or school papers. 87% of them use it all the time or a lot for fun, 65% to send emails and keep in touch with friend, 76% for chatting and 71% for participating in social networks. 83% of the

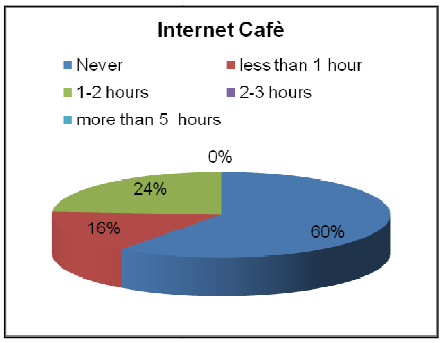
youths participating as tutors in the project also use the Internet all the time or a lot to look for information of cultural events or generally about what to do in their free time, 36% use it to purchase items online **Fig.28 and 29)**.

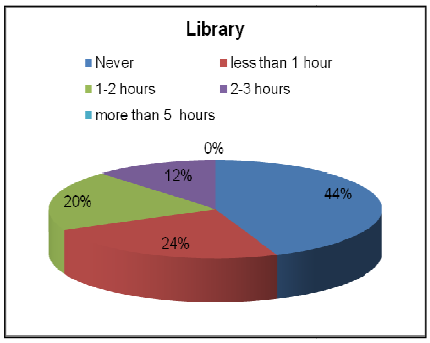
Fig. 28











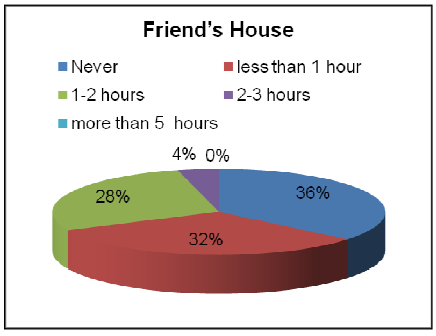
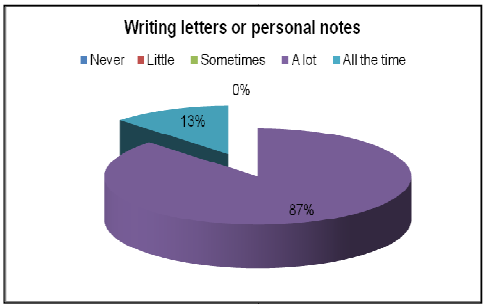
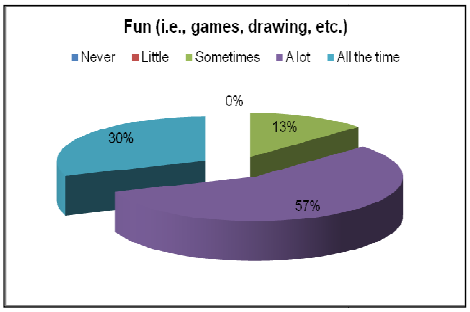
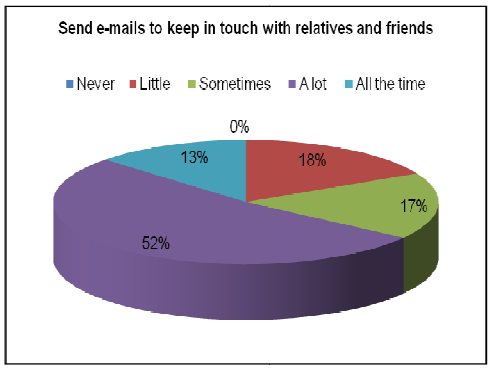
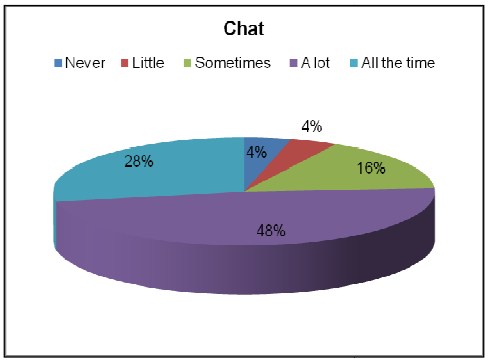


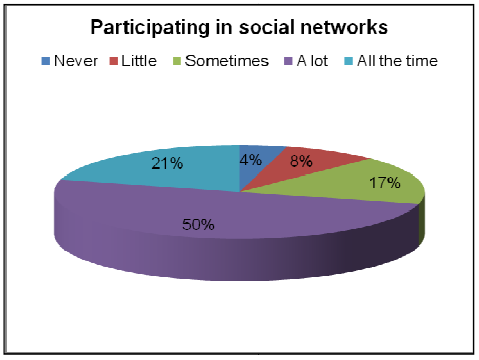
Fig. 29

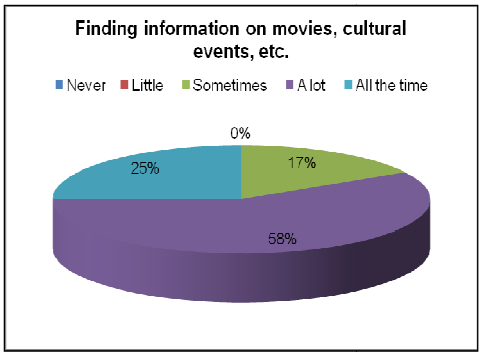

Writing letters or personal notes
Never
Little
Sometimes
A lot
All the time
0%
13%
87%

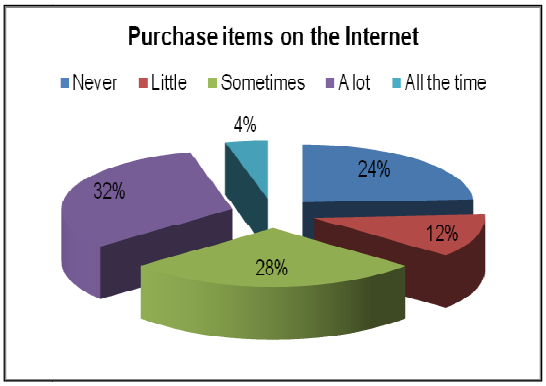

Fun (i.e., games, drawing, etc.)
Never
Little
Sometimes
A lot
All the time
0%
30%
13%
57%


Send e-mails to keep in touch with relatives and friends
Never
Little
Sometimes
A lot
All the time
0%
13%
18%
17%
52%


Chat
Never
Little
Sometimes
A lot
All the time
4%
28%
4%
16%
48%

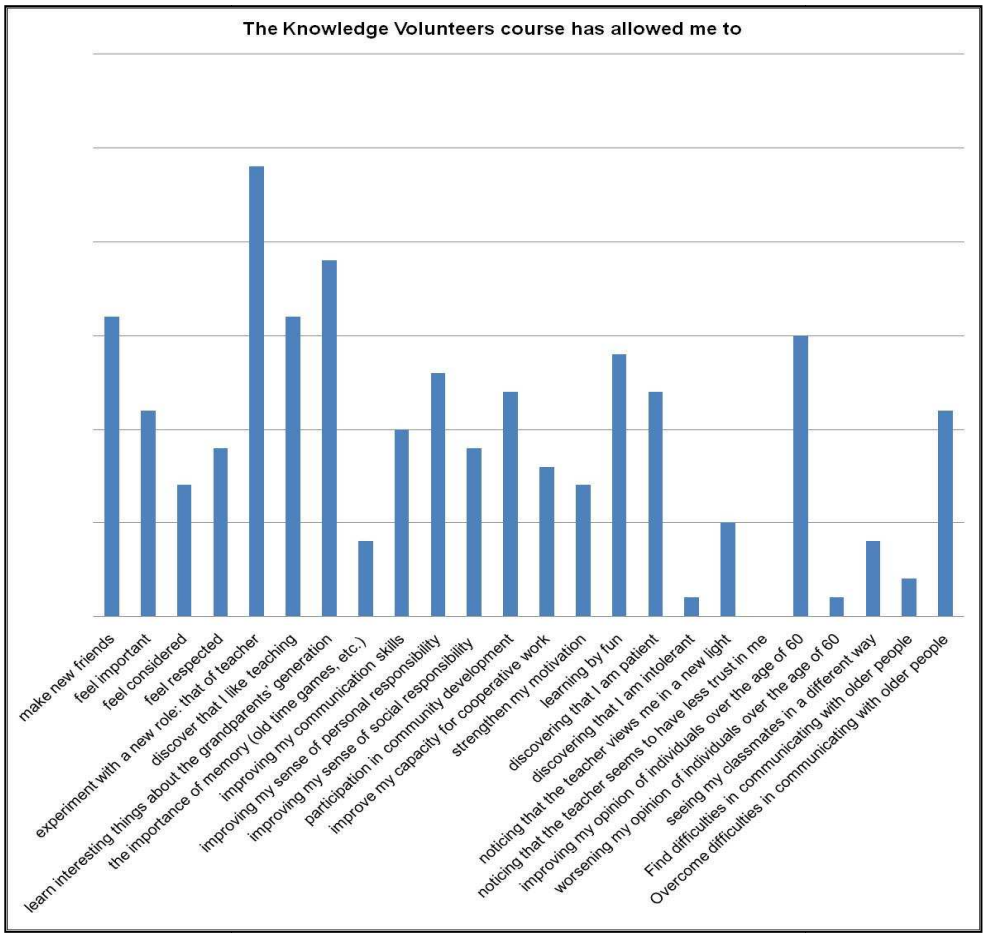

Participating in social networks
Never
Little
Sometimes
A lot
All the time
21%
4%
8%
17%
50%


Finding information on movies, cultural events, etc.
Never
Little
Sometimes
A lot
All the time
0%
25%
17%
58%


Purchase items on the Internet
Never
Little
Sometimes
A lot
All the time
4%
32%
24%
12%
28%

The overall volunteer experience, teaching and tutoring grandparents, was for the young students an opportunity to improve their personal capacities and a valuable intergenerational exchange which allowed them to overcome difficulties in communicating with older people, improving their opinions about over 60s, and learning interesting things about the grandparents' generation.

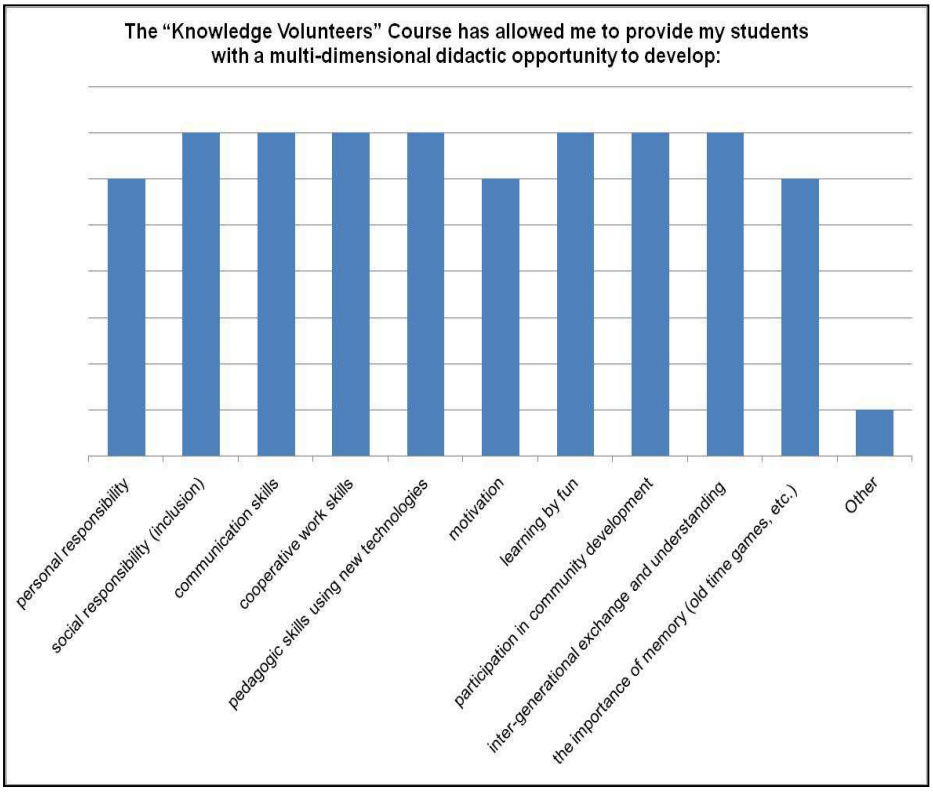
Fig.30



In their new role, they felt respected and more considered, improved their capacity for cooperative work and sense of social and personal responsibility. They also enhanced their motivation to participate in their communities' development **(Fig.30)**.

Teachers said the experience of The Knowledge Volunteers project provided their students with a multidimensional didactic opportunity that developed their personal and social responsibility, strengthening their communication skills and capacity to work cooperatively. They also said during their participation in the project, youths understood the importance of the intergenerational exchange and learnt to appreciate the memory of the past experiences told to them by grandparents **(Fig.31)**.

Fig.31

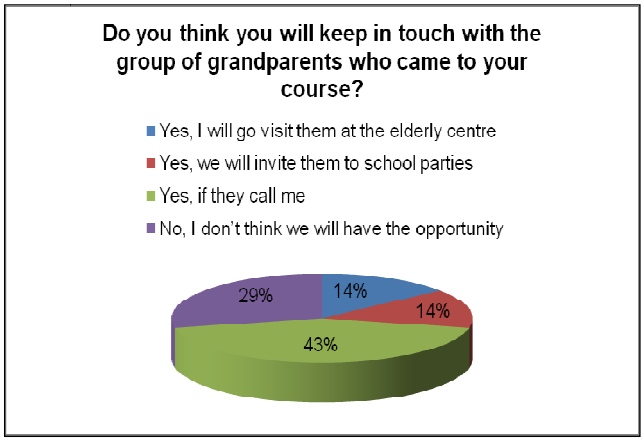


In most cases, students established new friendships during the courses, with other youths as well as with grandparents.

Most of them said they wish to maintain the newly born relationships even after the end of the courses. 43% of the volunteers said they will call grandparents they met during the project, and 14% said they wish to invite them sometimes at school parties, while another 14% said they will surely visit grandparents at the elderly centers very often.

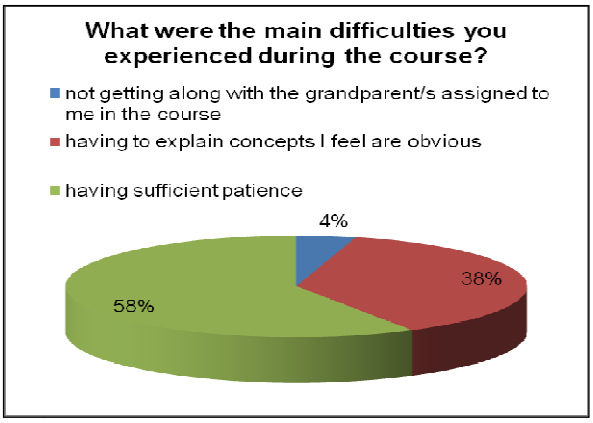
Only 29% of the young students believe they will not have the opportunity to keep in touch with grandparents after the end of the project **(Fig.32)**.

Fig.32



If tutors experienced difficulties during the courses, they were mainly due to their capacity to have sufficient patience to teach grandparents, because of the latter's learning difficulties and lack of memory. Tutors often had to repeat the lessons many times, assisting grandparents in practicing the use of the PC **(Fig.33).**

Fig.33



Romania

Courses organisation

100% of the courses were organized in a structured way. 80% of the time was devoted to frontal lessons, with the remaining time used by tutors to assist grandparents in practicing the PC. Lessons had a duration of more than 2 hours each. Tutors were provided with training by teachers at schools before the beginning of the courses. Tutors also were meeting with teachers before each lesson and received a briefing of about 30 minutes about the subject to discuss during the lesson. Young volunteers also studied the guidelines and handbooks provided by the project, to be prepared to teach grandparents. Lessons took place in the school laboratories out of the normal school hours. Each grandparent was assisted by an assigned tutor responsible for supporting him/her under the active supervision of an adult teacher (**Fig.1**).

Fig.1

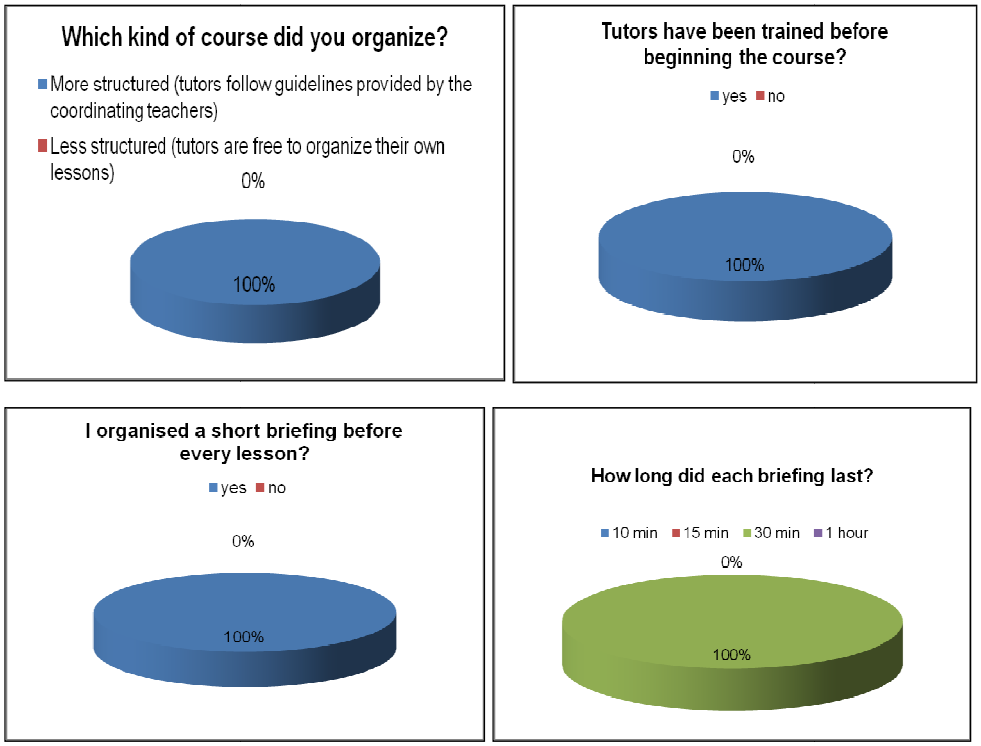
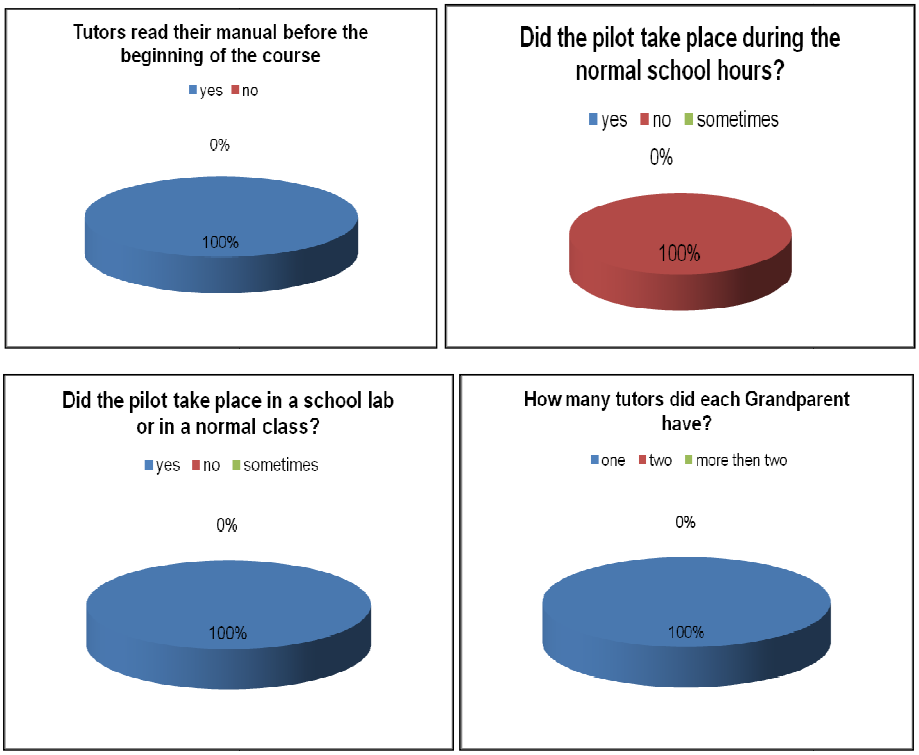


Fig.1



Grandparents enrolled in the courses were contacted through Srep's local networks. As an average, grandparents frequenting the courses were 50% males and 50% females, aged mainly between 60 to 65 (80%), 66 to 70 (12%), 71 to 75 (8%). Regarding their social background and educational level, 29% had completed university, 60% high school, and 11% the secondary school (**Fig.2**).

Fig.2

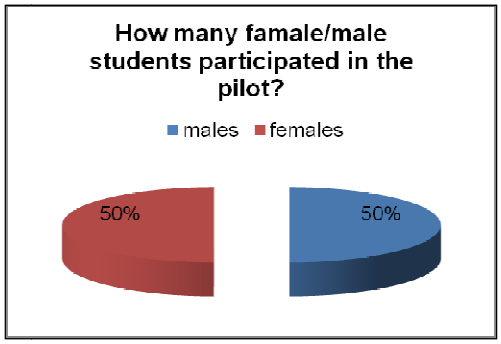
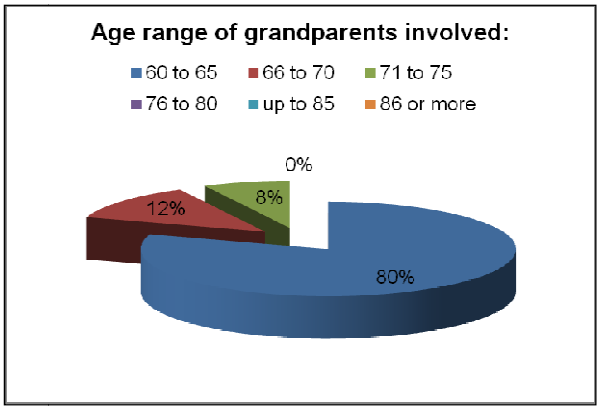
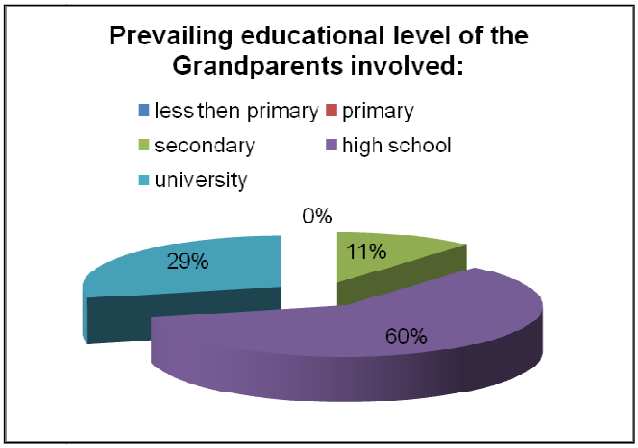


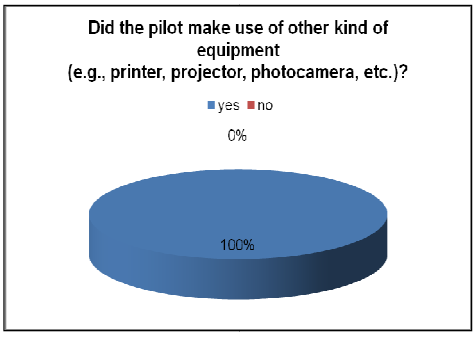
Fig.2

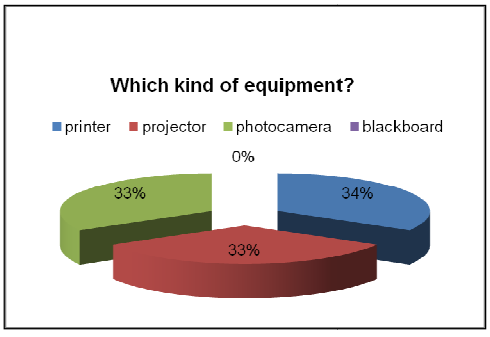




Schools hosting the courses provided equipment in order to support the training pathway and learners practice: PCs were available for grandparents in all the classes were the lessons took place. In many cases, printers, projectors, photo cameras were also made available for the use of learners and tutors during the lessons (**Fig.3**).

Fig.3





Educational value of The Knowledge Volunteers project

Questionnaires were submitted to grandparents attending the courses, before the beginning of the courses and at the end. Interviews were also organized, as part of the real time evaluation run during the courses. The objective of the survey was to evaluate the methodological and didactical aspects of the training curricula and model and to test the intergenerational and peer to peer approach in relation to (a) the skills acquired by grandparents involved in the education path, (b) the changes in their use of the pc, and (c) the main evolution in the relationships between elders and youths.

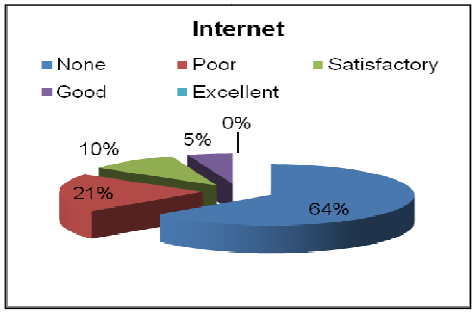
The following charts (**Fig.4)** refer to the use of a PC. 64% of the elders had no knowledge at all about how to use the Internet, 10% declared to have satisfactory knowledge, 5% of them said to have a good capacity to use it. 5% of grandparents said they use social networks, but 70% had no knowledge about it. 8% use e-mails but 59% had no skills and 20% had limited proficiency.

