

Full Length Research Paper

A study on the role of computers in adult education

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This paper discusses how knowledge of computers can affect our daily personal life as well as in the workplace in Greece. Our research is concerned with how useful the knowledge of computers is in the everyday life and work of adults and attempts to investigate the interest of adults for learning computer programmes and different subjects via computers. The research took place from March 30 to April 10, 2015, in Lamia, Greece. Fifty individual adults aged 18-65 years old participated in this study. According to their answers it seems that they consider knowledge of computers essential; however, the same enthusiasm was not expressed when it came to learning through a computer.

Key words: Adult education, computers, technology, literacy, learning theories.

INTRODUCTION

Learning is a personal practice and each person has his own way and perception of learning. Existing perceptions of learning greatly influence teaching methods. There are three major theories of learning, Behaviorism (Watson, 1924; Pavlov, 1927; Thorndike, 1931; Skinner 1968), Constructivism (Bruner, 1961; Duckworth, 1964; Tolman and Hardy, 1995) and Socio-cultural theories of learning (Vygotsky, 1978; Collins et al., 1989; Lave, 1998). In 1995 computers started to be used in the teaching of science and became known as Computer Assisted Learning. In particular, the Department of Veterinary science at the University of Glasgow developed a software package to replace five hours of lectures. The use of technology in the educational process is an important factor in successful teaching because it allows students to learn more in less time. Technology allows students to monitor

their own learning process and also gives them access at the touch of a button to a large amount of information (Lam and Lawrence, 2002). According to Goddard (2002), research shows that there has been an increase in the number of computers used at home and there is also a growing number of technological media in schools for educational purposes. Ginsburg (1998) proposes four approaches related to the integration of technology in adult education. According to Askov and Bixler (1996), the use of information technology can help adult learners to develop various skills such as problem-solving and the development of logical thinking. One important type of literacy in modern times, because of the huge volume of information through new technology, is information literacy. There are several definitions of the concept of information literacy which all agree on the skills needed

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to be able to search, evaluate, organize and use the information collected.

The purpose of this research is to measure how useful the knowledge of computers is in everyday life and work of adults. It also attempts to outline issues relating to adults' learning through the use of computers. According to Lawson (2005), adults have to update their knowledge and improve their skills for job purposes as well as for personal growth. Technology being cheaper has become accessible to everyone and more people have access to computers and the internet (Day et al., 2005). According to Eurostat statistics internet was used by 78% of the households in the EU in 2014 (Eurostat statistics, 2015).

Planning the research

In our attempt to outline the actual opinion of adults about learning through computers, we will present an empirical research investigating these opinions using some simple statistical techniques of preferences through questionnaires, in order to support our findings and our arguments so far.

In order to complete our project, we need to raise a series of research questions that will help us in our analysis of the issues and also guide our research. Thus, the following research attempts to:

1. Outline how useful the knowledge of using technology in is in the everyday and working life of adults.
2. Determine the degree of understanding of adults' relationship with computers.
3. Determine the frequency of computer use from adults.
4. Define how familiar adults are with a series of simple computing applications.
5. Determine the interest of adults for learning computer programmes.
6. Outline the views of adults for learning different subjects via computer.

Sample

For the statistical analysis of our questionnaire, we have chosen a sample of 50 individual adults from the city of Lamia, Greece. This sample replied in our research tool with a sense of responsibility. The completion of the questionnaires was held from March 30 to April 10, 2015. The questionnaire used as research material is listed in Appendix.

Essentially this is a closed-type questionnaire with 14 questions. All of the data and variables created are categorical, 30% of these are nominal and the remaining 70% are hierarchical.

The results of the survey are presented in bar charts in the form of percentages, and frequency allocation tables

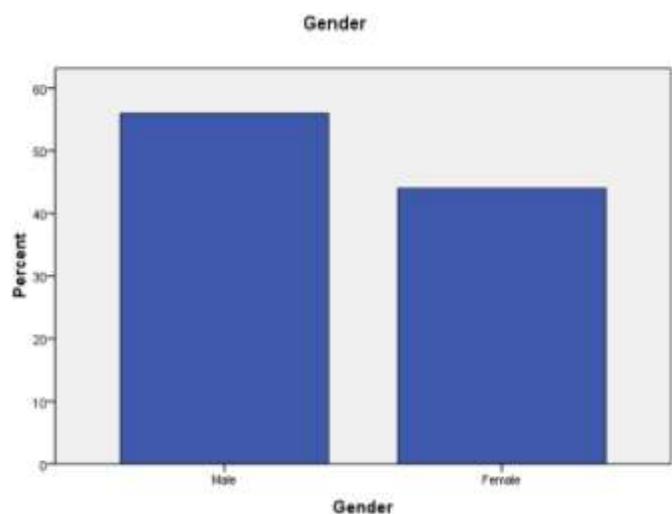


Figure 1. Demographic analysis: Gender.

are listed.