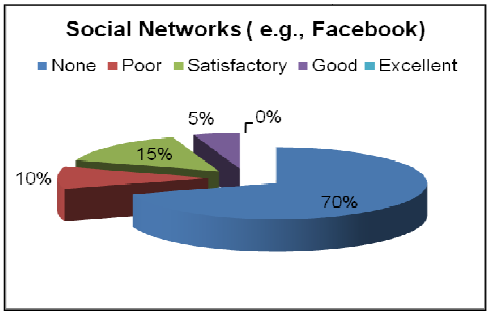
Only 3% of grandparents use the PC all the time and 5% a lot, while 20% use it sometimes, 32% a little and 40% of them declared they never used it before (**Fig.5**).

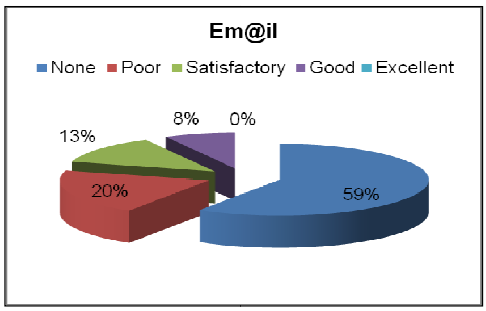
Only 10% of the elders participating in the courses use sometimes the PC to write letters and take notes, 16% all the time or a lot to send emails to keep in touch with relatives or friends. 15% of them use it to look for information on the Internet for what to do in the free time.

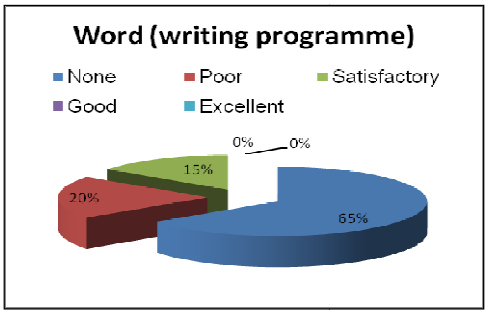
80% declared they never used the PC to make photo albums or modify photos, 72% never used it access to public information services purchase items on line, 70% never used it to participate in social networks, and 87% never used it for remote assistance services (**Fig.6**).

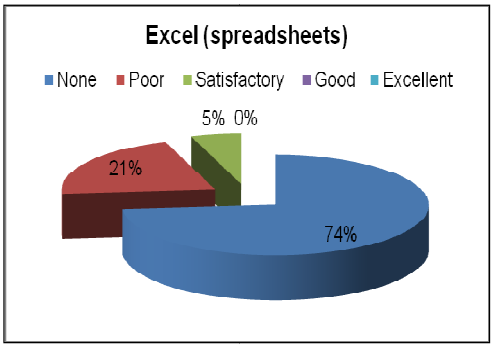
Fig.4

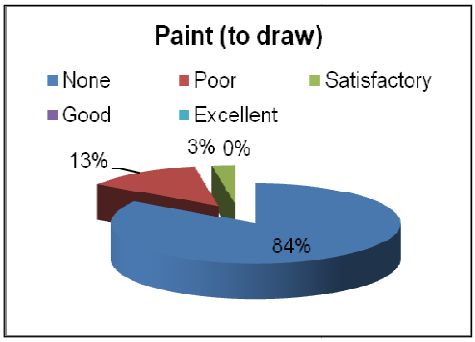

Internet
None
Poor
Satisfactory
Good
Excellent
10%
5%
0%
21%
64%


Social Networks (e.g., Facebook)
None
Poor
Satisfactory
Good
Excellent
5%
0%
15%
10%
70%


Em@il
None
Poor
Satisfactory
Good
Excellent
13%
8%
0%
20%
59%


Word (writing programme)
None
Poor
Satisfactory
Good
Excellent
0%
0%
15%
20%
65%


Excel (spreadsheets)
None
Poor
Satisfactory
Good
Excellent
5%
0%
21%
74%


Paint (to draw)
None
Poor
Satisfactory
Good
Excellent
13%
3%
0%
84%

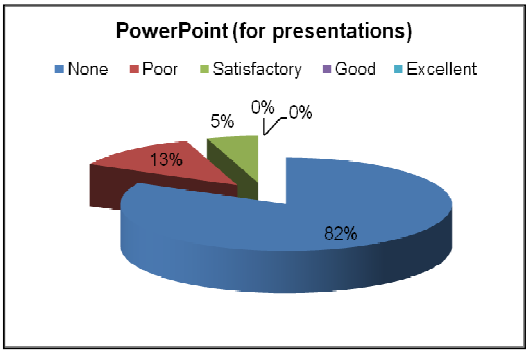

PowerPoint (for presentations)
None
Poor
Satisfactory
Good
Excellent
5%
0%
0%
13%
82%

Fig.5

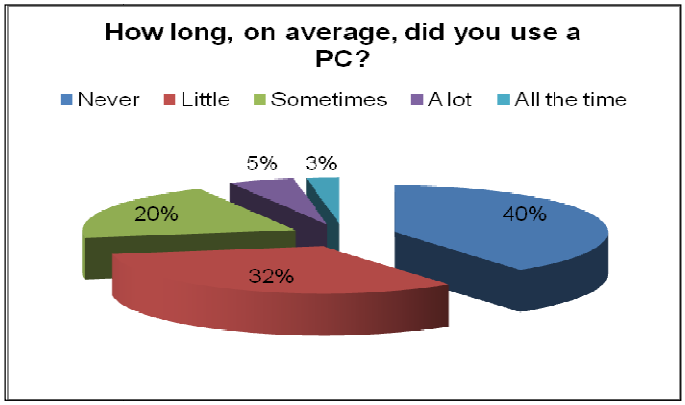
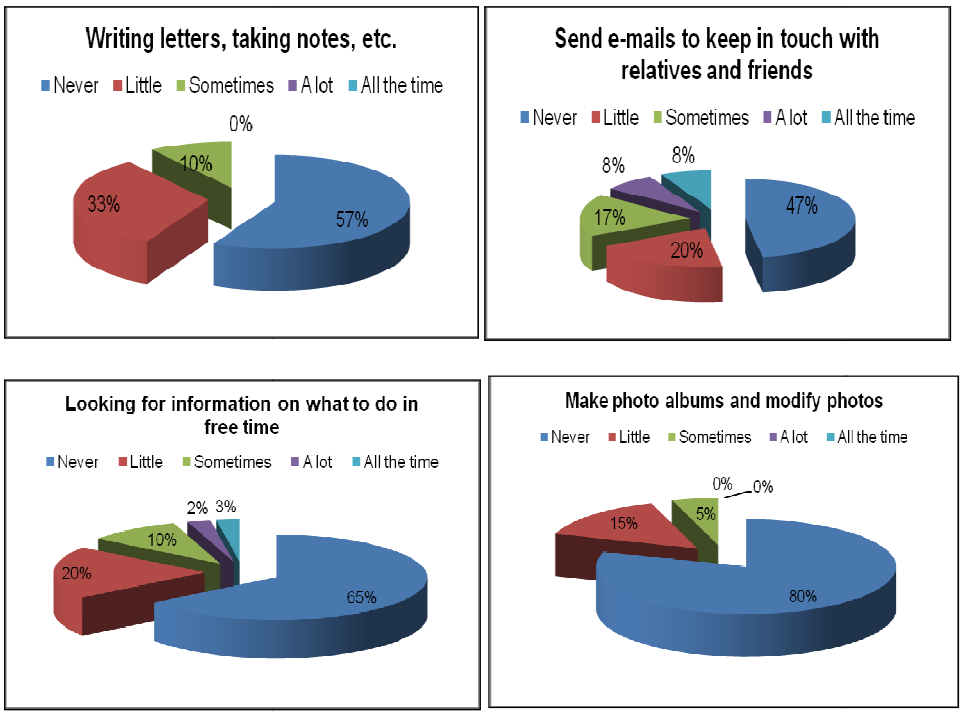
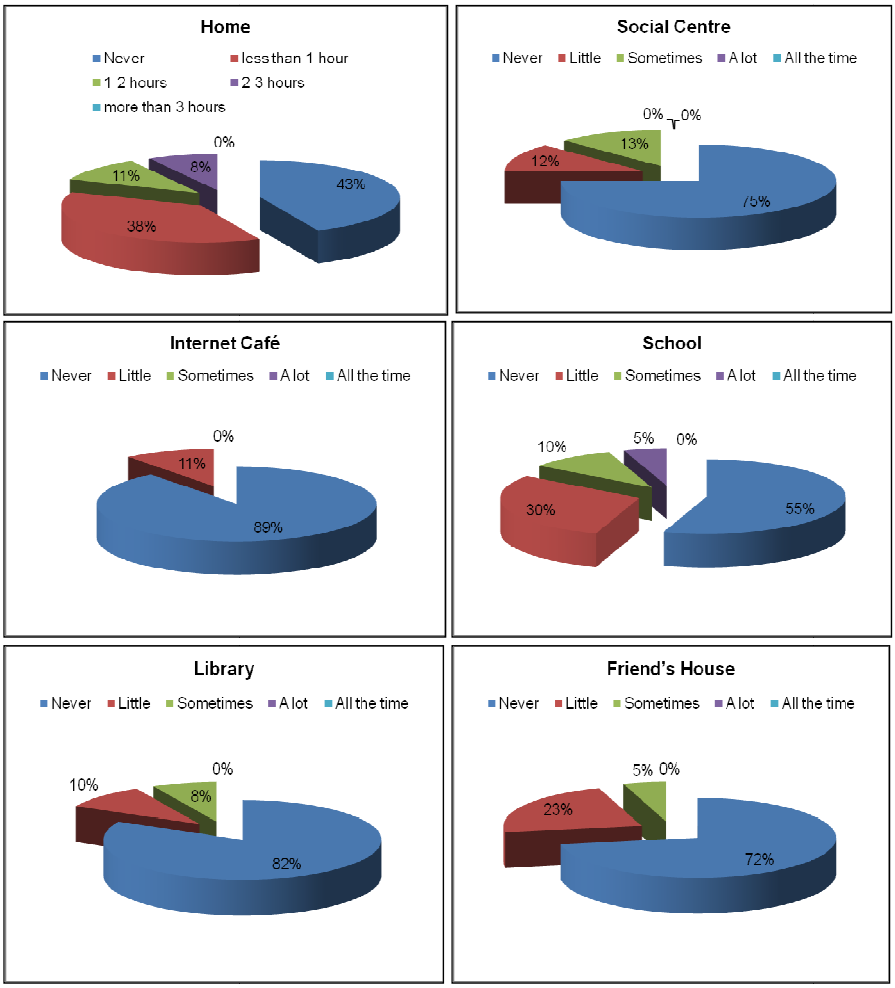


Fig.6



8% of grandparents usually used the PC at home for around 2-3 hours, 75% never used it at the social center, only 13% sometimes. 89% had never used the PC at an internet café. 5% used a lot the PC at school, 10% sometimes, 30% a little, and 55% never. Only 8% used it sometimes at the library, 5% at friends houses (**Fig.7**).

Fig.7



Grandparents who already had some knowledge about PC Programmes or make use of the Internet, declared they already knew because they use their daughter/son or granddaughter/grandson PC (78%), another 7% because they worked with it in the past, 4% because they had attended other courses before **(Fig.8 and 9).**

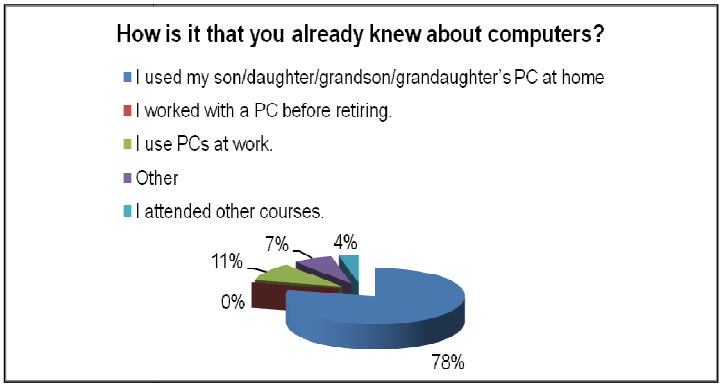
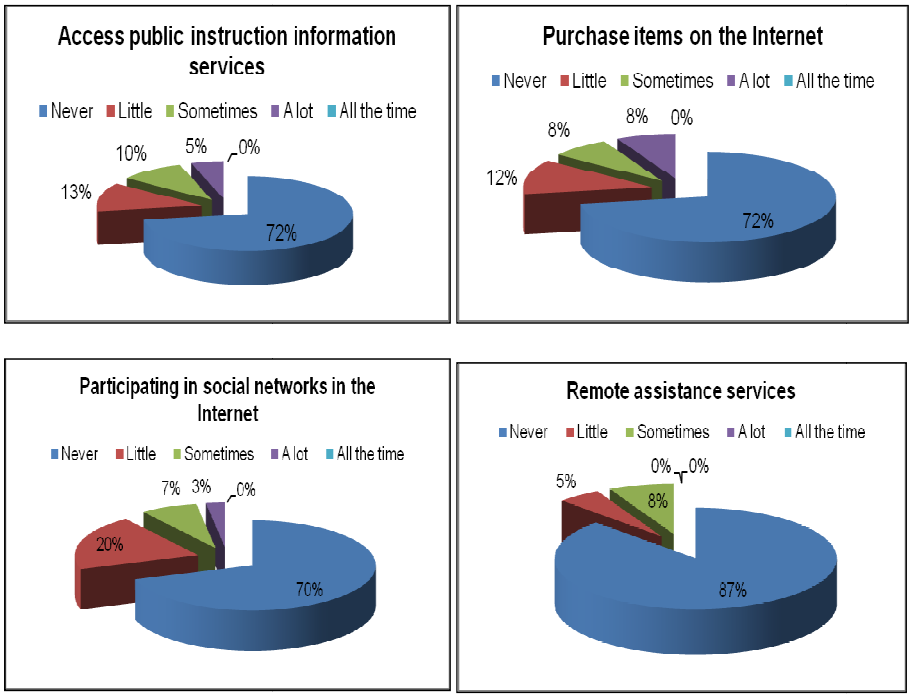


Fig.8

Fig. 9


Access public instruction information services
Never
Little
Sometimes
A lot
All the time
13%
10%
5%
0%
72%
Purchase items on the Internet
Never
Little
Sometimes
A lot
All the time
12%
8%
8%
0%
72%
Participating in social networks in the Internet
Never
Little
Sometimes
A lot
All the time
20%
7%
3%
0%
70%
Remote assistance services
Never
Little
Sometimes
A lot
All the time
5%
0%
0%
8%
87%

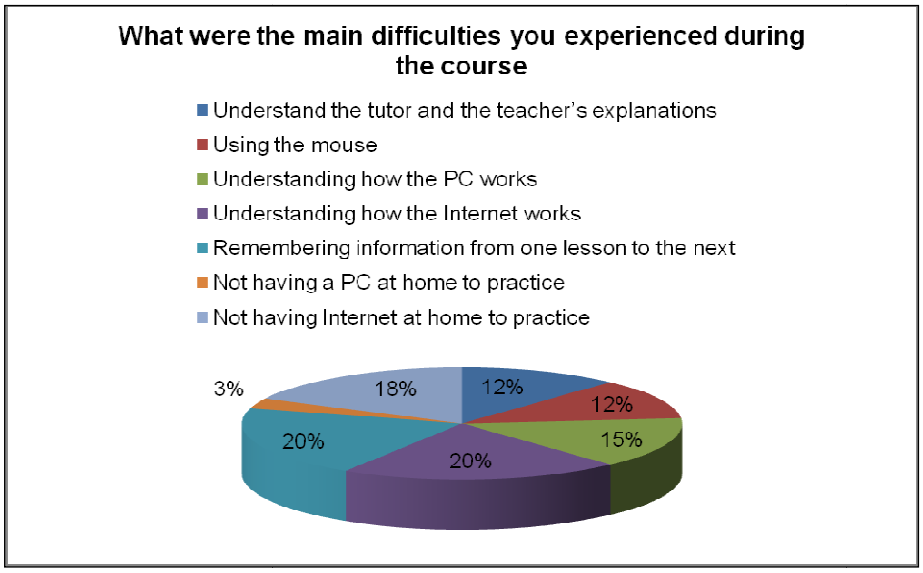
Evaluation of the Courses

The subjects of the lessons part of the curricula were adapted continuously to the needs of learners, extra exercises to support the teaching were developed and introduced during the lessons and made available for self-learning and home exercises. The methodology was adapted regarding the time needed on each step and with high degree of personalization. In many cases, grandparents faced learning difficulties that required repeating the lesson and extending the time dedicated to some of the subjects.

The main difficulties grandparents met were related to the difficulties of remembering information from one lesson to another (20%), of understanding the tutor or teacher explanation (12%). In some cases, not having a pc or internet at home to practice (21%) affected the learners' capacity to memorize and practice the lessons. The main understanding difficulties were related to the basic knowledge regarding the use of the PC, such as how to use the mouse or understand how the internet works and particularly how to use e-mails **(Fig. 10).**

Young students, in the role of volunteering tutors, supported grandparents in the learning process, assisting them in practicing the use of the PC.
Courses included frontal lessons and peer to peer teaching methods. In most cases, young tutors prepared the lessons providing exercises and power point presentations to simplify the explanations of the main curricula subjects.
67% of the Grandparents attending the courses declared that tutors were always very helpful. (**Fig.11**).

Fig.10


What were the main difficulties you experienced during the course
Understand the tutor and the teacher's explanations
Using the mouse
Understanding how the PC works
Understanding how the Internet works
Remembering information from one lesson to the next
Not having a PC at home to practice
Not having Internet at home to practice
3%
18%
12%
12%
20%
15%
20%

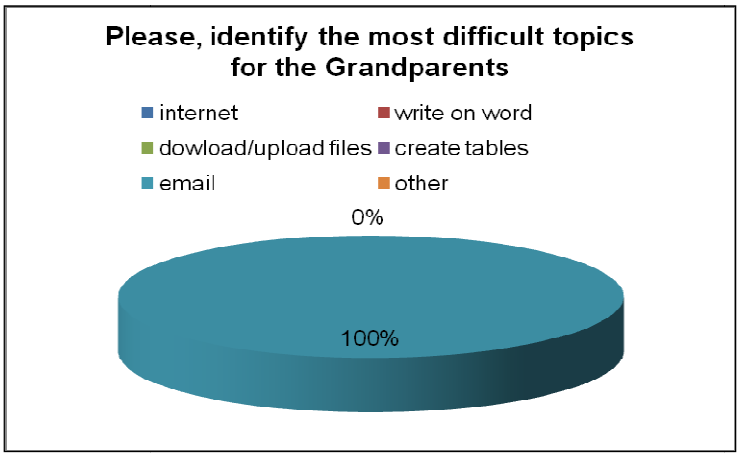
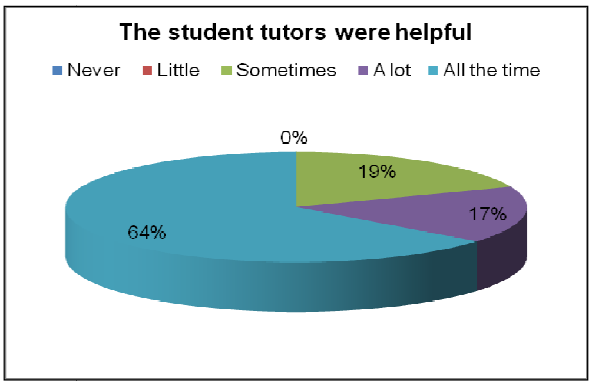

Please, identify the most difficult topics for the Grandparents
internet
write on word
dowload/upload files
create tables
email
other
0%
100%

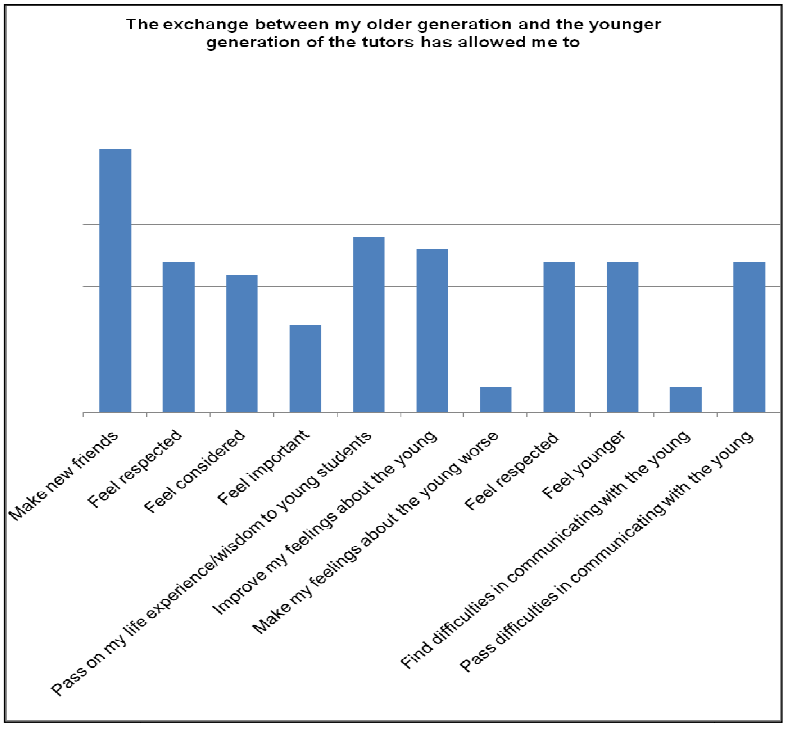
Fig. 11


The student tutors were helpful
Never
Little
Sometimes
A lot
All the time
0%
19%
17%
64%

The teaching and learning approach based on intergenerational learning, networking and role exchange, was the key aspect of the lessons. TKV promoted social relationships through the active involvement of different generations who shared experiences and helped grandparents become aware of their opportunities to participate actively in society.

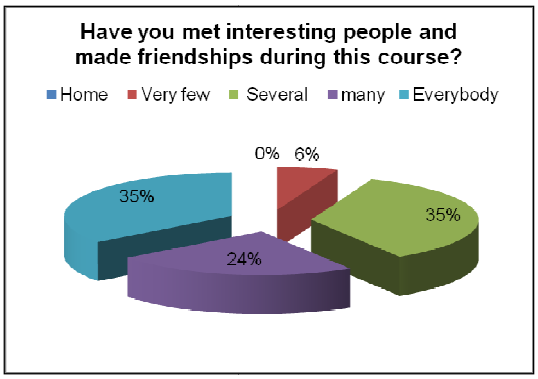
Grandparents who participated in the courses declared the exchange between their older generation and the younger generation of tutors allowed them to pass their experience to the young students and to improve their feelings about the youths. The intergenerational exchange facilitated the communication and dialogue between the elders and youth, contributing to both the elimination of difficulties in communicating and the change of elders' opinions about youths. Thanks to the course path, grandparents become aware of their opportunities to participate actively in the society. This made them feel considered, important and respected. In many cases grandparents said the experience was useful to make them feeling younger **(Fig.12).**

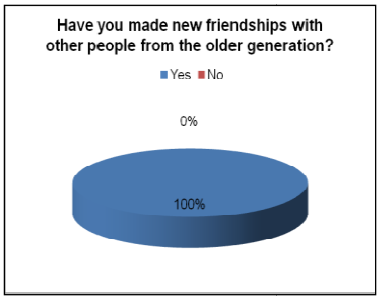
Fig.12

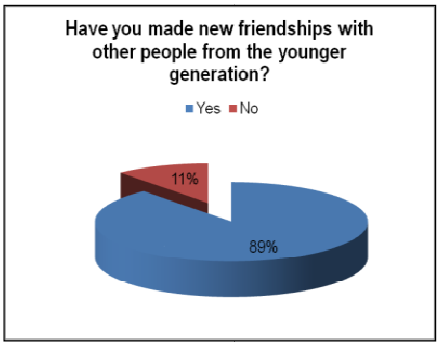


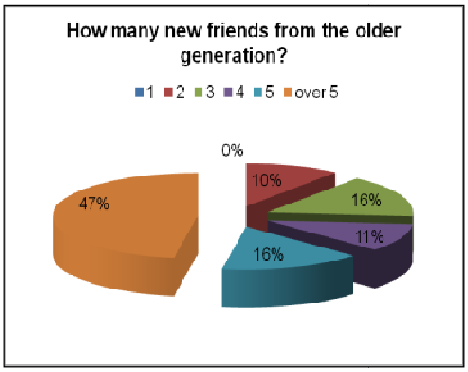
The courses were a chance for grandparents to meet and socialize, often to make new friends. Grandparents established very good relationships with young tutors, in many cases they built very good friendships and said they wish to continue getting in touch even after the end of the courses, meeting sometimes and visiting each other. 67% of Grandparents declared they met several interesting people and made friendships with the older and the younger generation during the courses (**Fig.13**).

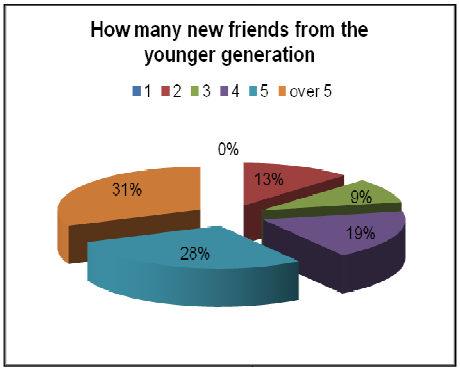
Fig.13

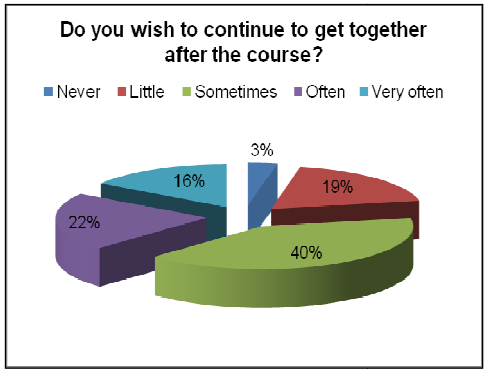








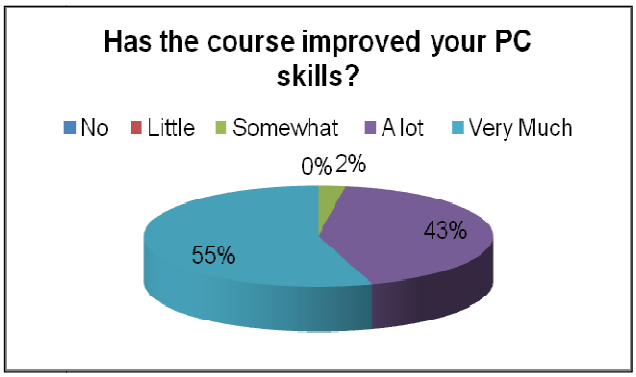




In terms of digital literacy knowledge and competences, the interviews and questionnaires distributed to grandparents at the end of the courses, revealed that grandparents enhanced their skills and knowledge about ICT.

Although the level of capacity to use the PC did not reach excellent levels for all the grandparents, 43% of them said the course improved a lot their PC skills, 55% very much, while 0% of the elders stated they did not improved their digital literacy level **(Fig.14)**.

Fig.14.

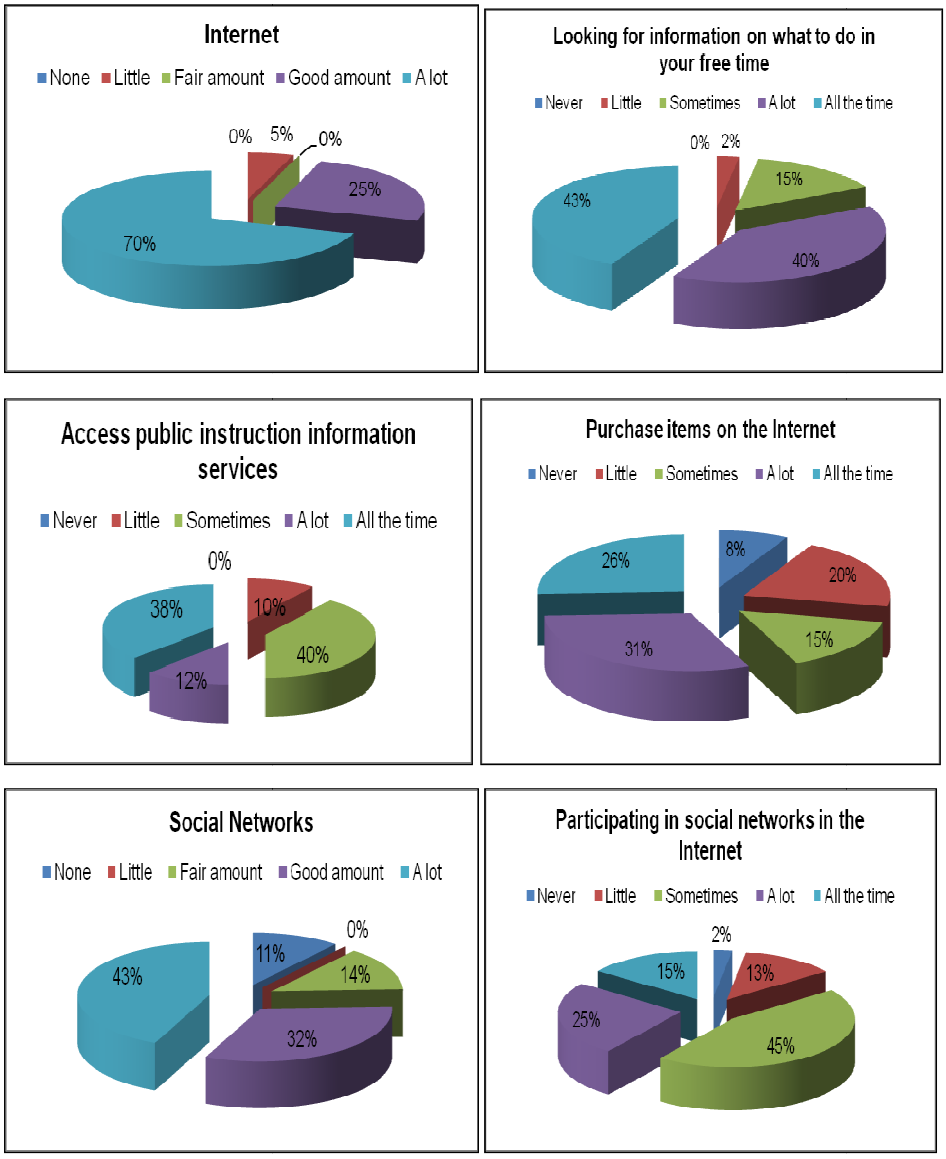


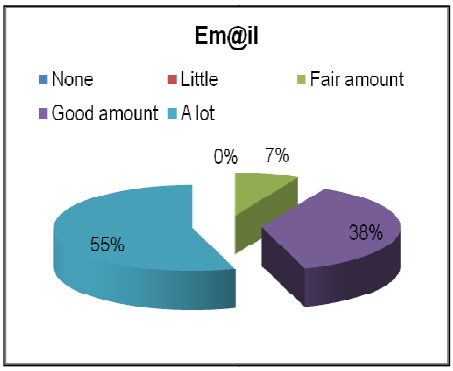
70% of the grandparents know now a lot better how to use the Internet, even if that was not an easy subject to learn. 83% said they intend to use the Internet in future to look for information on what to do in the free time. : 50% said they will use the Internet a lot or all the time to access public information services, while 40% will use it sometimes for this purpose. 26% of grandparents in future will use the PC all the time to purchase items on line, 31% a lot.

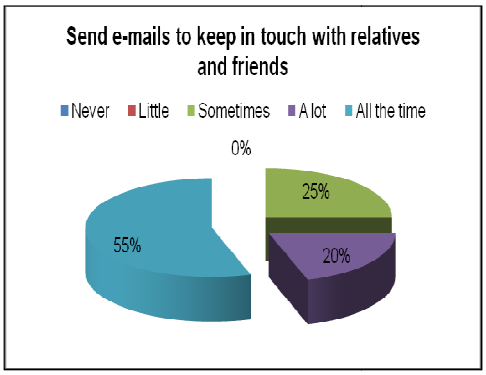
75% declared to know a lot (43%) or a good amount (32%) how to use social networks thanks to the lessons provided during the courses, only 12% said they still do not understand how social networks work. 100% of grandparent, even if at different levels, increased their knowledge about e-mail use, 75% will use them in future to keep in touch with relatives and friends.

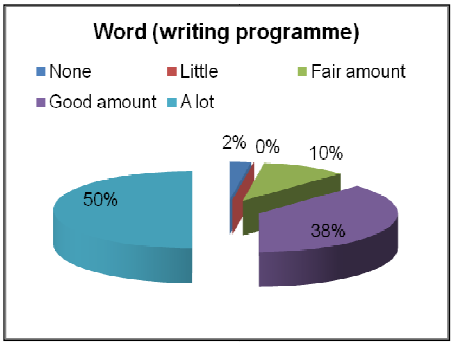
A tiny 2% still do not know well how the word programme works, while 54% said in future they will use it to write letters and take personal notes. Regarding excel 70% declared a fair, good amount or a lot of knowledge, while 30% declared a little or no knowledge about the functionalities of excel. **(Fig.15)**.

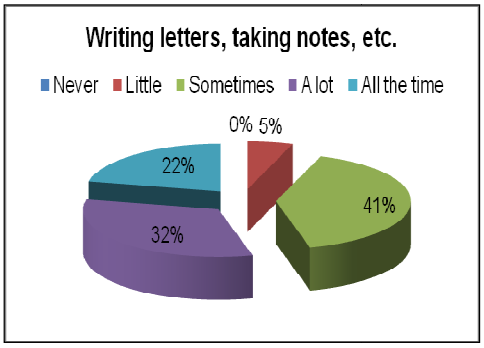
Fig.15

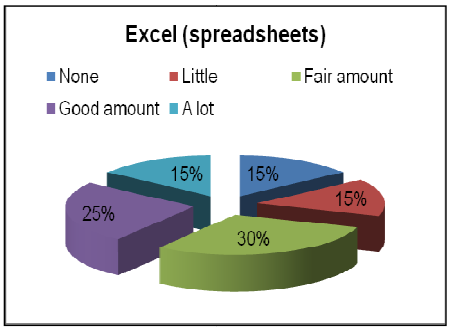


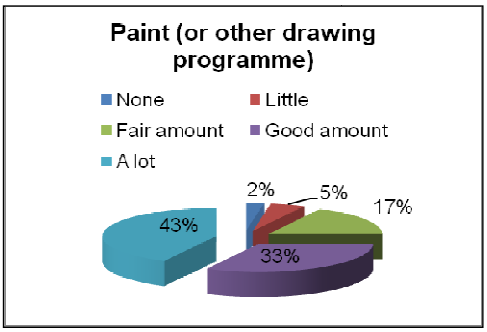


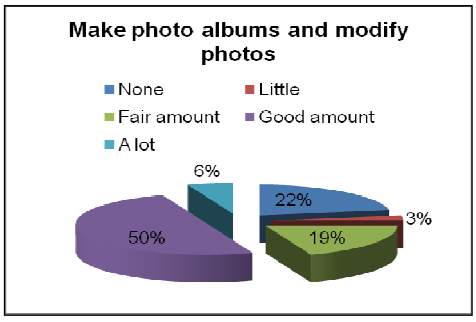








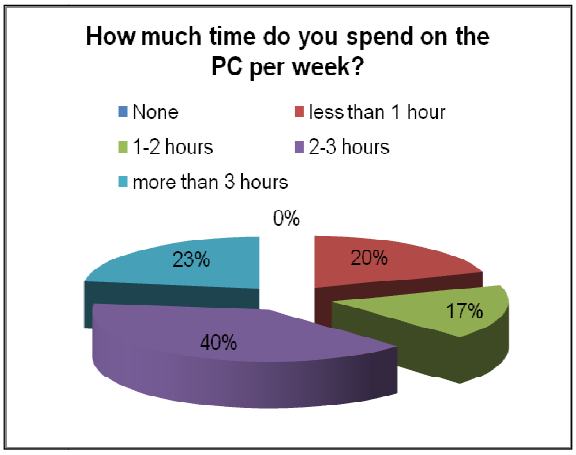


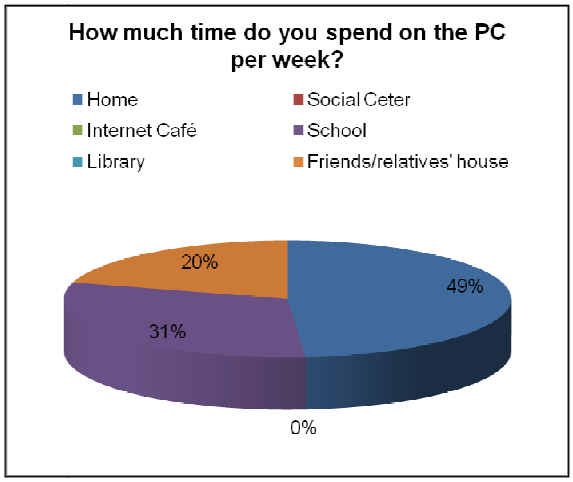


76% of grandparents said that thanks to the courses they now use a lot (43%) or a good amount (33%) programmes such as paint; and 56% have fun creating photo albums and modifying photos (**Fig.15**).

Elders said after the courses they increased the time they spend using the PC. 40% of them now use the PC for at least 2-3 hours per week, 23% for more than 3 hours per week, 20% for less than 1 hours and none of them is not using the PC at all (**Fig.16).** Most of the time they use the PC at home (49%), at school (31%), or at a friend's or relative house (20%) (**Fig.16**).

Fig.16





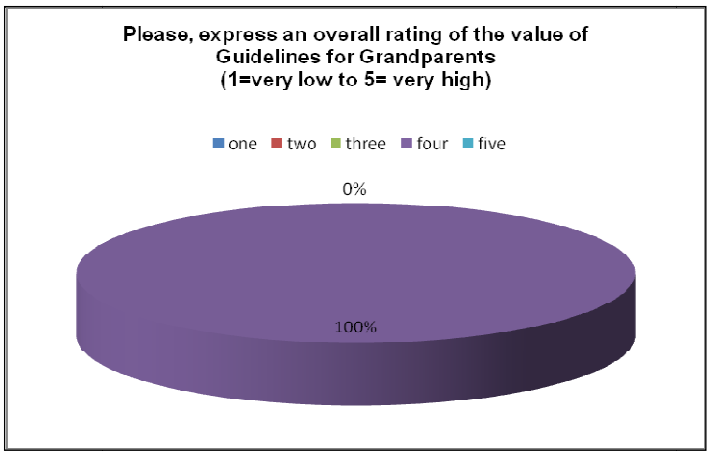
Evaluation of the value of The Knowledge Volunteers didactic kit

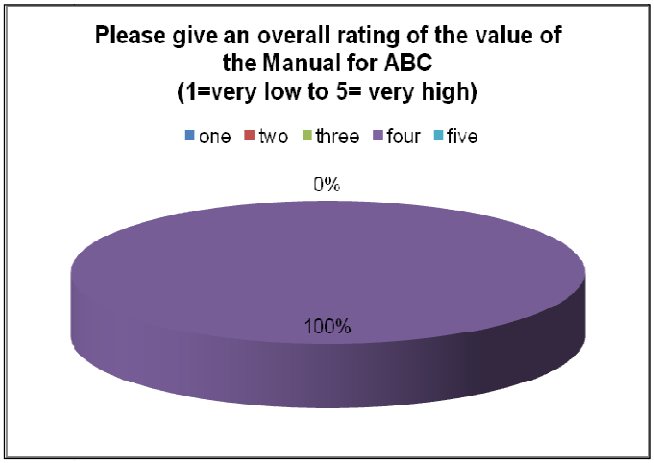
Based on the curricula and the learning needs of grandparents, a didactic kit was developed for 4 course levels: ABC of ICT, Social networking, E-government services, and Easy technology accompanied by Guidelines for Users, Tutors and Teachers.

The contents were developed based on the target needs, customizing and translating them to better respond to the local context and constraints.

The Handbooks and Guidelines were used during the courses by grandparents as well as by tutors and teachers to organise the lessons. 69% of grandparents declared the guidelines and handbooks were very useful (**Fig.17**).

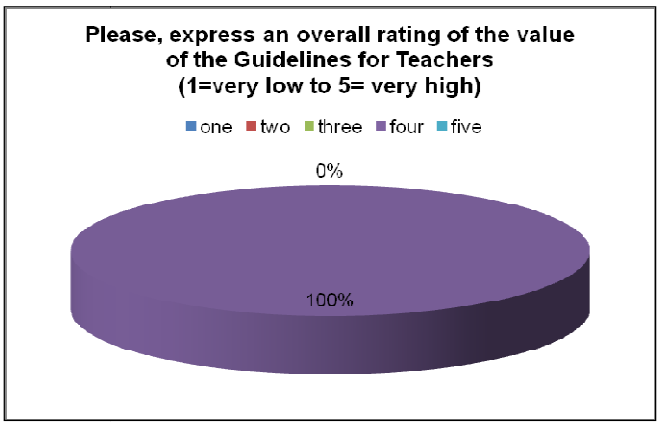
Fig.17

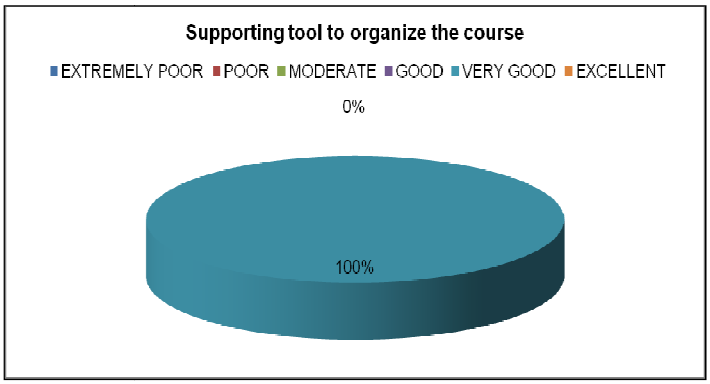




100% of the teachers declared the Guidelines were helpful. They used it a lot as a tool to support the courses's organization and during lessons to guide both grandparents' learning and the tutors' teaching work. Teachers said the kit was characterized by very good accuracy of contents and amount of exercises. **(Fig.18)**.

Fig.18





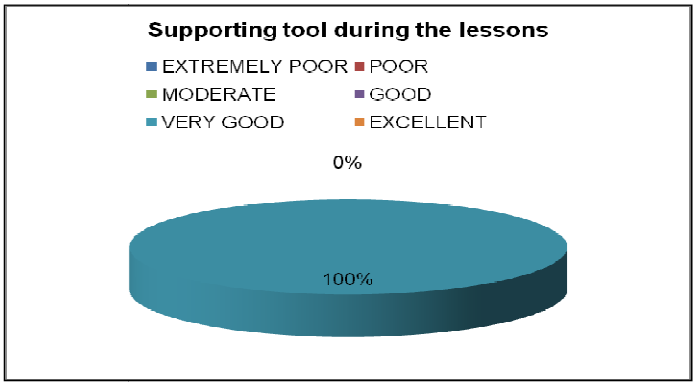
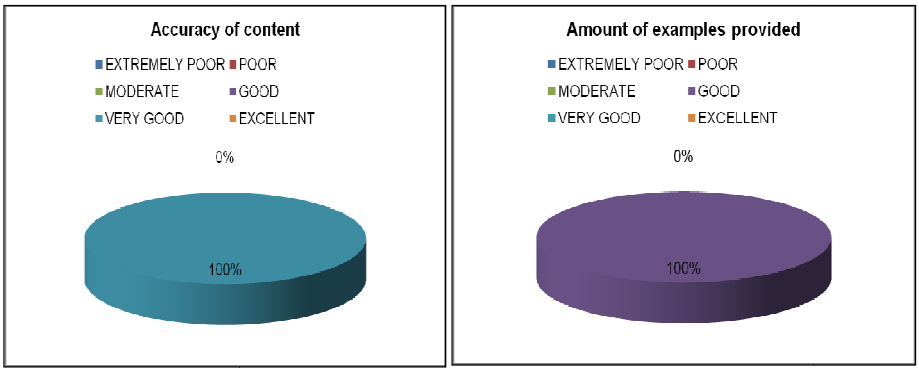


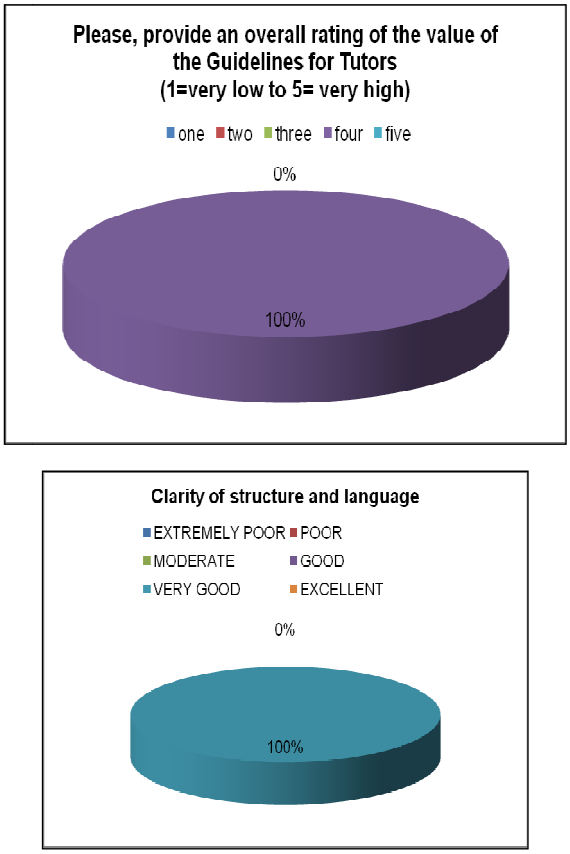
Fig.18



Tutors judged as very useful the guidelines provided, adding that most of all they appreciated the clarity of structure and language.

They used them to prepare the lessons and as support during the teaching and while assisting grandparents in the practice of the PC (**Fig.19**).

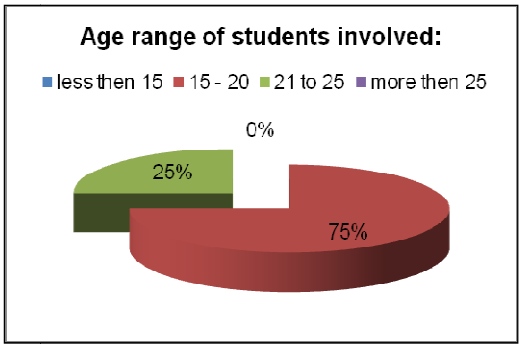
Fig.19

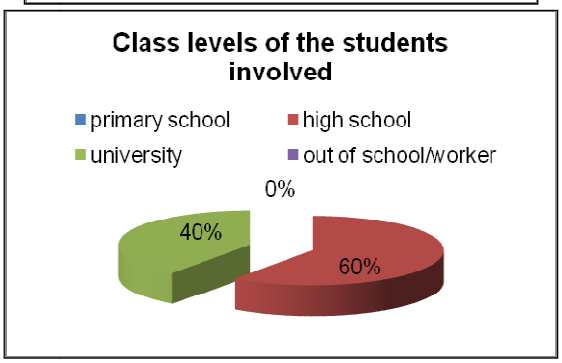


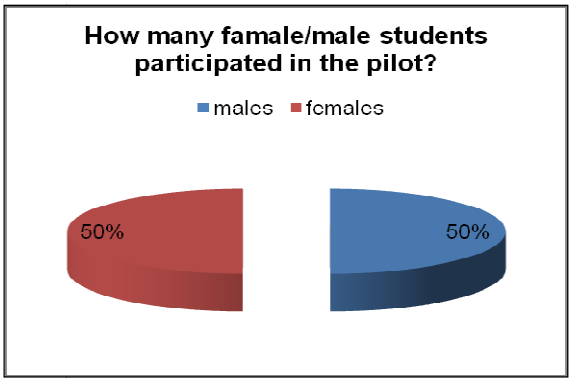
Tutors: role and added value of intergenerational exchange

60% of the young students involved as tutors in the digital literacy training courses frequented high school and 40% university. 75% of the volunteers were aged between 15 to 20 year old, while 25% were aged more than 21 and up to 25. 50% were males and 50% females (**Fig.20**).

Fig.20

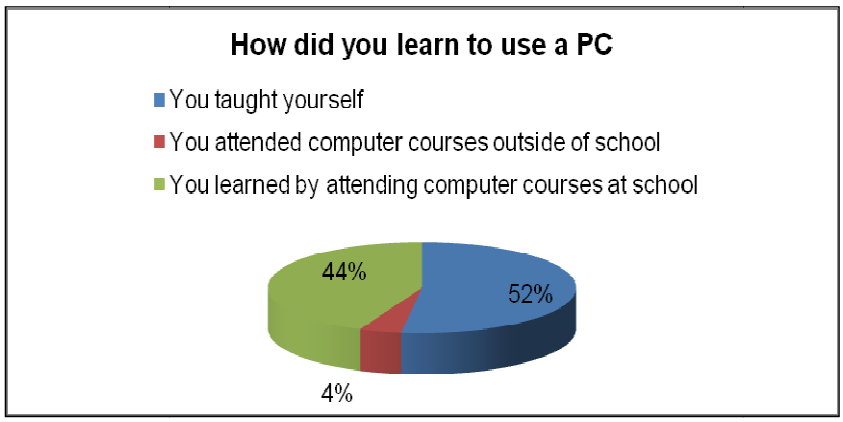


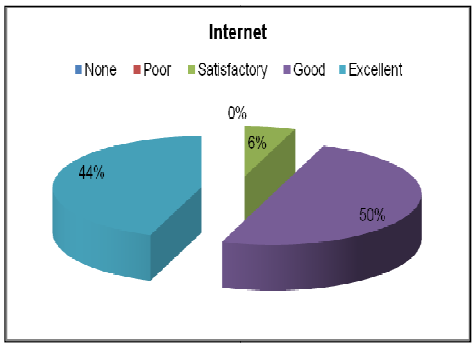


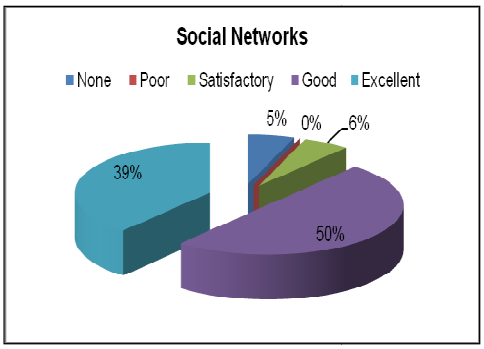


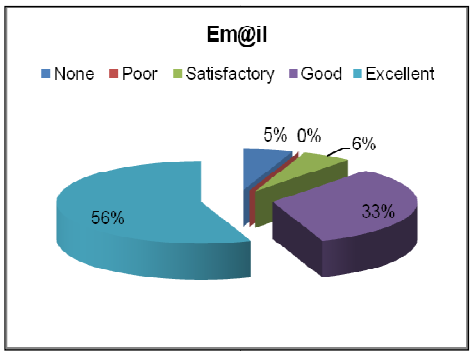
All tutors had good digital competences, acquired trough self-training in 52% of the cases or attending school courses (44%). 94% of the tutors had excellent or good knowledge of the Internet, 89% had excellent or good capacity to use e-mail, 89% social networks, 95% word, 83% excel, 83% power point, 100% paint or other touch up programmes and 39% video editing programmes. Few of them also had good programming skills (5%) or were able to create a website (6%) **(Fig 21).**

Fig 21









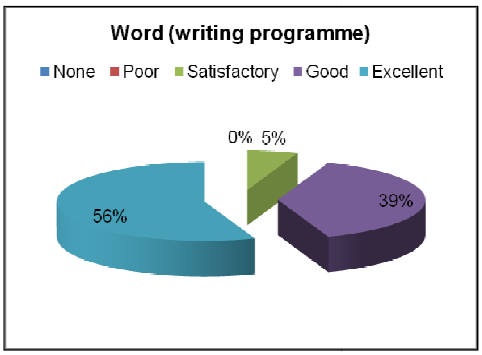
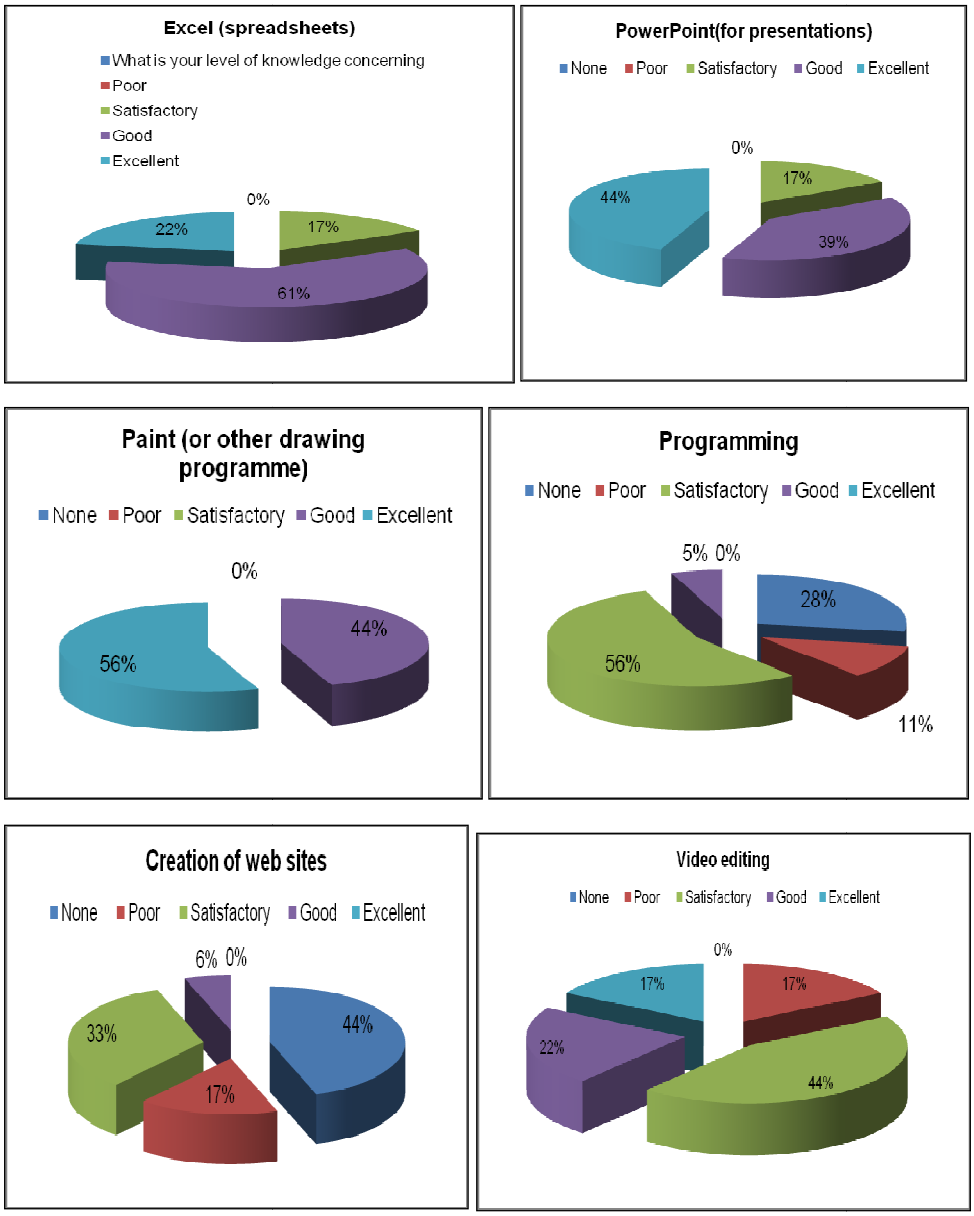
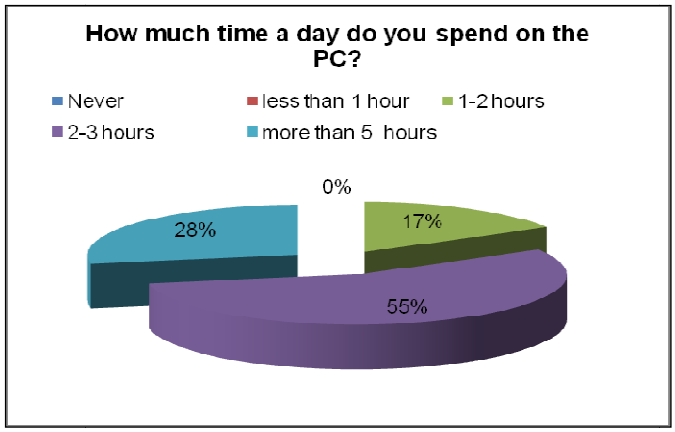


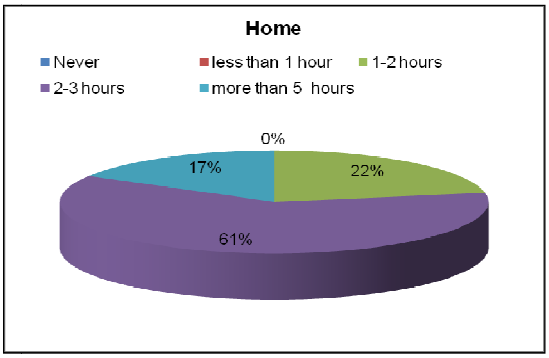
Fig 21

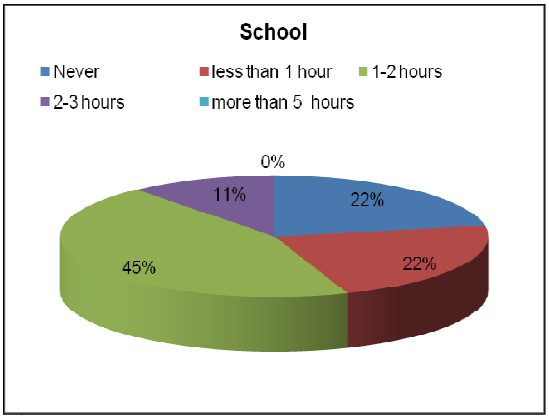


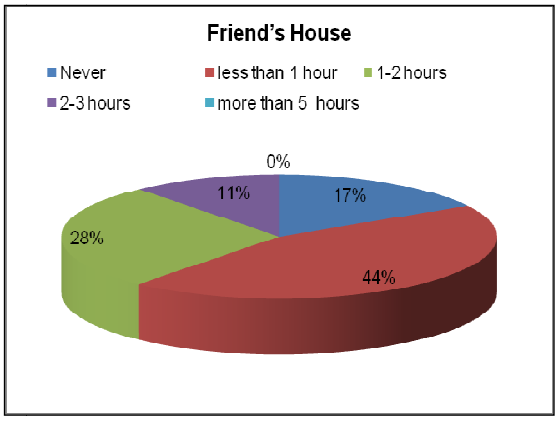
28% of the young volunteers tutoring grandparents, declared they use the pc for more than 5 hours per week, 55% for 2 to 3 hours, and 17% for 1 to 2 hours per week. Most of them use the pc at home, at school or at a friend's house **(Fig. 22).**

Fig. 22


How much time a day do you spend on the PC?
Never
less than 1 hour
1-2 hours
2-3 hours
more than 5 hours
0%
28%
17%
55%

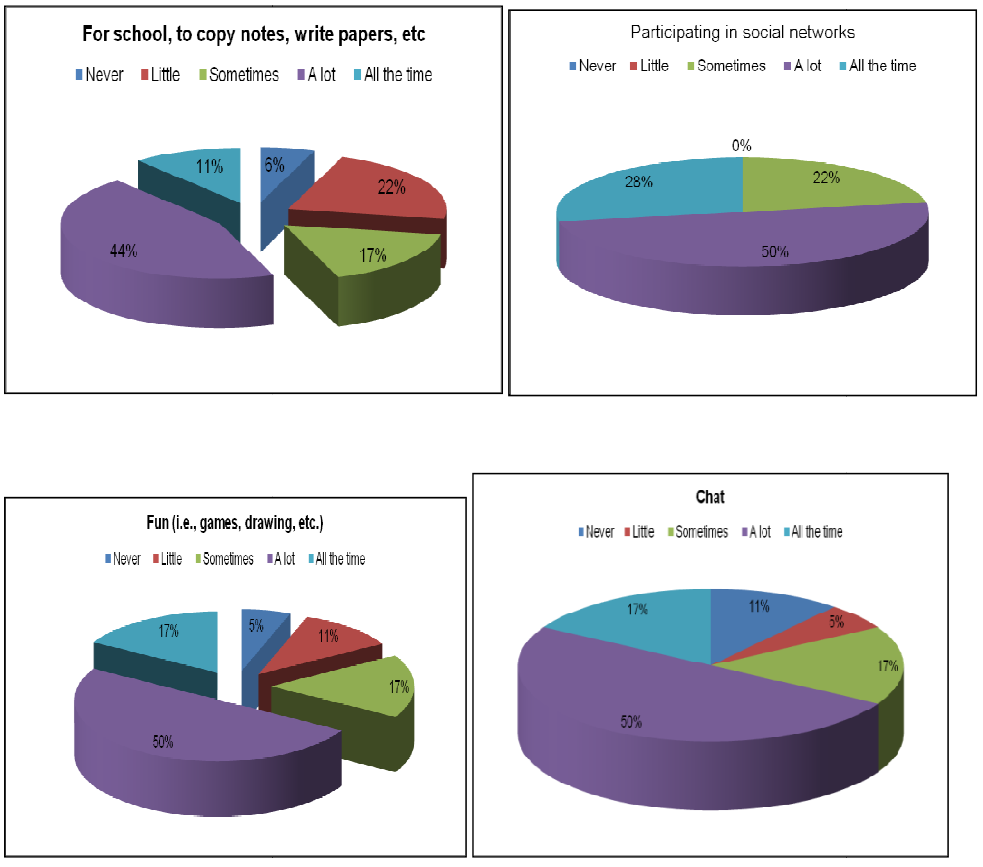

Home
Never
less than 1 hour
1-2 hours
2-3 hours
more than 5 hours
0%
17%
22%
61%

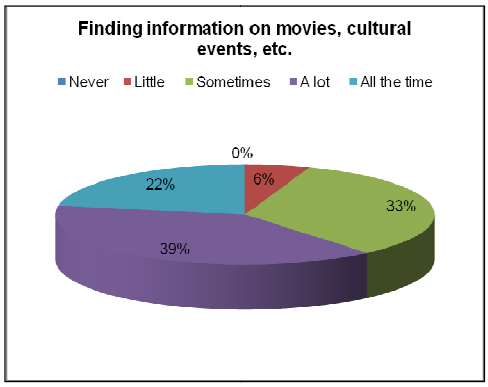

School
Never
less than 1 hour
1-2 hours
2-3 hours
more than 5 hours
0%
11%
22%
45%
22%

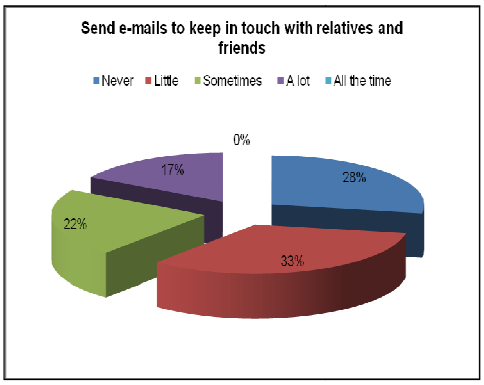

Friend's House
Never
less than 1 hour
1-2 hours
2-3 hours
more than 5 hours
0%
11%
17%
28%
44%

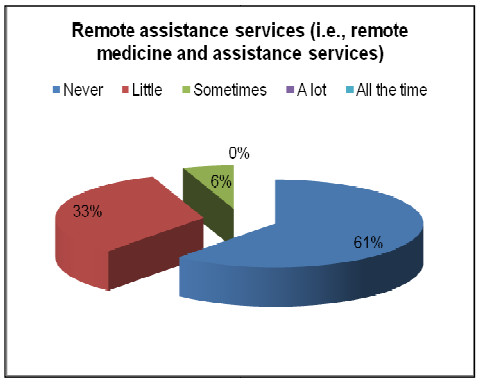
11% use the time PC for school, to copy notes, write papers etc. (44% so a lot and 17% sometimes) but also to have fun chatting (17% all the time, 50% a lot and 17% sometimes) or using social networks (28% all the time, 50% a lot and 22% sometime), send emails to keep in touch with friends or relatives (28% all the times, 39% a lot and 22% sometimes). Few of them use the Internet to access remote assistance services (33% a little and 6% sometimes), but 22% of them look all the time on the internet for information about cultural events, 39% use the internet a lot to look for such informations and 33% use the internet sometimes for this purpose. 12% of them also use the internet a lot to purchase items online, while 18% use it sometimes for this pupose and 23% a little for the same reason **(Fig. 23)**.

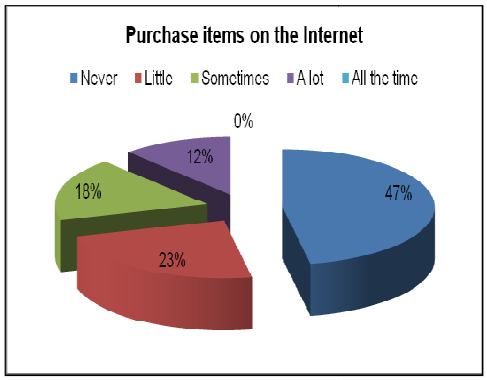
Fig. 23











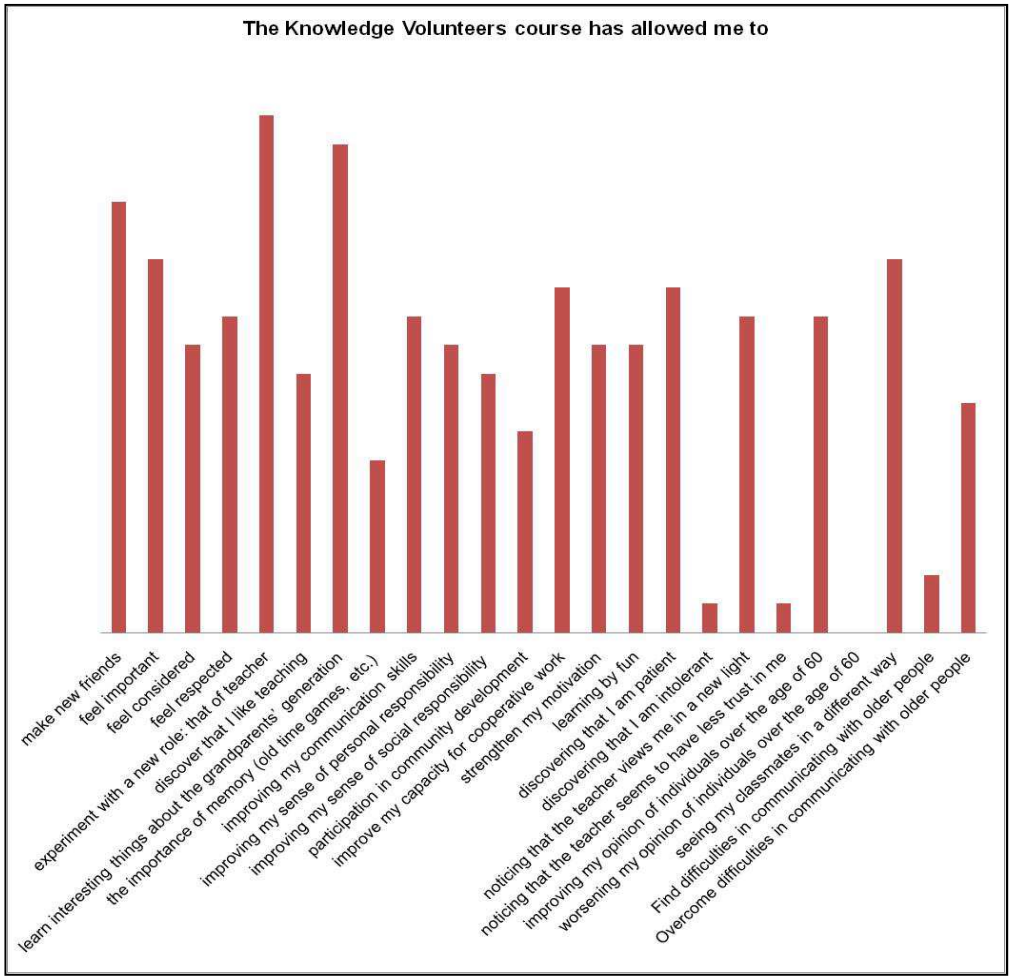
The teaching experience and the opportunity of intergenerational exchange were very interesting and useful for the young students involved.

They declared an improvement in their capacity for cooperative work and sense of social and personal responsibility, and an increased feeling of participation in community development. During the courses they felt respected, considered and important.

The Knowledge Volunteers project had allowed them to overcome difficulties in communicating with older people, improving their opinions about the over 60s and learning interesting things about the grandparents' generation.

The course was also a chance to make new friends from the younger and as well as the older generation (**Fig.24**).

Fig.24

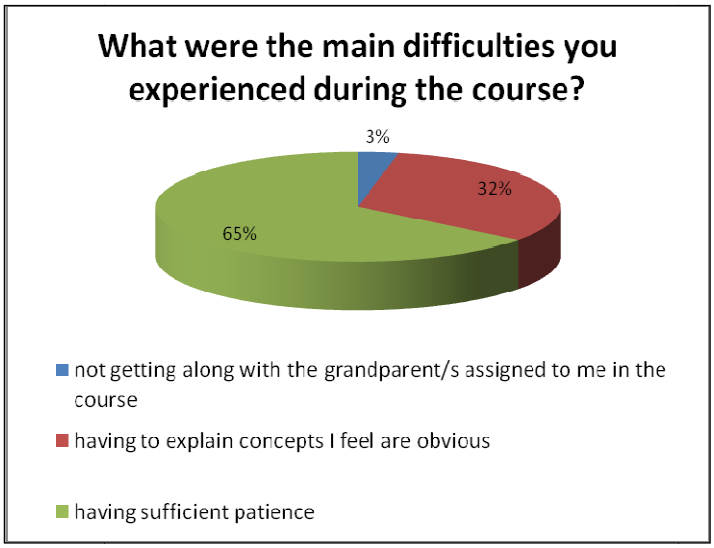


Teachers said The Knowledge Volunteers courses allowed them to provide their students with a multidimensional didactic opportunity to develop personal and social responsibility, allowing them to strengthen their communication skills and capacity to work cooperatively.

They also believe students understood the importance of the intergenerational exchange and of the memories of past experiences grandparents can tell them **(Fig.24)**.

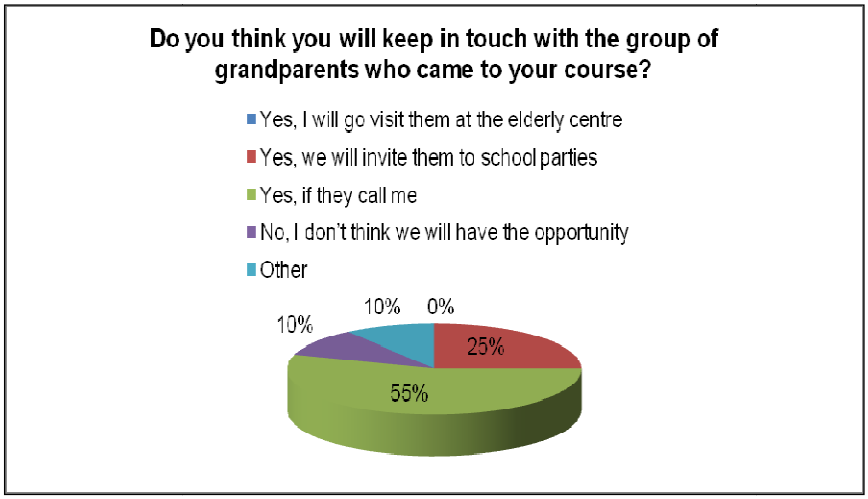
The difficulties Tutors experienced during the courses were mainly related to the capacity to have sufficient patience in teaching grandparents, particularly regarding the need to repeat the lessons many times because of their learning difficulties **(Fig.25)**.

Fig.25

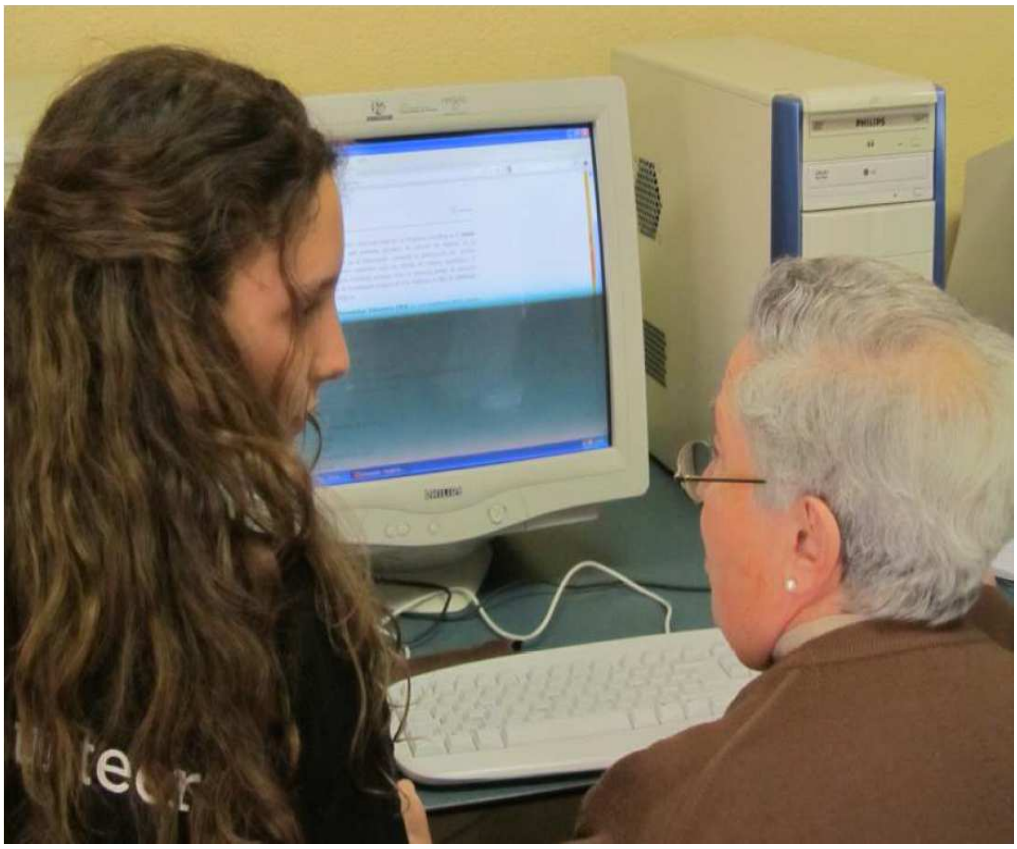


In most cases, the courses' intergenerational experience enabled the learning of interesting things about the younger/elder generations and, in many cases, the establishment of friendships between youths and elders. 90% of Tutors declared their wish to remain somehow in contacts with the elders they met during the courses. 40% intend to visit them at the elders center **(Fig.26)**.

Fig. 26



Spain

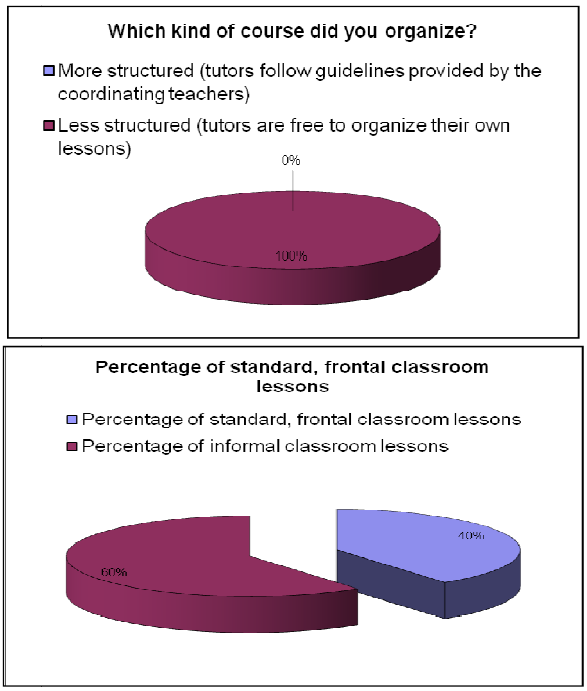


In Spain, **FUNDETEC** involved, since the very beginning of the project, the Public Elders Center of Madrid, the University of Castellon for intensive courses, and high schools in Madrid and Castellon to enrol young students as volunteers. Thanks to the project dissemination strategy, other grandparents as well as young volunteers joined the project later on, contacting directly the organization to participate in the project activity.

Courses organisation

Courses were organised jointly by teachers supported by students outside the normal school hours. They were hosted in school laboratories, all equipped with PC as well as blackboard, printer and projector to facilitate the teaching and learning process through constant practice of the lessons' subject. Lessons were organised by young students as frontal standard lessons 40% and informal lessons (60%) assisting grandparents in the Pc practice (**Fig.1 and 2**).

Fig.1



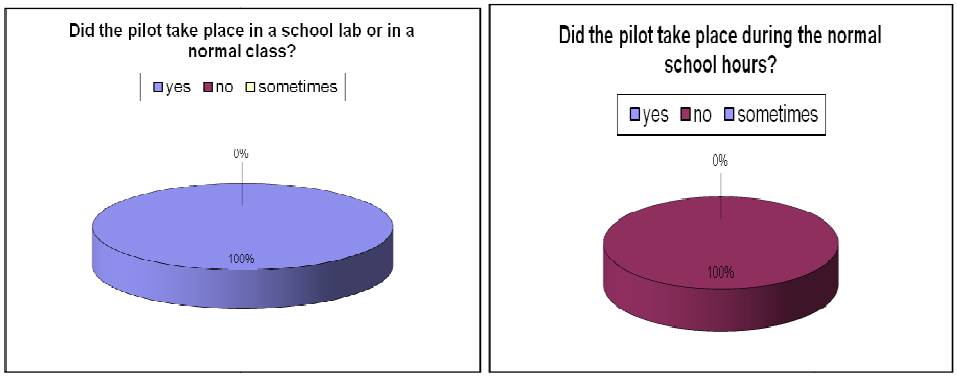
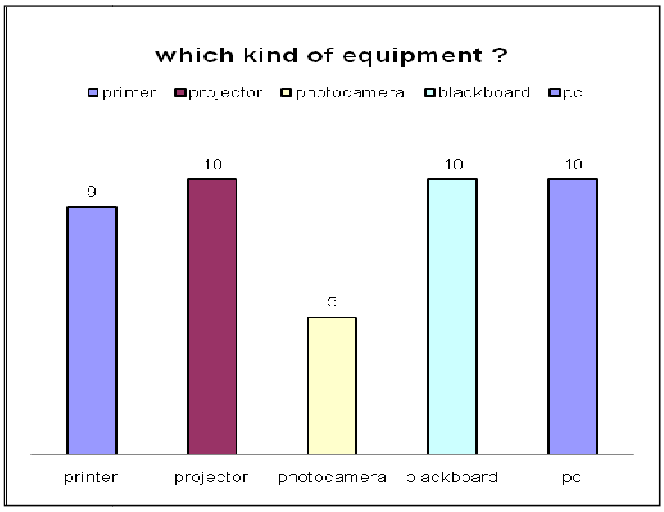
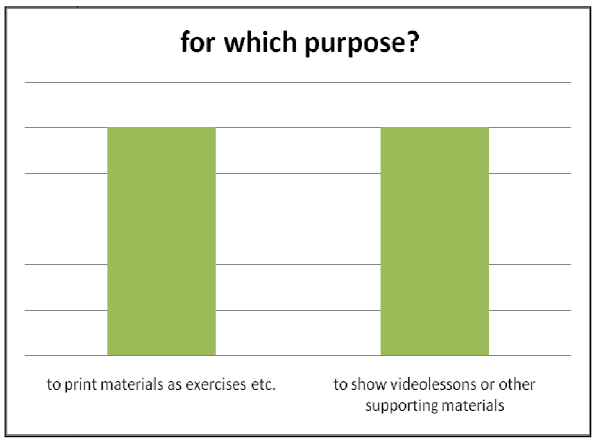


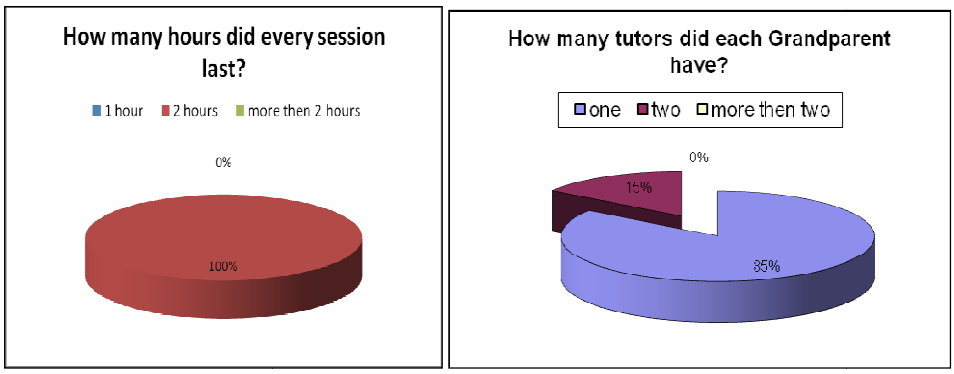
Fig.2





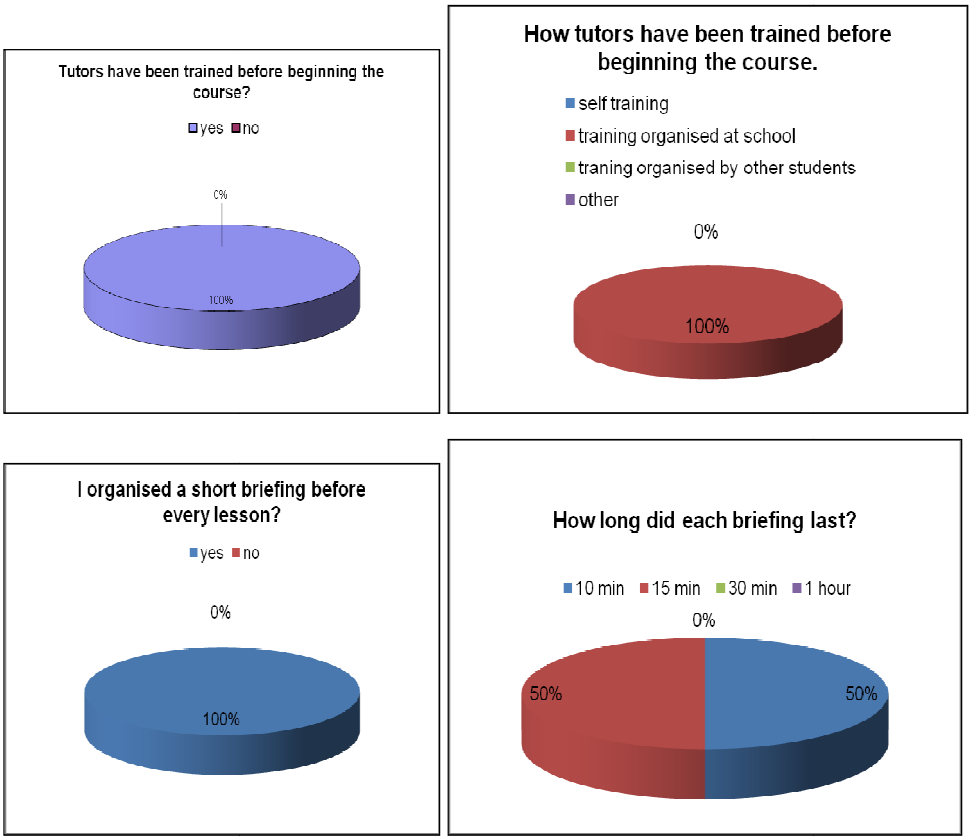
The courses were organized during the school year, as the didactical model requires. Students tutored the elders in a student/elder ratio of 1:1 or 2:1 under the active supervision of an adult teacher. Each lesson had a duration of 2 hours (**Fig.3**)

Fig.3



100% of the volunteers were provided training at school before the beginning of the courses and a short briefing of about 10-15 minutes was organised by teachers before every lesson to decide the subject and the exercises to propose (**Fig.4**).

Fig.4



Elders were enrolled in the courses via FUNDETEC local network. 7% of the elders were aged between 60 and 65, 33% between 66 to 70, 33% between 71 to 75, 14% between 76 to 80, 11% up to 85 and 2% were aged more than 86. 85% of the grandparents were females (**Fig.5**). Regarding their social background and educational level, all of them declared to have completed only the primary level of education (**Fig.6**).

Fig. 5

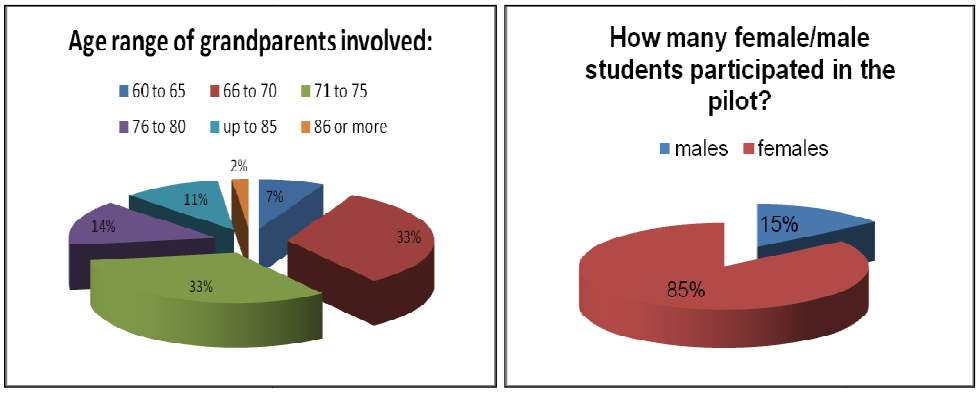
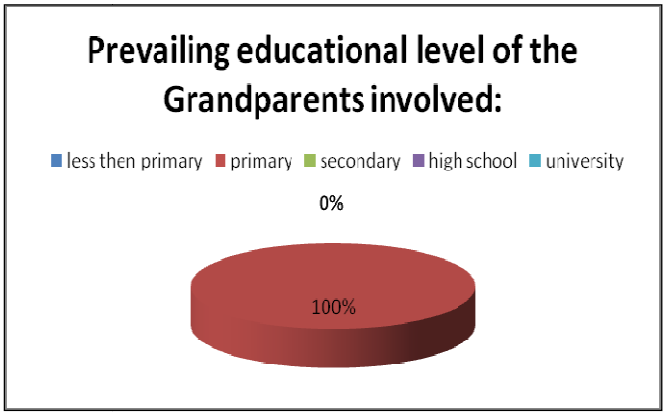

Age range of grandparents involved:
60 to 65
66 to 70
71 to 75
76 to 80
up to 85
86 or more
2%
11%
7%
14%
33%
33%
How many female/male students participated in the pilot?
males
females
15%
85%

Fig. 6

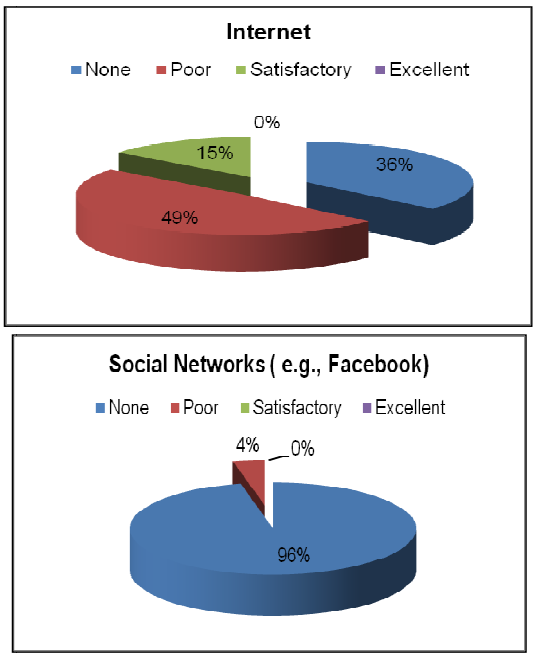

Prevailing educational level of the Grandparents involved:
less then primary
primary
secondary
high school
university
0%
100%

Educational value of The Knowledge Volunteers project

Questionnaires were submitted to grandparents before the beginning of the courses and at the end. The objective of the survey was to evaluate the methodological and didactical aspect of the training curricula and model, and to test (a) the intergenerational and peer to peer approach in relation to the skills acquired by grandparents and tutors and (b) the results in terms of relationships between the elder and younger generations.

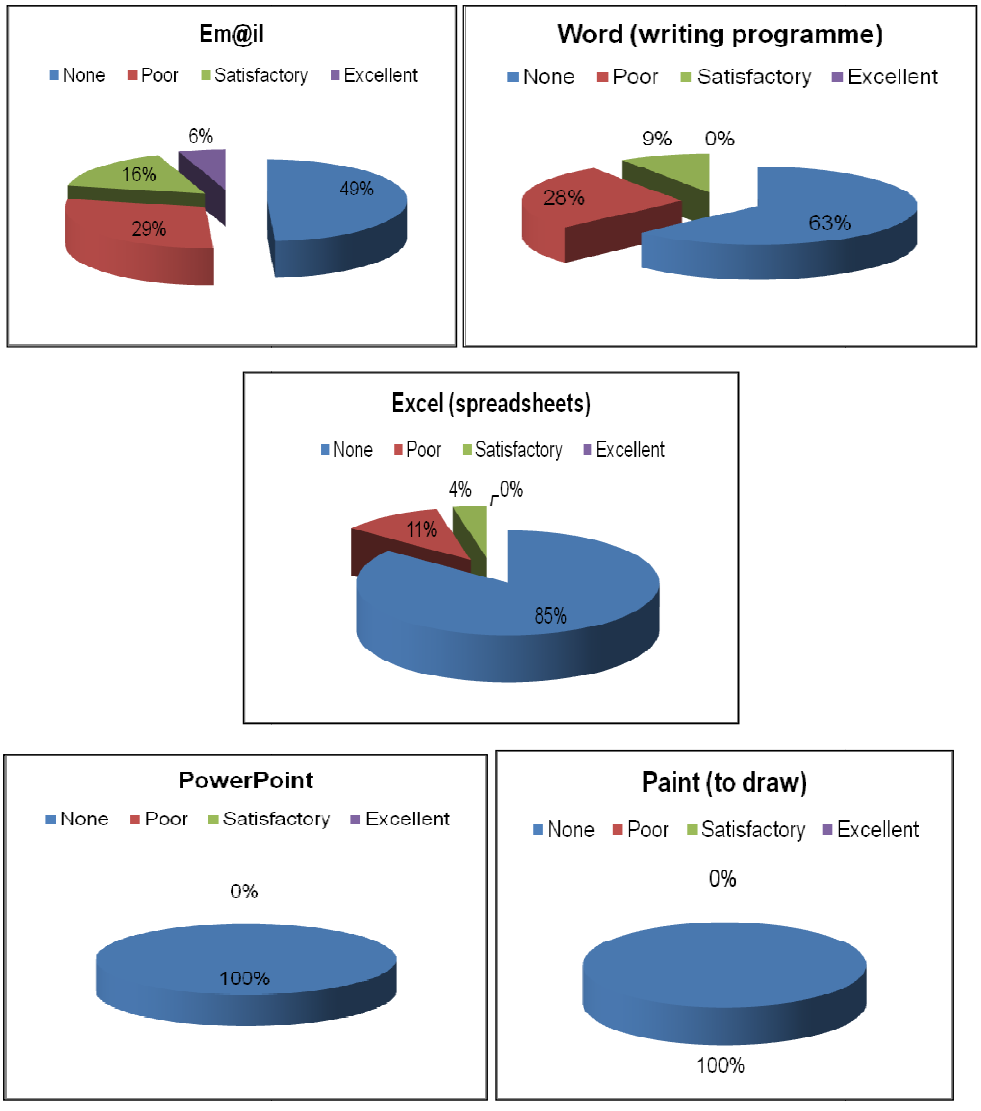
The following charts refer to elders' digital literacy competences before the beginning of the courses. Only 15% of elders declared to have satisfactory knowledge about the Internet, 49% had poor experiences and 36% had never used it. Only 4% of the grandparents starting the courses within the TKV project had some basic and poor knowledge about social networks, while 96% had no knowledge about the subject (**Fig.7**).

Fig.7



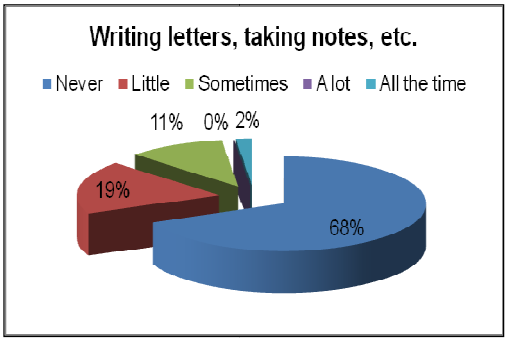
Only 6% of the grandparents starting the courses said to have excellent capacity to use e-mail, 16% a satisfactory capacity, while 29% a poor capacity or 49% had no knowledge. 63% declared they never used writing programmes such as word, only 9% had previous satisfactory capacity to use it. 85% had never used excel, 11% declared a poor capacity and 4% believed to have a satisfactory ability to use the programme. None of the grandparents enrolled in the courses had skills related to the use of programmes such as power point or paint **(Fig.8).**

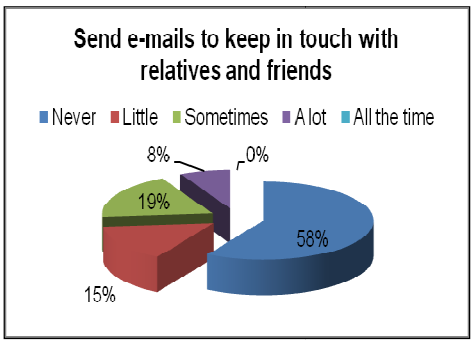
Fig.8

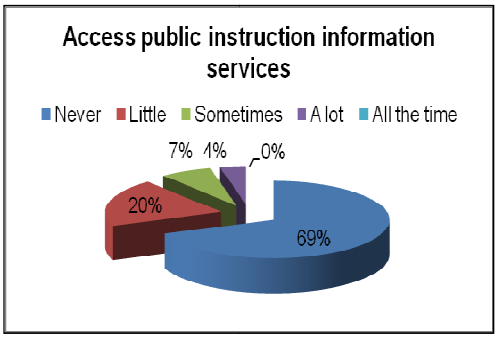


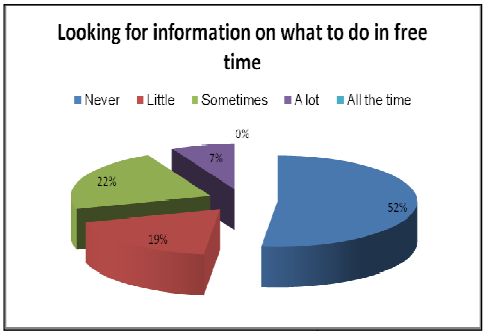
The following charts (**Fig. 9**) refer to grandparents' habits regarding the use of a PC, before they started the courses. Only 2% said to use a PC all the time to write letters or emails, 8% to send emails to keep in touch with relatives or friends and look for information on what to do in their free time. About 4 % of the elders interviewed declared to have used the Internet to access public instruction and information services or have access to social networks.

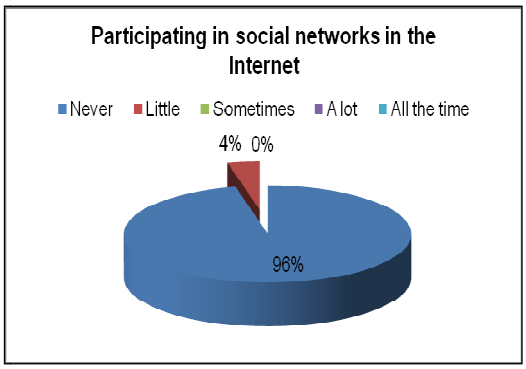
Fig.9





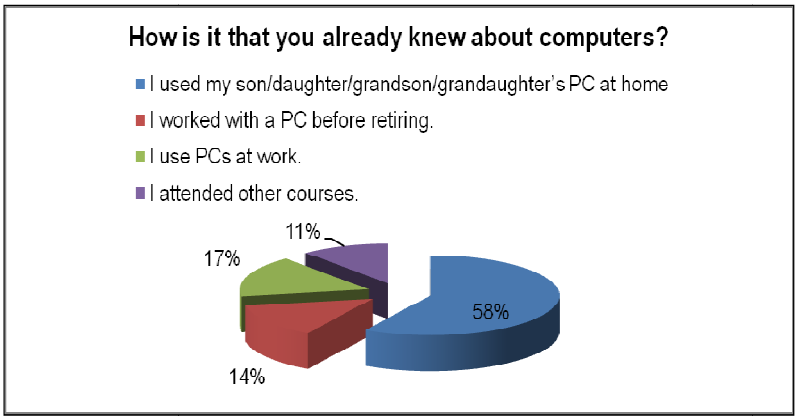


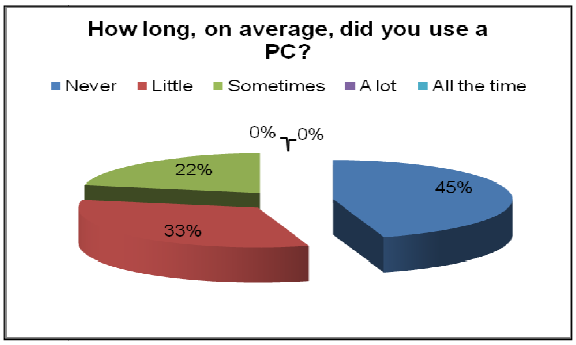


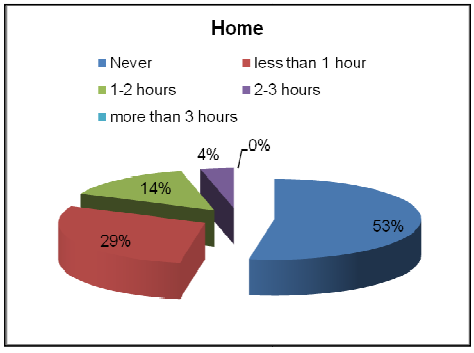


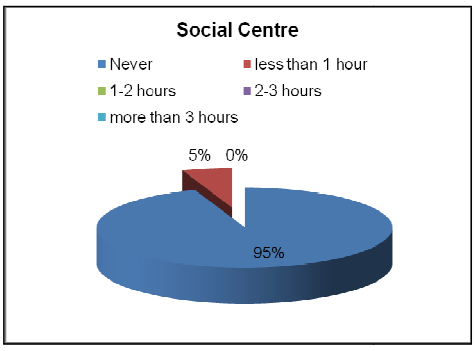
Grandparents declaring to have some knowledge about ICT, said they learnt using their daughter, grandson/granddaughter PC or because of their work. 45% of the grandparents interviewed at the beginning of the courses declared that they never use the PC. 22% of them use it sometimes, 33% a little, mainly at home and rarely for more than 3 hours a week **(Fig.10)**.

Fig.10





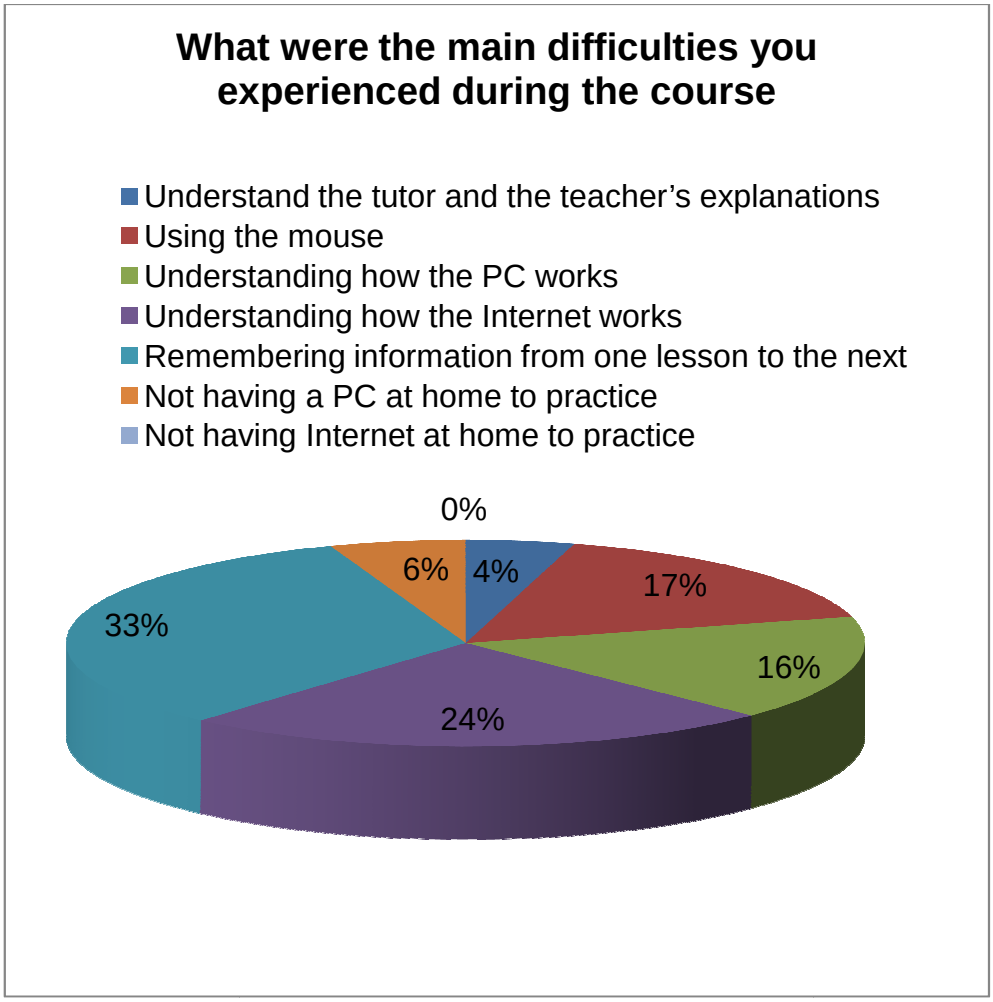




Evaluation of the courses

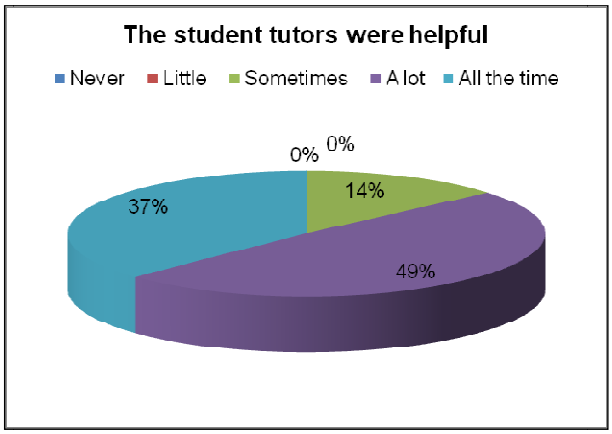
The curricula of the courses as well as manuals and guidelines were adapted continuously to the learning needs of grandparents. Thus the lessons were personalised to tackle grandparents' learning difficulties, mainly linked to the complexity to understand how the PC or the Internet work or to their capacity to memorize the lessons from one lesson to another. It was often necessary to repeat the lesson, add exercises or/and extend the time dedicated to some of the subjects. **(Fig.11)**.

Fig. 11



Young students tutored grandparents during the learning process, assisting them in practicing with the pc. In most of the cases young tutors prepared the lessons providing exercises and power point presentations to simplify the explanations of the main curricula subjects. 100% of the Grandparents attending the courses declared tutors helped them to acquire digital competences (**Fig.12).**

Fig.12



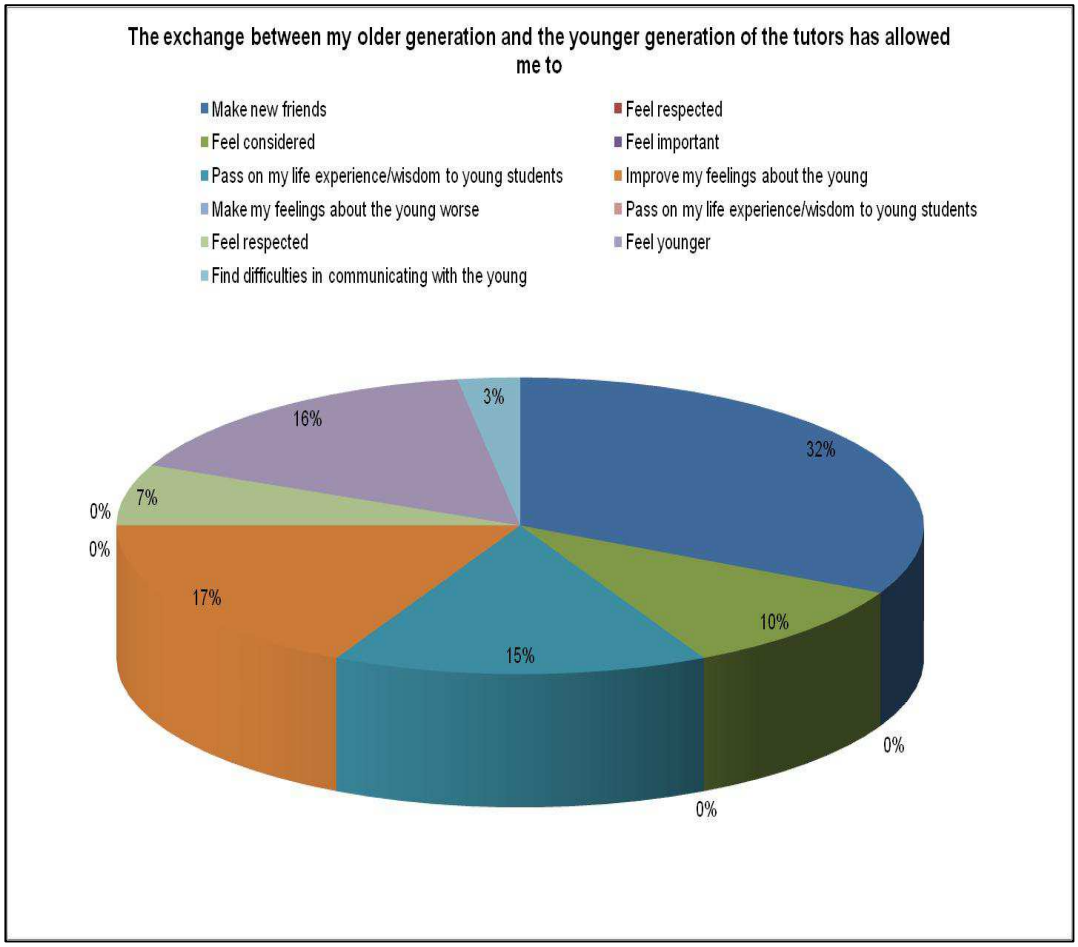
The intergenerational dialogue based on peer-to-peer teaching approach was the key aspect of the methodology applied to courses organisation. TKV promoted social relationships through the active involvement and sharing of experiences by the different generations. Tutors helped grandparents become aware of their opportunities to participate actively in society. Grandparents felt considered (10%) and respected (7%), 16% felt younger **(Fig. 13)**.

The intergenerational exchange facilitated communication and dialogue between elders and youth, contributing to a change of elders' opinions about youths.

17% of grandparents participating in the courses declared the exchange between their older generation and the younger generation of the tutors allowed them to improve their feelings about youths **(Fig. 13)**.

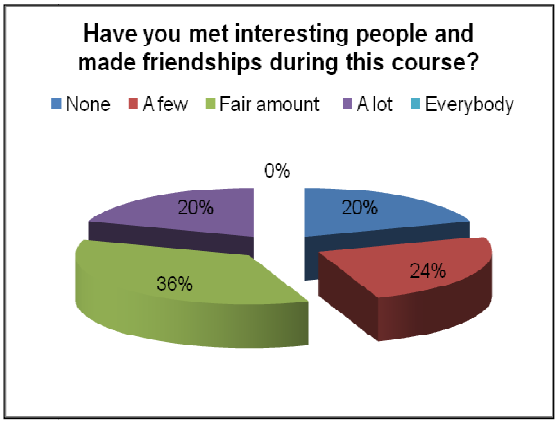
Only 3% of Grandparents found difficulties in communicating with the students or worsened their opinion about them. The courses were a chance for grandparents to meet and socialize, making new friends among the older and the younger generation: 32% of the elders said the courses allowed them to make new friends **(Fig.13).**

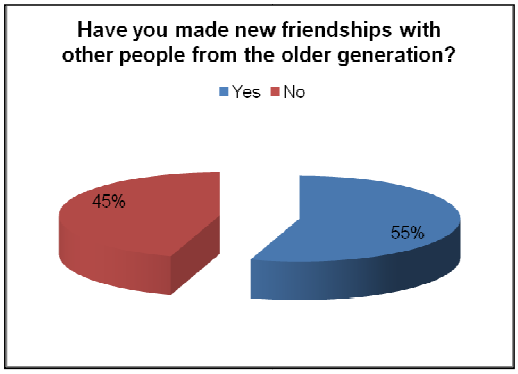
Fig.13

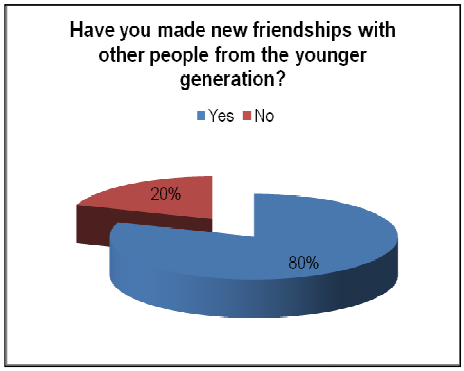


Grandparents and young tutors established very good relationships and in many cases friendships. 67% of Grandparents declared they met several interesting people and made friendships during the course **(Fig.14).**

Fig. 14







Grandparents also expressed the wish to continue to get together with the newly met friends from the older and younger generation, even after the end of the courses. In many cases, they also expressed the intention to visit each other very often. 39% of grandparents frequenting the courses believe what they have learnt will help them to make new friends in the future **(Fig. 15)**.

Fig. 15

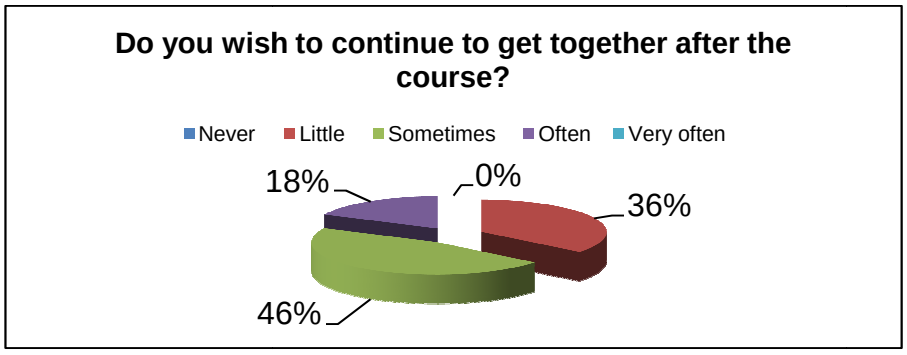
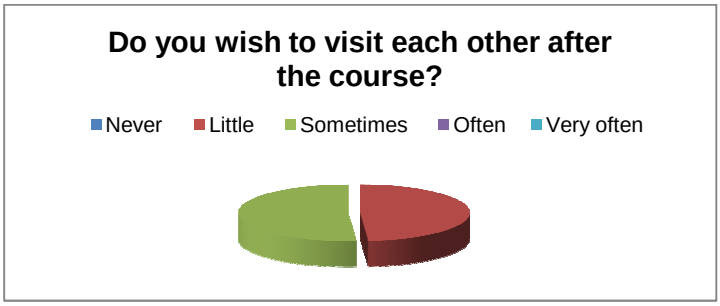
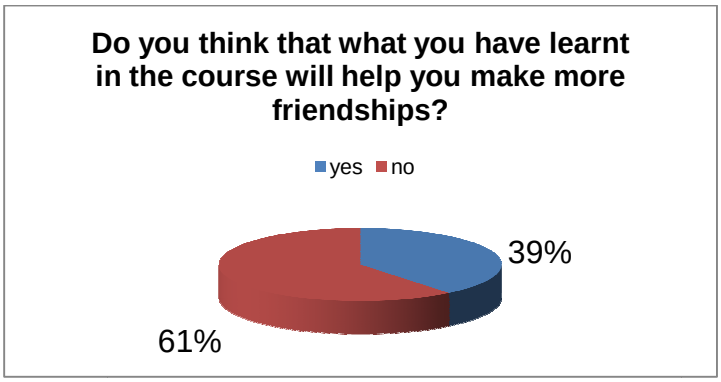


Fig.15





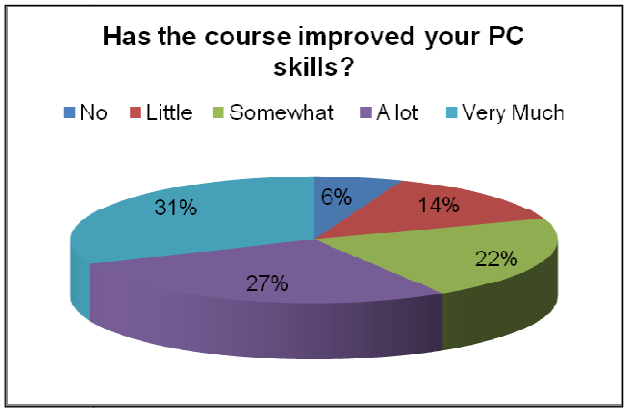
In terms of digital literacy knowledge and competences, the interviews and questionnaires distributed to grandparents at the end of the courses, revealed a general improvement in the level of skills acquired on specific subjects of the curricula. Charts also provide information on grandparents' change of approach and habits regarding the use of the PC.

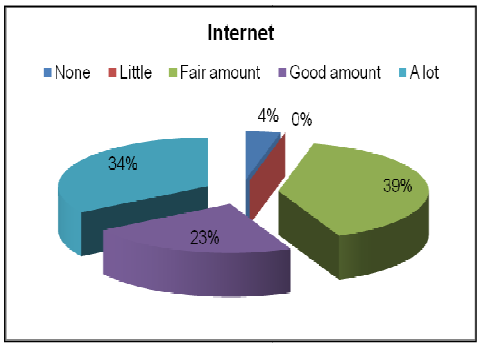
Grandparents said the course improved a lot (31%) or very much (27%) their digital literacy competences. 34% improved a lot their knowledge about the Internet and the capacity to use it. 84% of Grandparents are able to use email following the courses. Only 4% of the learners declared not to have enhanced their skills regarding the use Internet (**Fig.16).**

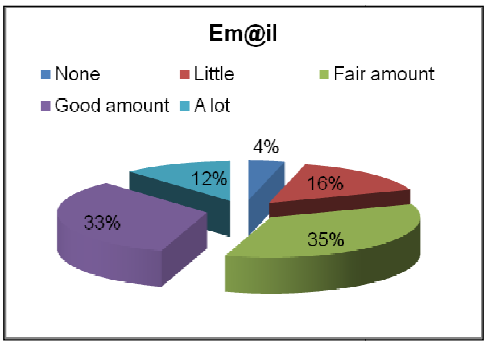
61% of elders said that thanks to the skills acquired during the courses, they will in future use a lot the Internet to look for information about what to do in their free time or sometimes, 49% will use it to access public information services. Even if 51% of learners will never use the

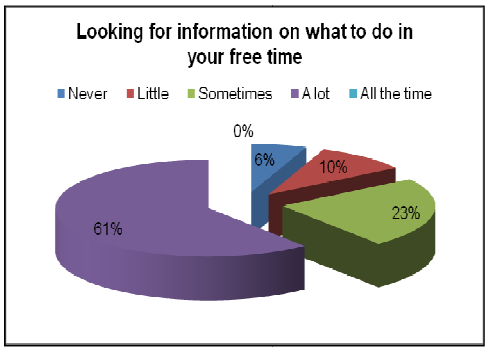
Internet to purchase items, 22% will do it sometimes or a little 27% **(Fig.16).**

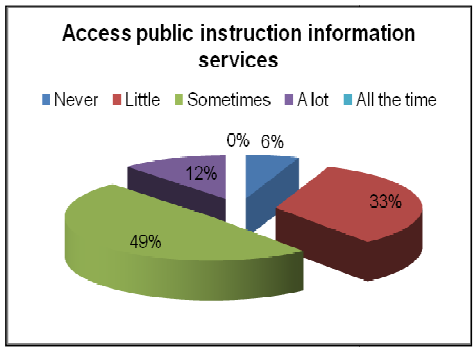
Fig.16

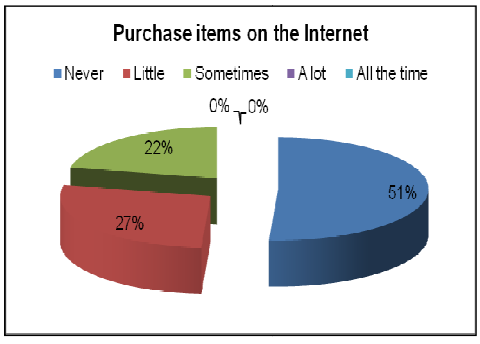


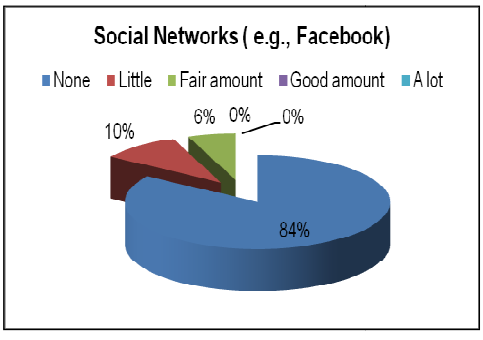












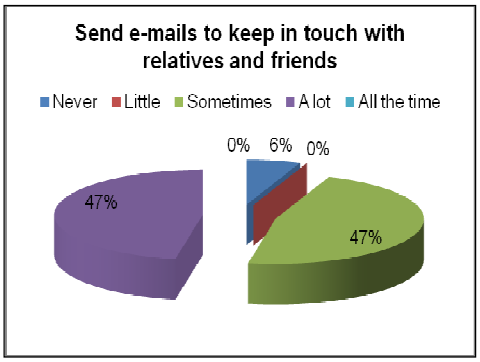
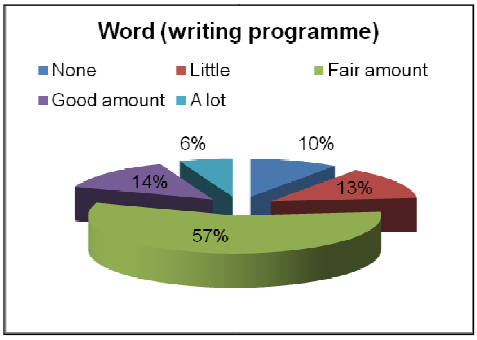
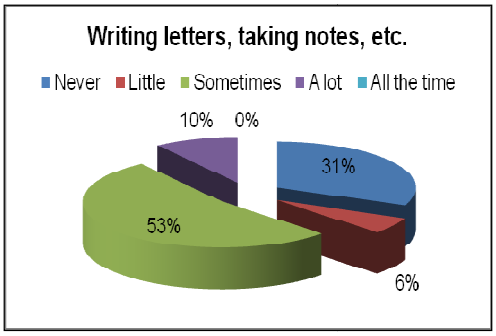


Fig.16

84% of grandparent found difficulties in understanding how a social network works: only 6% will use sometimes an online platform to keep in touch with friends even if at different levels. On the other hand, 47% will in future use email for that purpose. 90% of grandparents frequenting the courses can now use word with a certain level of proficiency and 63% of them will use the programme to take notes and write letters (**Fig.17**).

Fig.17



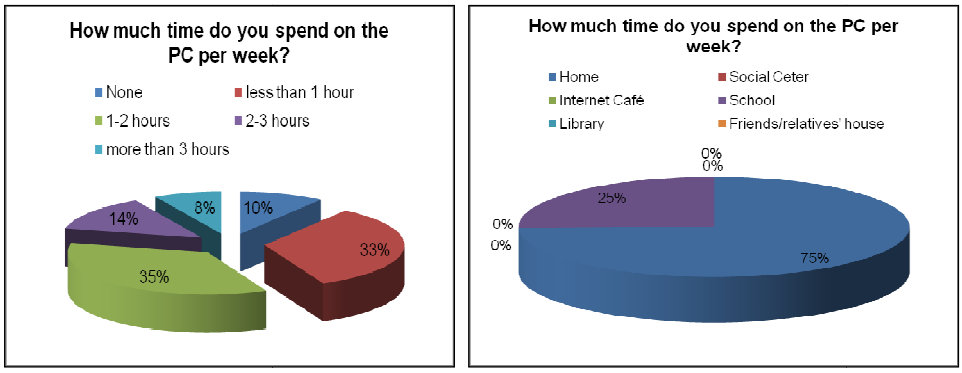


In general, grandparents who have attended The Knowledge Volunteers Courses now spend more time using the PC.

8% spend more than 3 hours per week using the computer, 33% spend less than one hour.

Data gathered demonstrate that grandparents generally use the PC mainly at home (75%) and 25% use it at school (**Fig.18**).

Fig. 18

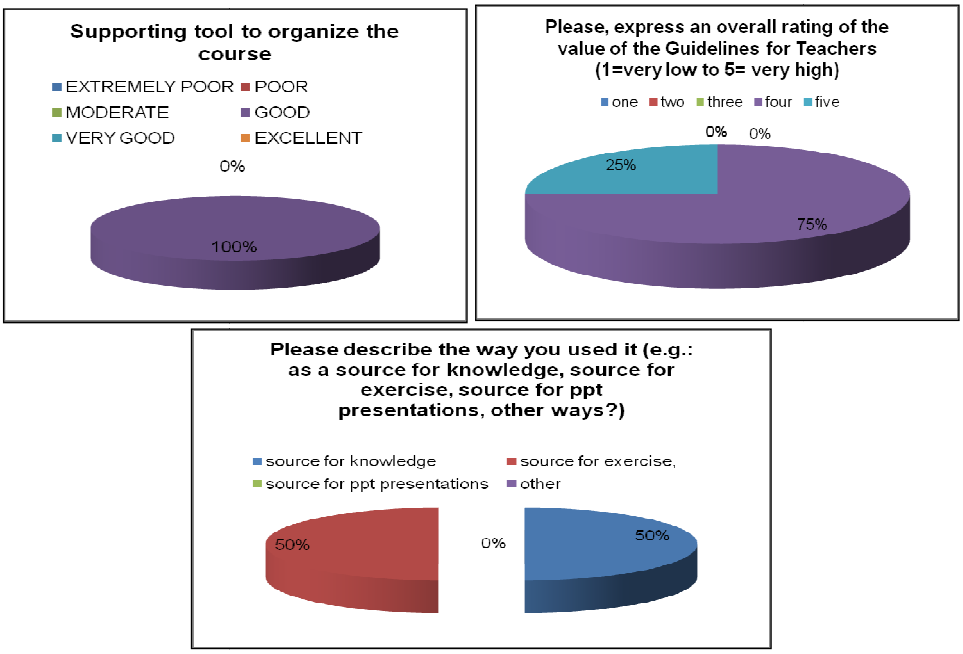

How much time do you spend on the PC per week?
None
less than 1 hour
1-2 hours
2-3 hours
more than 3 hours
14%
8%
10%
33%
35%
How much time do you spend on the PC per week?
Home
Social Ceter
Internet Café
School
Library
Friends/relatives' house
0%
0%
25%
0%
0%
75%

Evaluation of the value of The Knowledge Volunteers didactic kit

The curricula didactic objectives were developed following the directive and advice from the Fondazione Mondo Digitale to (a) support the courses' organisation and lessons contents and (b) develop the appropriate methodology to foster intergenerational exchange and digital literacy capacity of over 60s. FUNDETEC developed, customised and adapted the guidelines and manuals to the specific need and constraints of the elders, teachers and volunteers involved in implementing TKV course. A didactic kit was developed for 4 levels of courses: ABC of ICT, Social networking, E-government services, and Easy technology, accompanied by Guidelines for Users, Tutors and Teachers.

Handbooks and Guidelines were used during the courses as (a) guidelines for courses organisation, (b) tools for teachers to brief tutors, and (c) as a didactic kit for teachers, volunteers and grandparents (**Fig.19).**

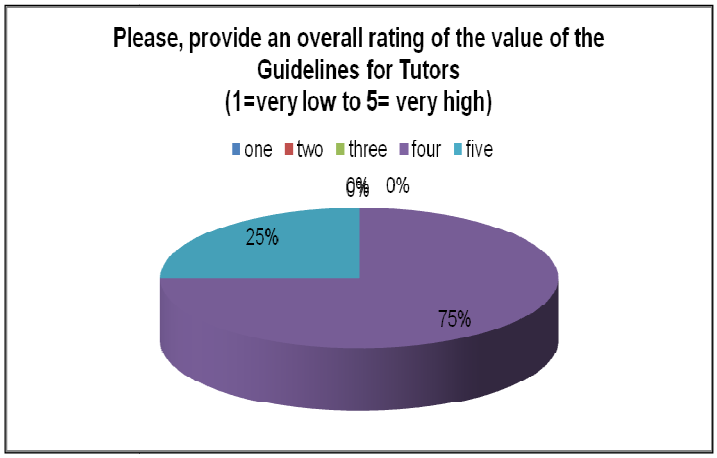
Fig.19

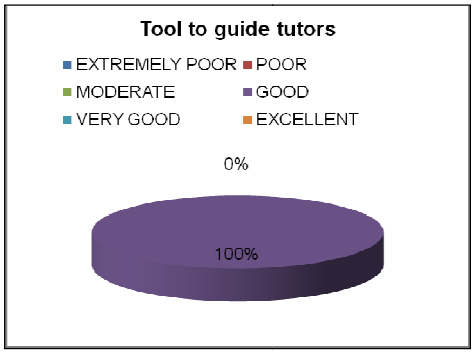


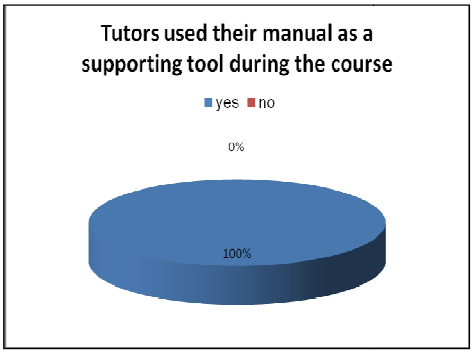
Teachers said the guidelines had been a good supporting tool, 50% of them said they used them as a source of knowledge and 50% as a source of exercises.

100% of the volunteers used them as a tool during the courses; 75% of them judged them very useful and 25% extremely useful. 100% of the teachers judged the guidelines as a good tool to guide tutors (**Fig.19 and 20**).

Fig.20

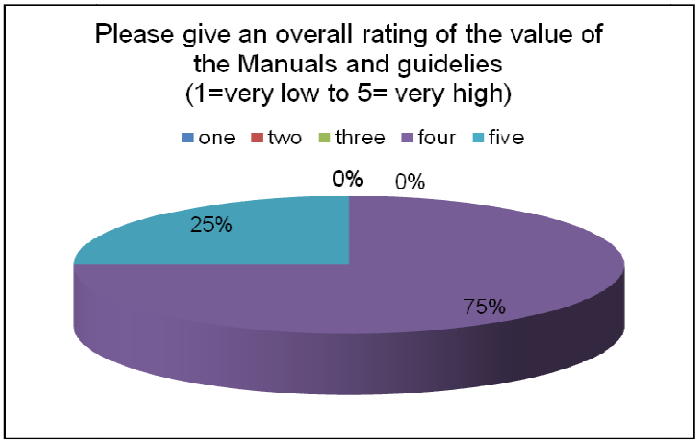


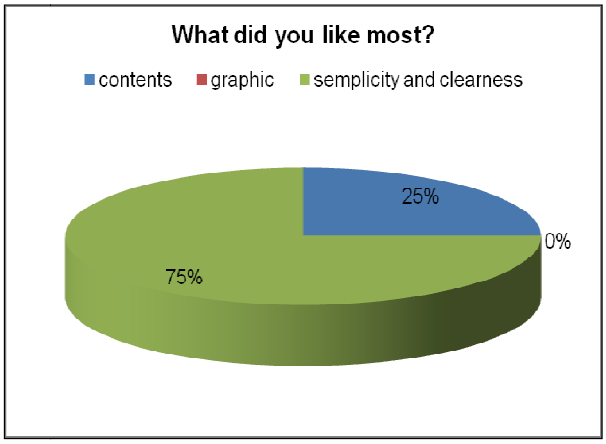


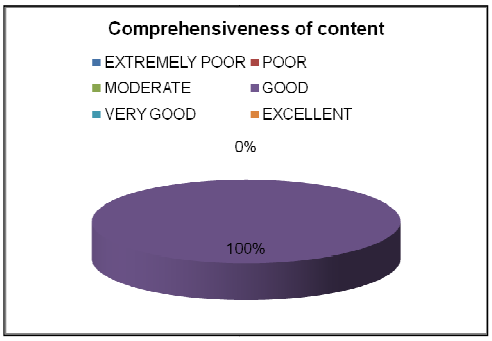


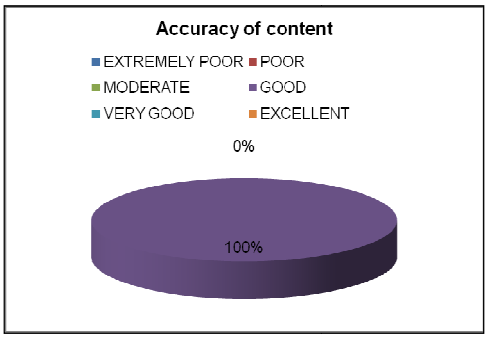
100% of the grandparents declared guidelines and handbooks were very useful, liking simplicity and clarity the most, indicating that they had a good level of comprehensiveness and accuracy of contents and very clear structure and language, even if they suggested in 100% of the cases the need to add more exercises in order to facilitate their practice on the PC. (**Fig. 20, 21,22).**

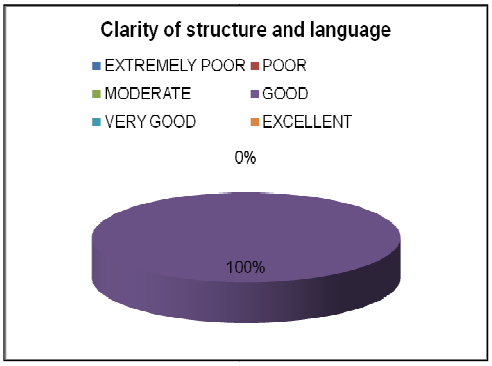
Fig. 21


Please give an overall rating of the value of the Manuals and guidelies (1=very low to 5= very high)
one
two
three
four
five
0%
0%
25%
75%


What did you like most?
contents
graphic
semplicity and clearness
25%
0%
75%


Comprehensiveness of content
EXTREMELY POOR
POOR
MODERATE
GOOD
VERY GOOD
EXCELLENT
0%
100%


Accuracy of content
EXTREMELY POOR
POOR
MODERATE
GOOD
VERY GOOD
EXCELLENT
0%
100%


Clarity of structure and language
EXTREMELY POOR
POOR
MODERATE
GOOD
VERY GOOD
EXCELLENT
0%
100%

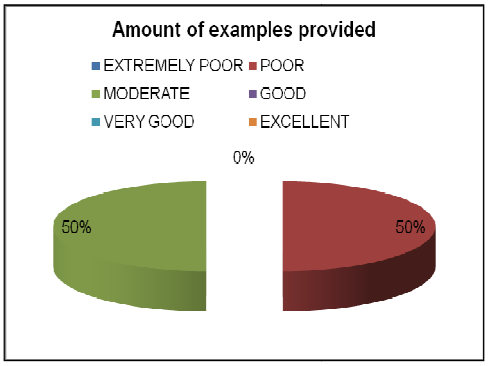
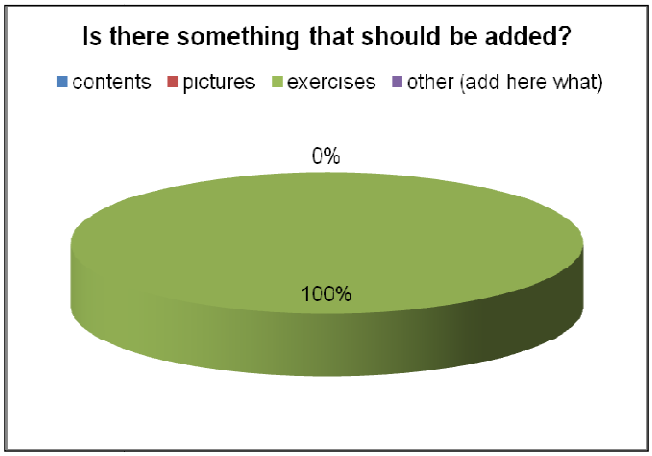

Amount of examples provided
EXTREMELY POOR
POOR
MODERATE
GOOD
VERY GOOD
EXCELLENT
0%
50%
50%

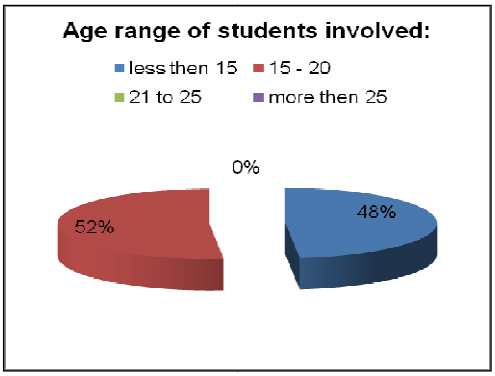
Fig. 22

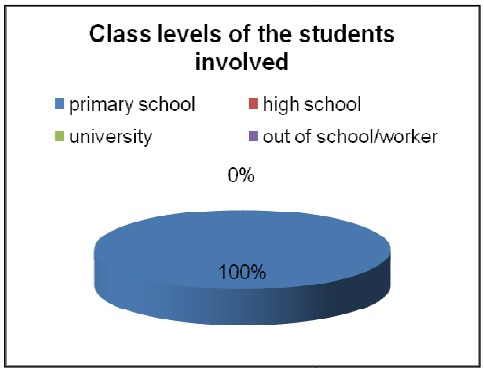

Is there something that should be added?
contents
pictures
exercises
other (add here what)
0%
100%

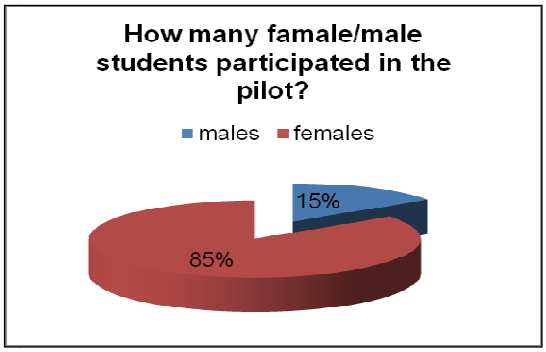
Tutors: role and added value of the intergenerational exchange

100% of the young students involved as tutors in the digital literacy training courses frequented primary school and were aged less than 15 to 20, 15% were males and 85% females (**Fig 22**).

Fig. 22

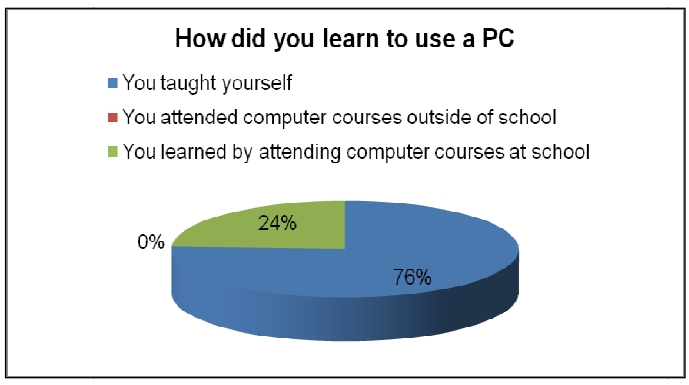






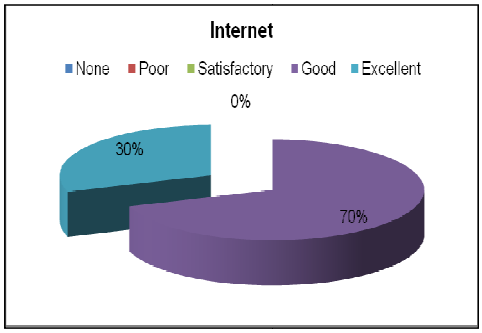
All tutors had good digital competences, acquired through self-training in 76% of the cases or attending school courses (24%) **(Fig.23).**

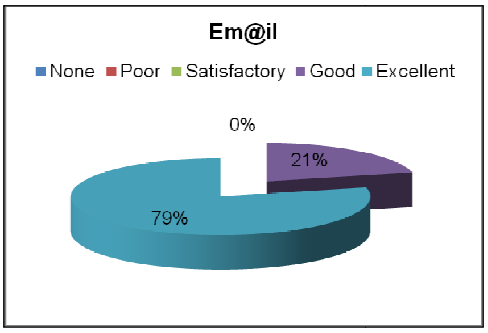
Fig.23

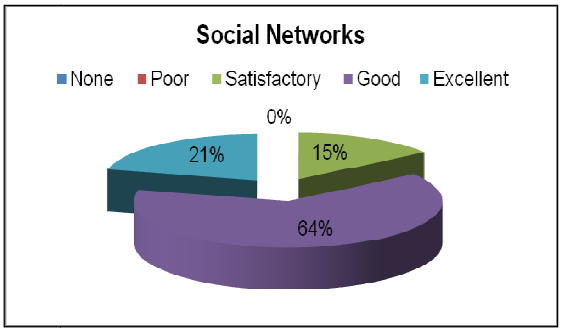


100% of tutors had excellent (30%) or good knowledge (70%) of internet, 79% had excellent capacity to use e-mail and good practice (64%) of social networks **(Fig.24).**

Fig.24

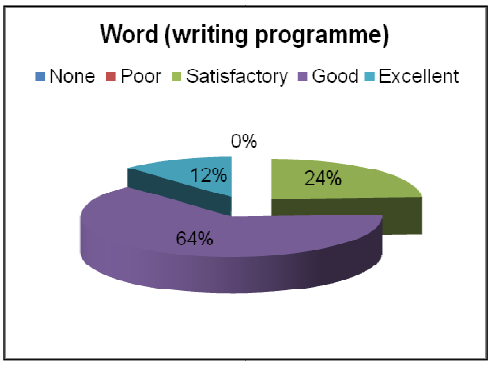






100% of them use word (12% declared to have excellent knowledge about this programme, 64% a good capacity to use it and 24% a satisfactory ability to use it). Regarding excel, 27% declared to have a good level of knowledge and 73% declared satisfactory knowledge. 64% said to know perfectly how to use power point, the others had a good (24%) or satisfactory level (12%) (**Fig.25**).

Fig.25



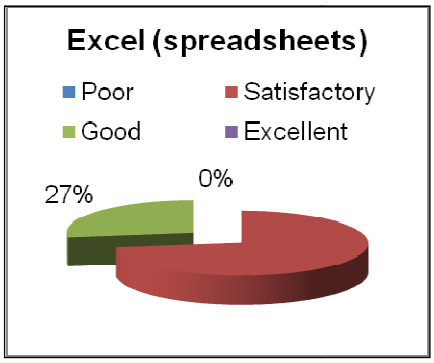
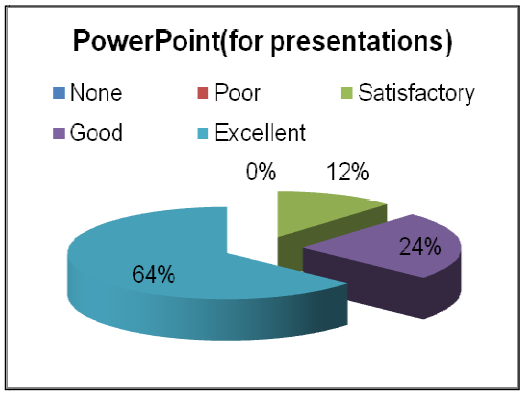
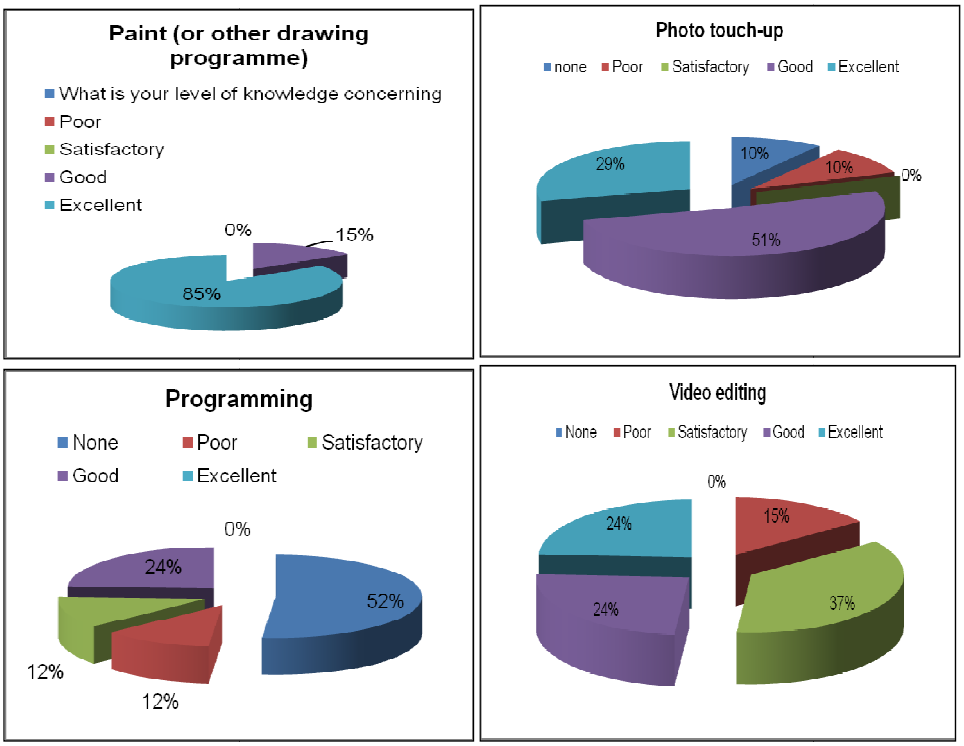


Fig.25



85% of students involved as grandparents' tutors in TKV courses considered they used perfectly a drawing programme such as paint. Approximately 50% of them had also specific skills related to programming and creating of web sites. Less than 40% of tutors said not to be able to use programmes for photo touch up or video editing **(Fig.26)**.

Fig.26



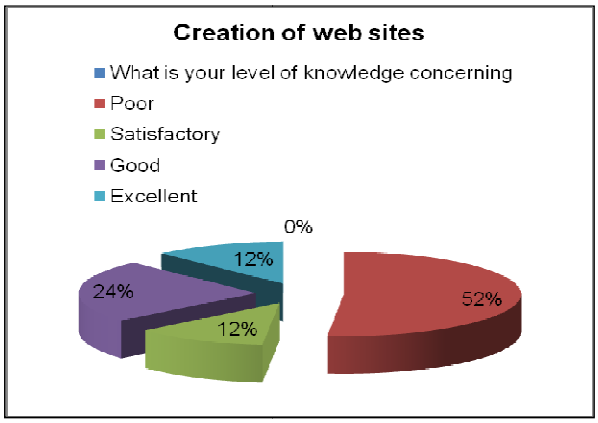
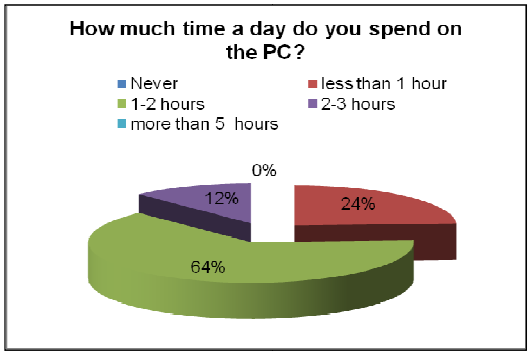
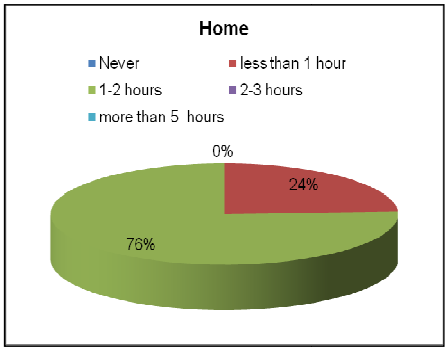


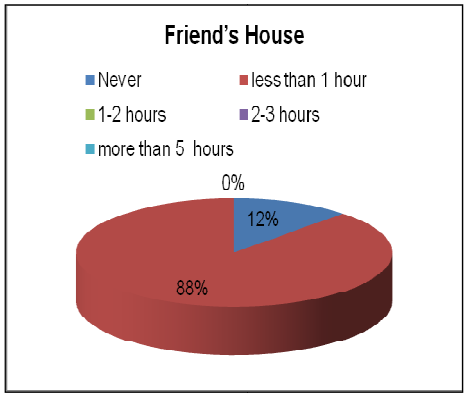
Fig.26

12% of the young volunteers tutoring grandparents declared they use the pc for 2 to 3 hours per week, 64% up to 2 hours and 24% for less than 1 hour per week. Most of them use the pc at home, at a friend's house or at school; some of them sometimes also use it at the library or at the internet café **(Fig. 27)**.

Fig.27







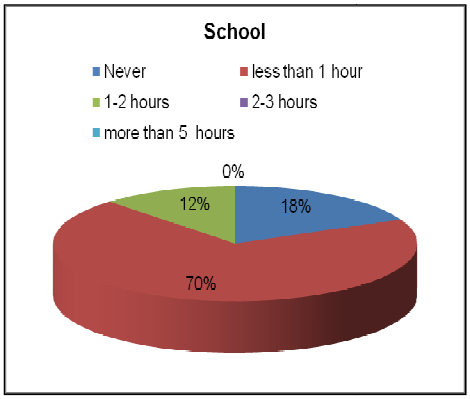
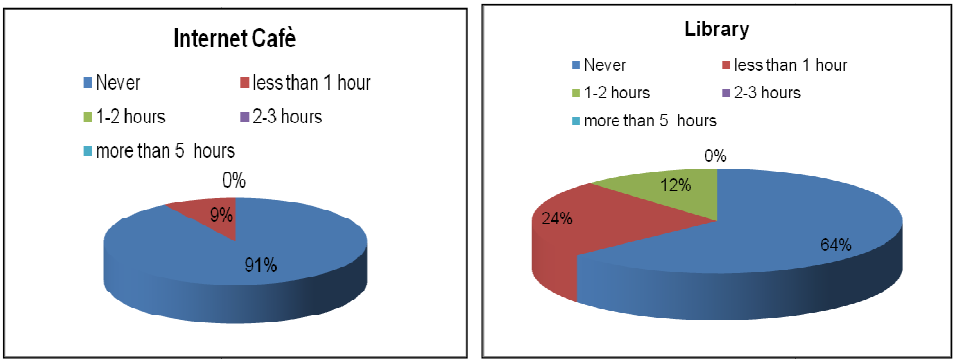


Fig.27



In their daily life, volunteers use the PC mostly for fun (24% all the time and 52% a lot), send e-mails to keep in touch with relatives and friends (37% all the time, 33% a lot), chatting with friends (46% all the time, 27% a lot), searching for information on the Internet about movies or cultural events (48% all the time, 52% a lot). Sometimes they also use the PC to write letters or personal notes (76%), or to copy notes or write school papers, write letters (73%). 12% of the students also use the Internet to write a blog, and 12% use it to purchase items all the time and 30% a lot. **(Fig.28)**.

Fig.28

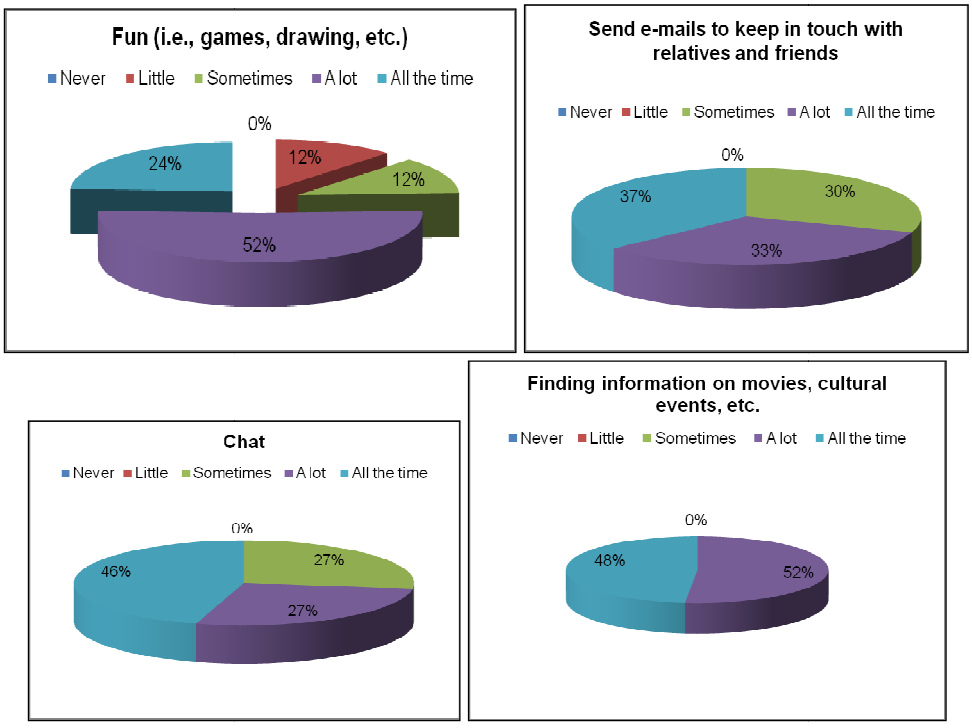
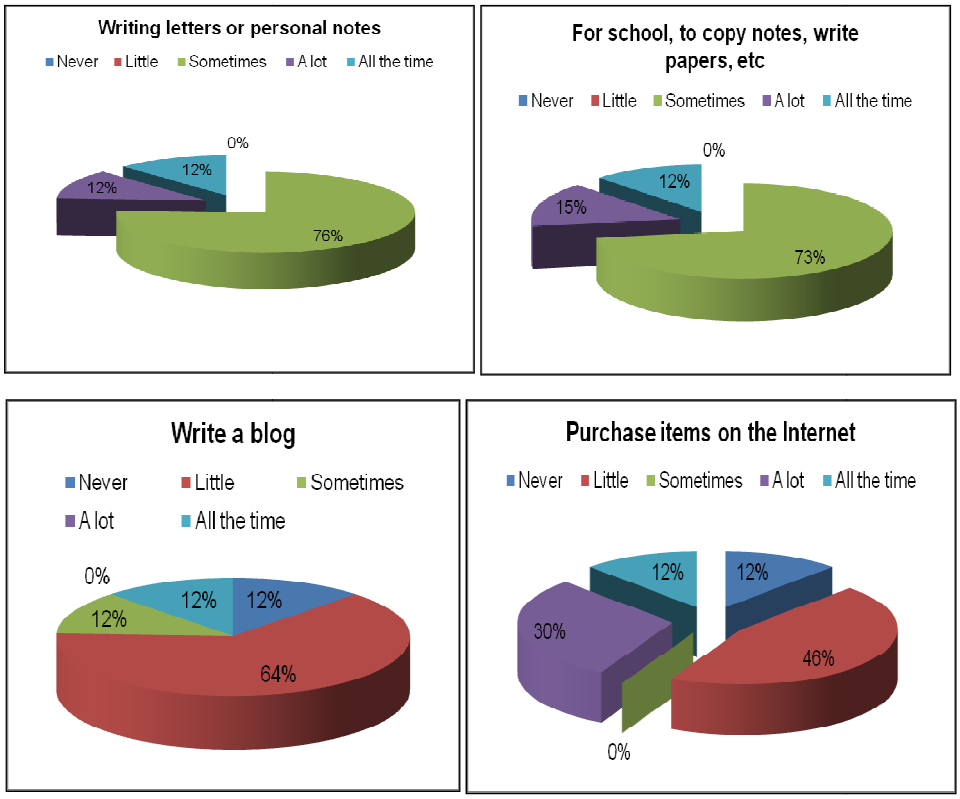


Fig.28

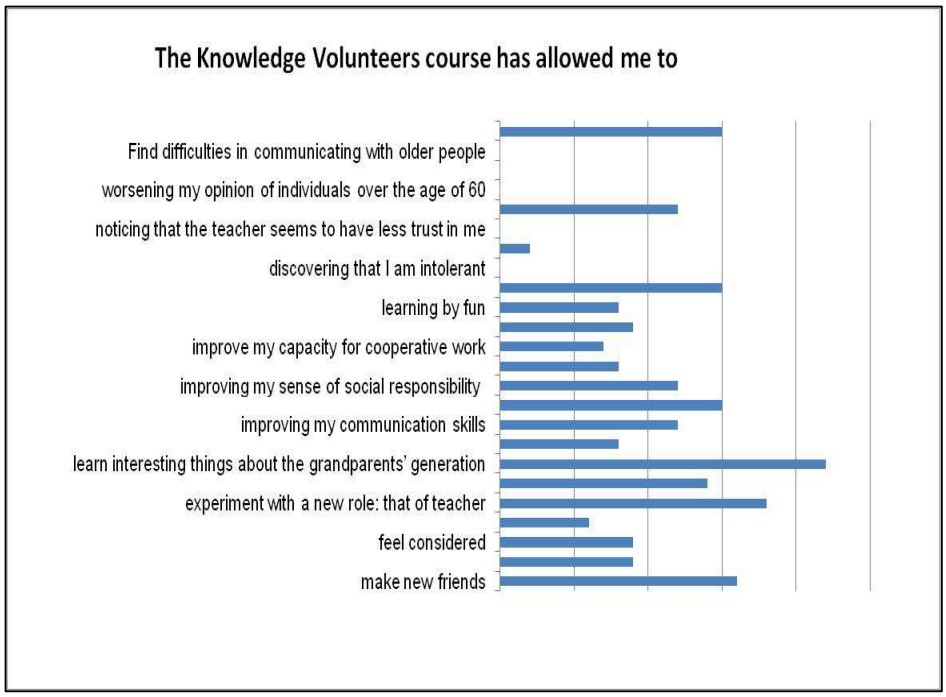


The TKV project experience was very interesting for the young volunteers, it was an opportunity for them to test and improve their capacity for cooperative work and sense of social and personal responsibility. Youths felt they were participating actively in community development.

Thanks to the involvement, they had the chance to strengthen their motivation, feeling respected, considered and important.

The Knowledge Volunteers project allowed them to overcome difficulties in communicating with older people, helping them to improve their opinions about the over 60s and learning interesting things about the grandparents' generation. Also, the course was a chance to make new friends (**Fig.29**).

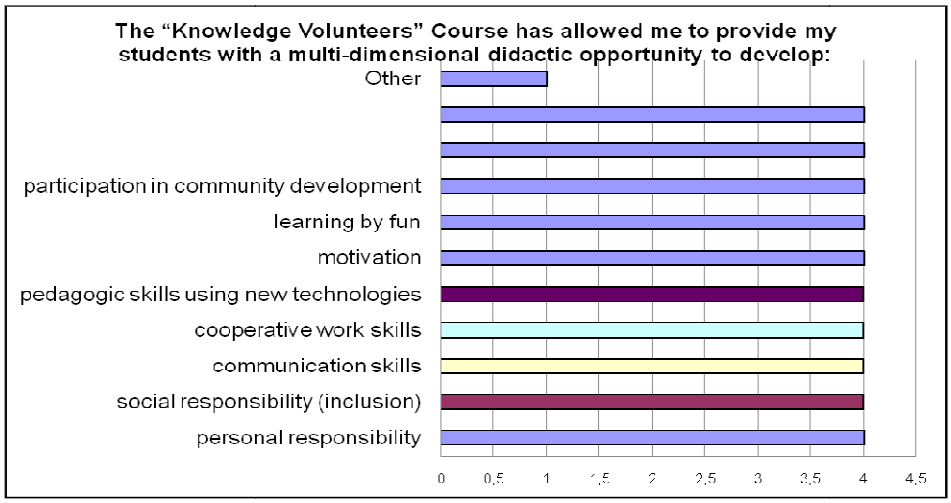
Fig.29



Teachers said The Knowledge Volunteers courses allowed them to provide their students with a multidimensional didactic opportunity to develop personal and social responsibility, allowing them to strengthen their communication skills and capacity to work cooperatively.

They also believe students understood the importance of intergenerational exchange and of the memories of past experiences grandparents can tell them **(Fig.30)**.

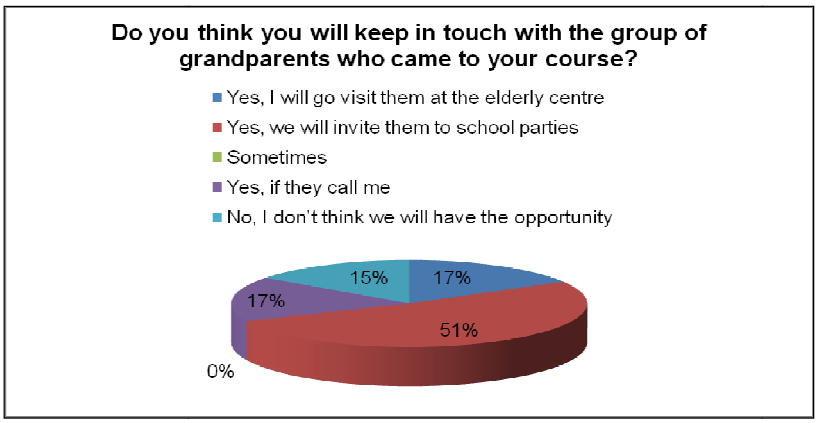
Fig.30



In most cases, the courses' intergenerational experience facilitates the learning of interesting aspects about the younger/elder generation and in many cases the establishment of friendships between youths and elders.

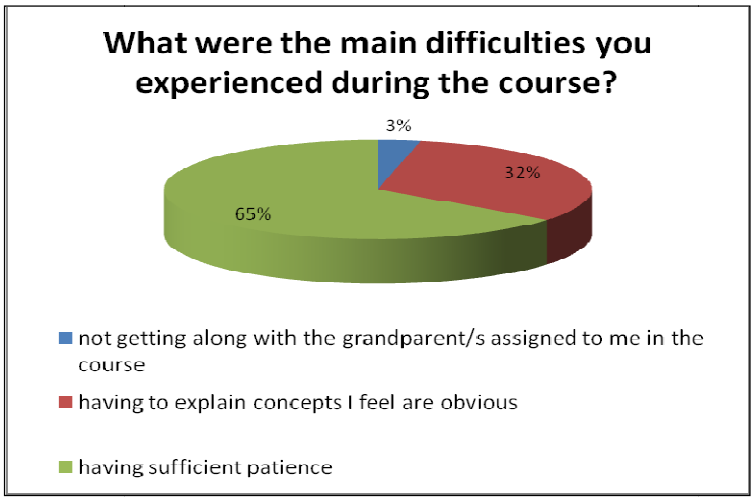
100% of Tutors declared their wish to remain somehow in contacts with the elders they met during the courses. 51% would like to invite them at school parties and 17% to visit them at the elders center **(Fig. 31)**.

Fig.31



The difficulties Tutors experienced during the courses were mainly related to sufficient patience in teaching grandparents, particularly, regarding the need to repeat the lessons many times because of their learning difficulties **(Fig. 32)**.

Fig. 32


What were the main difficulties you experienced during the course?
3%
32%
65%
not getting along with the grandparent/s assigned to me in the course
having to explain concepts I feel are obvious
having sufficient patience

Conclusions

In all the countries, elders improved their PC skills after they completed the course curricula programmes **(Fig. 1).**

The volunteering experience as teachers and tutors helped young students to strengthen their motivation to participate actively in cooperative work and enhanced their personal and social responsibility **(Fig. 2)**.

Fig. 1

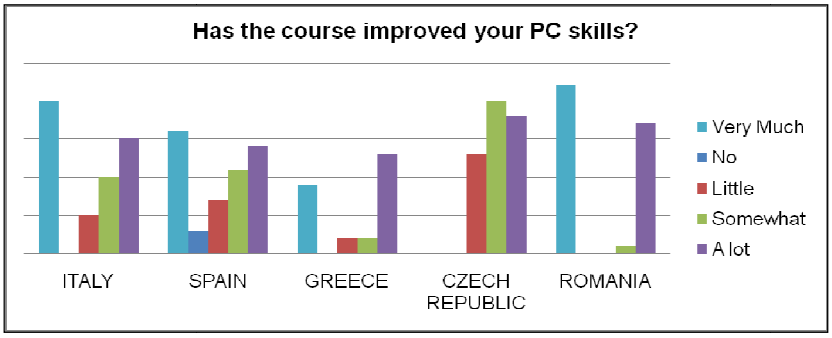
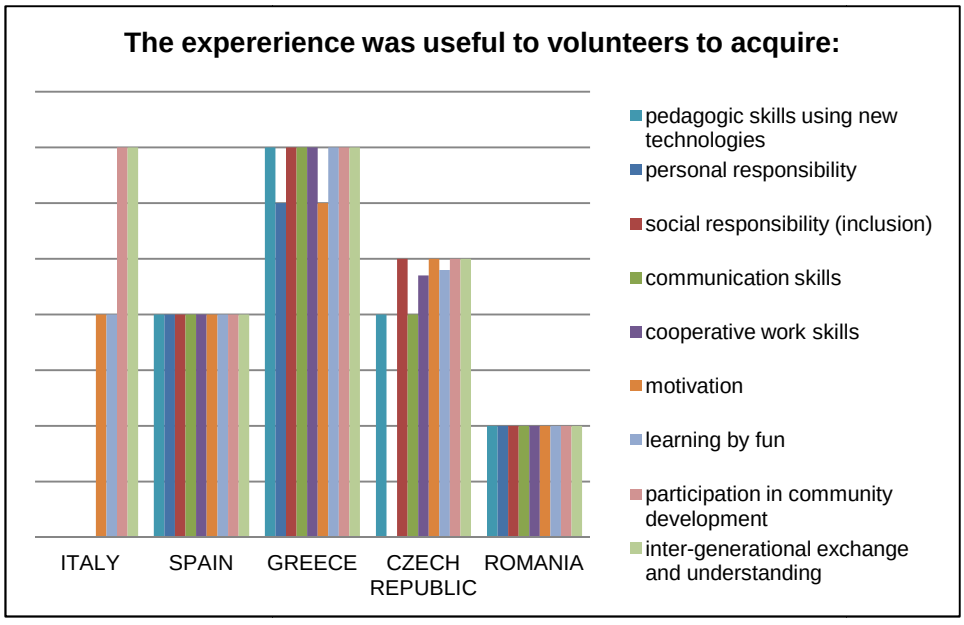
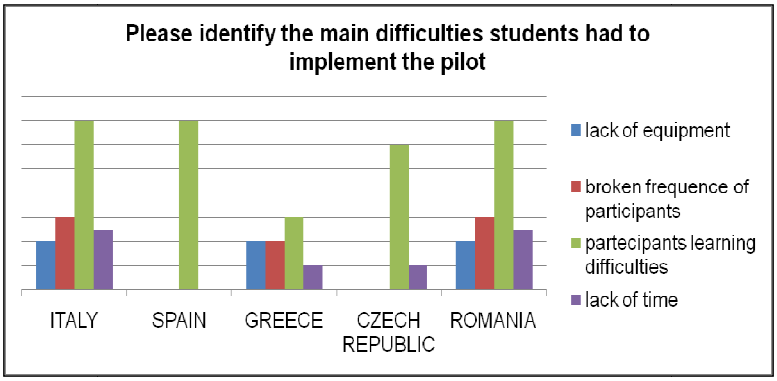


Fig. 2



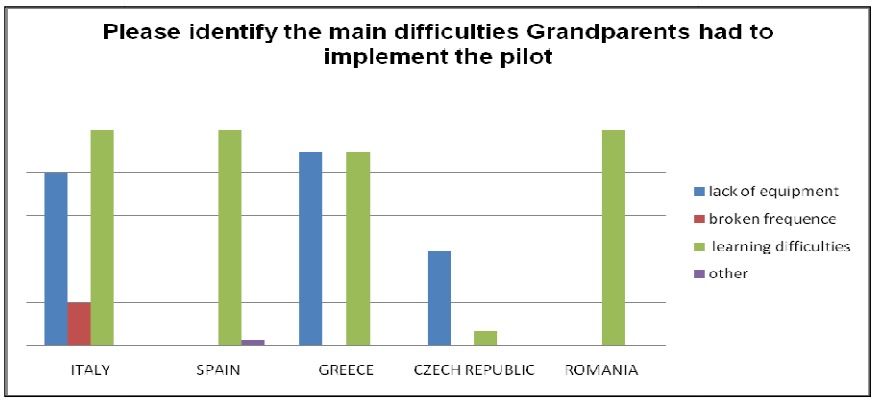
The main difficulties faced during the project implementation in relation to the courses path, were linked to grandparents learning difficulties, which in all countries required to increase the number of hours for the ABC level of courses and, in some cases, required the organization of more entry level of courses, thus delaying the higher levels in order to allow grandparents to fully assimilate the lessons and improve their skills. Furthermore, in some of countries, lack of equipments caused difficulties in managing the courses, particularly where a high number of learners could not practice with the PC during the frontal lessons. More courses were in some cases organised to allow grandparents to practice as required, in order to enhance their practical capacities to use the PC. Often grandparents did not have a PC at home to practice and thus the courses were the only opportunities for them to fully understand how to use the PC **(Fig.3, 4, 5)**.

Fig.3



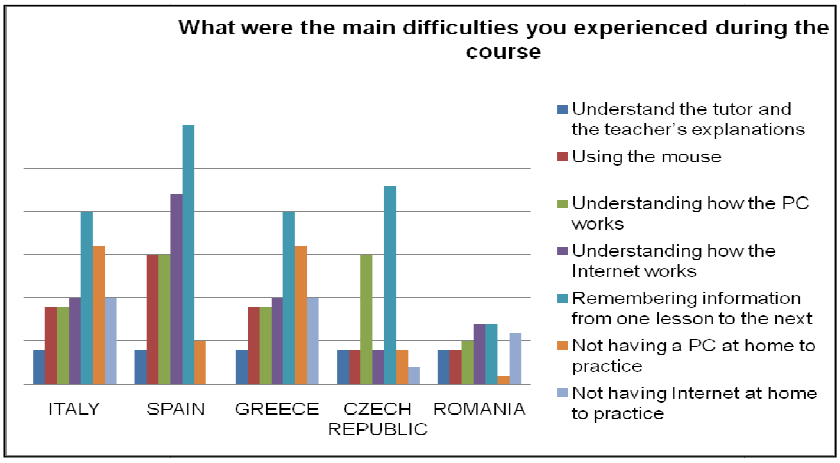
In other cases, participants' unstable frequency of attendance caused some difficulties and delays in the courses programme requiring the repetition of some of the lessons to allow learners to assimilate the subjects. Grandparents' absences were due mainly to difficulties to reach the courses venues linked to the availability of local transportation **(Fig.3, 4, 5).**

Fig.4



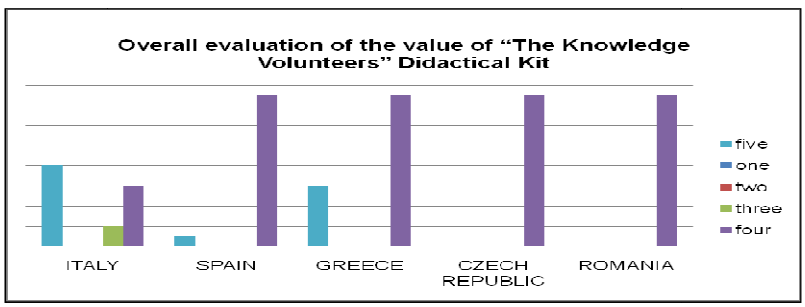
Most of grandparents enrolled in the courses had few or limited knowledge about the PC and found difficulties in understanding and remembering basic subjects as to how the PC or the Internet work. The fact they did not have a PC or the Internet at home to practice also influenced their learning path **(Fig5)**

Fig.5



The didactic kit, in all the partners languages (English, Italian, Spanish, Romania, Greek, Czech) was composed of a manual for 4 different levels of competences (ABC of ICT, Social networking, E-government, Easy Technology) and guidelines for Tutors, Teachers and Grandparents. This material was developed and adapted continuously during the courses to respond to the needs and constraints of teachers, courses organisers, tutors and grandparent learners. As a result, the kit was valued as very useful and was effectively used as a supporting tool for lessons organisation, teaching and self-learning material **(Fig.6)**.

Fig.6



The courses were useful to grandparents in all countries. They judged positively the overall experience to learn about PC but, also, as occasions to socialise and meet new friends from the younger and the older generation. The experience gave them the feeling they can actively and fully participate in society (**Fig.7**).

Fig.7

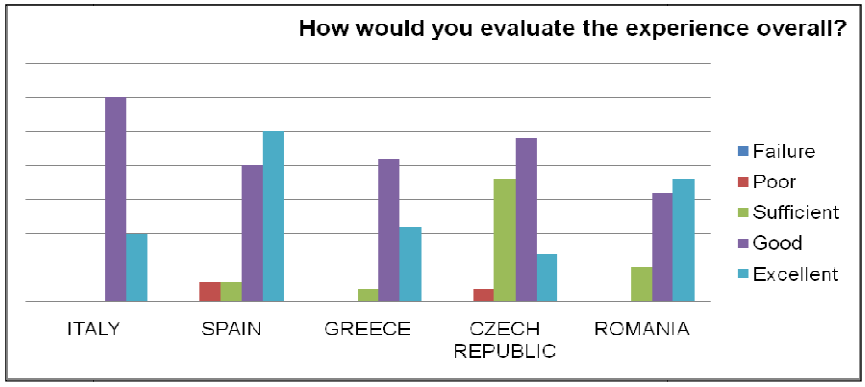
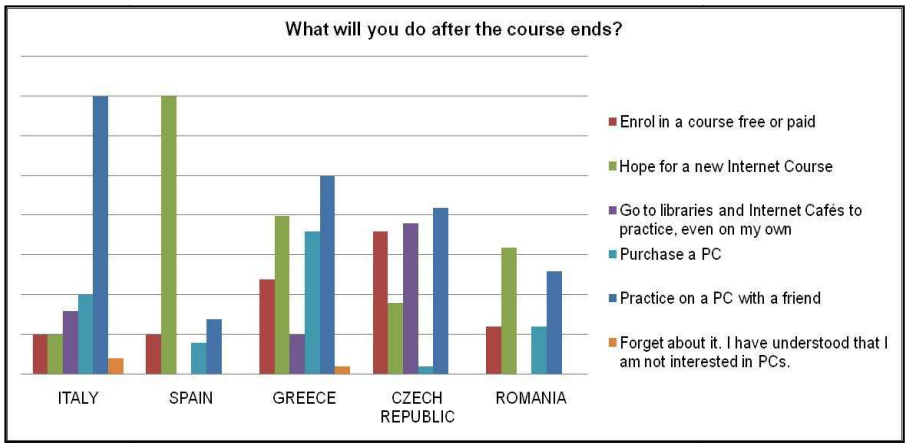
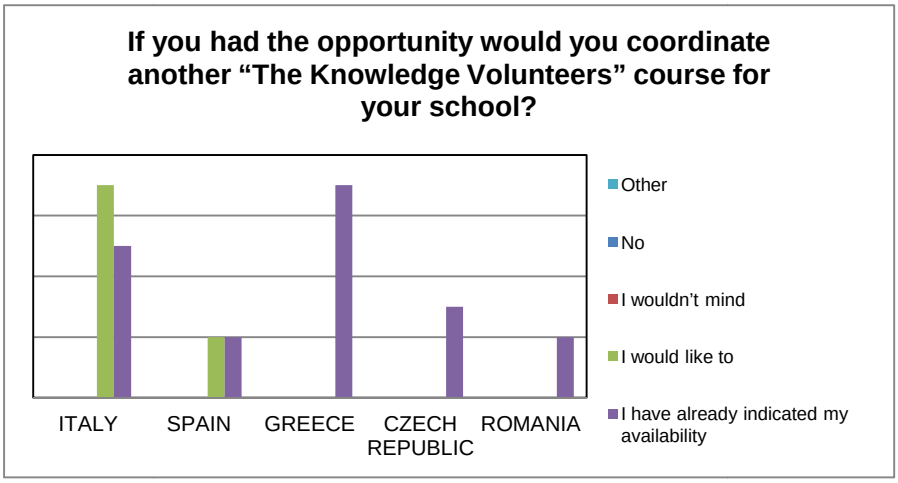


Fig.8



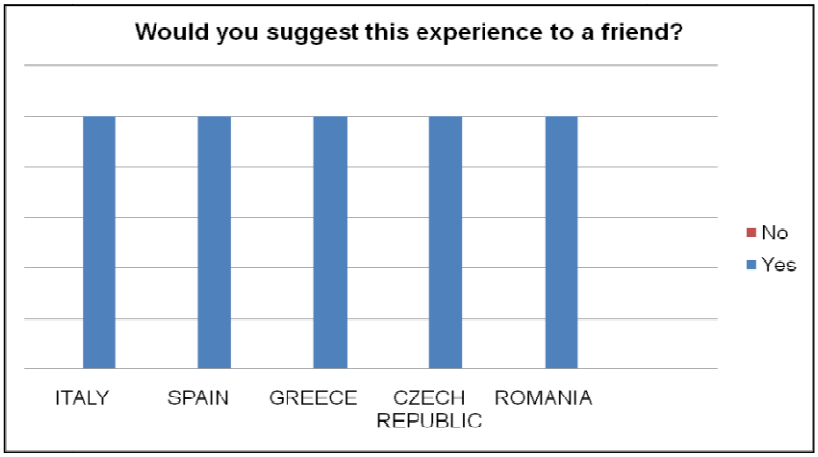
As a result of their experience within the project, grandparents will continue practicing the PC after the end of the courses, in some cases using a friend's PC or going to libraries or social centre. Some of them will enrol in other courses and purchase a personal computer **(Fig.8)**. Teachers and tutors who participated in the courses expressed their willingness to repeat the experience. In all countries, most of the teachers of the schools involved indicated their availability to take part in further projects involving them and their students in similar activities (**Fig.9**).

Fig.9



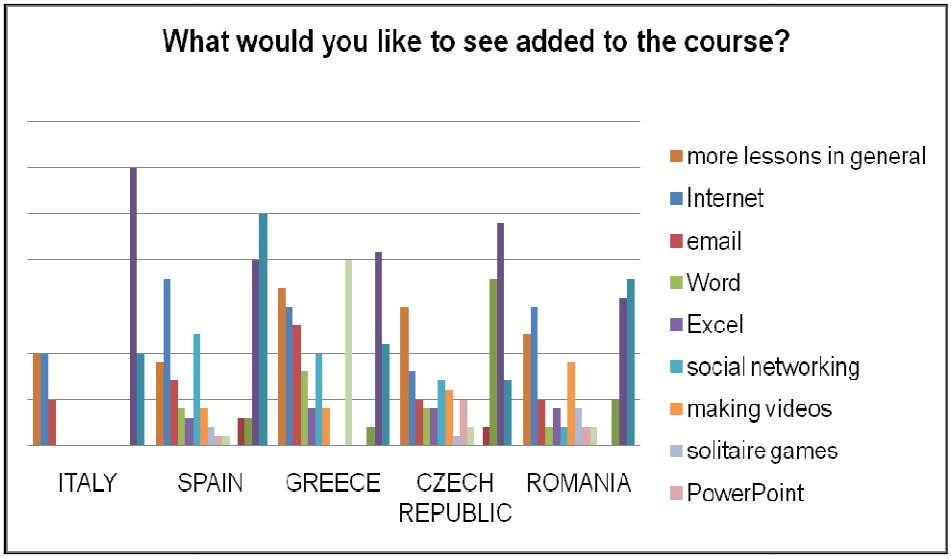
All the students, teachers and grandparents who took part in the project, said they would suggest the experience to their friends and colleagues **(Fig.10)**.

Fig.10



Thanks to grandparents, tutors, and teachers suggestions, future experiences could be improved by adding some subjects to the courses programme and curricula, in particular on the use and practice of the Excel programme or the Internet in general. Courses providing more lessons could in general respond better to the need of grandparents, particularly if they enrol in the courses as beginners with little knowledge of the PC use **(Fig.11)**.

Fig.11


What would you like to see added to the course?
more lessons in general
Internet
email
Word
Excel
social networking
making videos
solitaire games
PowerPoint
ITALY
SPAIN
GREECE
CZECH REPUBLIC
ROMANIA