RESULTS

The first two questions of the questionnaire have to do with the demographic features of the sample. Fifty-six percent of those who replied to the questionnaires are men, while the remaining 44% are females (Figure 1).

Forty percent of the respondents are between the ages of 25 and 34 years. 34% are in the age group of 18-24 years old. 16% are between 35 and 44 years. The last 10% range from ages 45 to 65 years (Figure 2).

Fifty respondents were asked to define their level in computers knowledge, 52% of the participants responded that their level is medium, while 30% has a low level. Merely 18% thinks that their level is at optimum.

Next, they were asked how useful the knowledge of computers in their everyday lives is. The majority, that is the 36% of the people asked, answered that their knowledge is medium useful. As shown in the second bar chart, 32% thinks that the knowledge in computers is useful while the 20% in the fourth bar chart that is very useful. 8 and 4% of the sample replied that is not useful and that it is very useful, respectively (Figure 3).

Forty-four percent (44%) of the respondents said that the knowledge of computers is a little useful in their work. Allocations of other responses as shown in the other bar charts do not seem to have large deviations between them. 18% says that is not useful in their work. On the contrary, 14% considers it very useful. Finally, 6% of the participant educators consider that is highly useful (Figure 4).

Seventy-four percent of respondents said that they use a computer, while the remaining 26% do not use

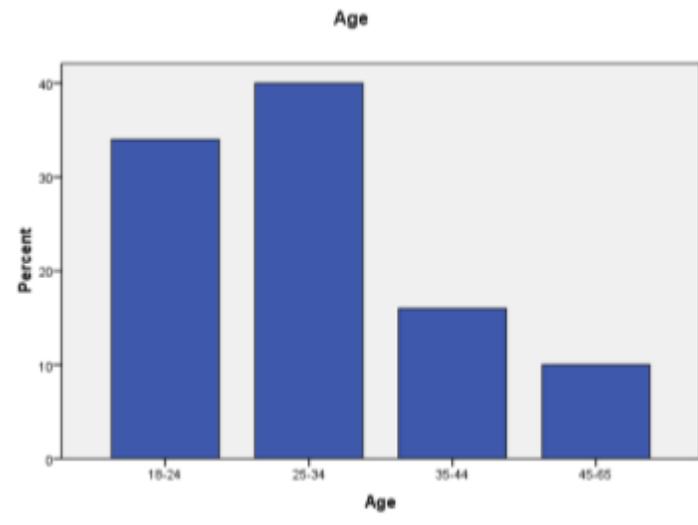


Figure 2. Demographic analysis: Age.

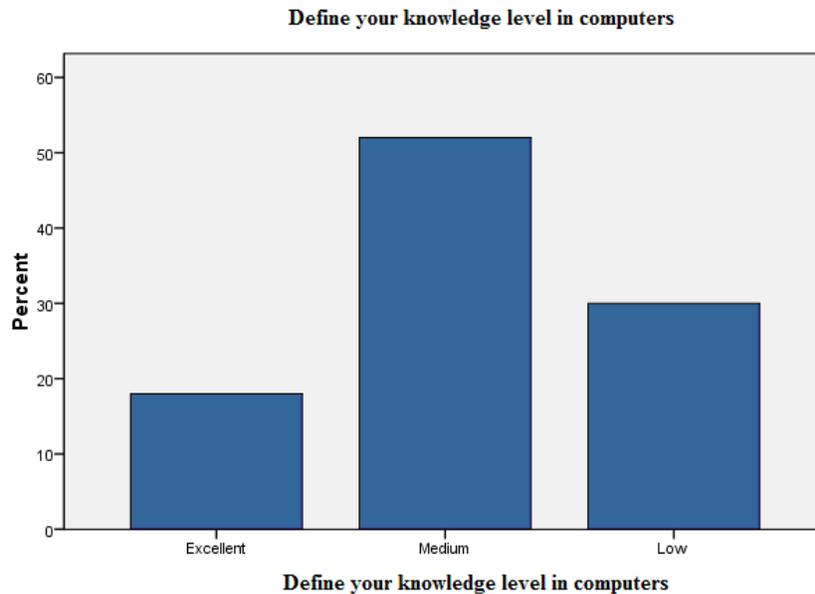


Figure 3. Defining your knowledge in computers.

computers (Figure 5).

Of the thirteen individuals who replied negatively to the question above, 92.3% would be interested in using a computer, unlike the small 7.7% who did not show the same interest for the use of computers (Figure 6). When the individuals were asked whether they have Internet access, 68% replied that they do have access, while the remaining 32% have no access to it (Figure 7). From the 16 individuals that in the previous question answered that they do not have internet access, all of them answered

that they would be interested to have one. That is, 31.4% of the respondents wish to have access to and use the Internet (Figure 8). As shown in the first bar chart, 44% of the respondents use the PC on a daily basis. The remaining response allocations show no particular deviations. 18% of the respondents replied that they use the personal computer on a weekly basis, 20% on a monthly basis, and finally the remaining 18% do not use a computer (Figure 9).

The participants were then asked to describe how

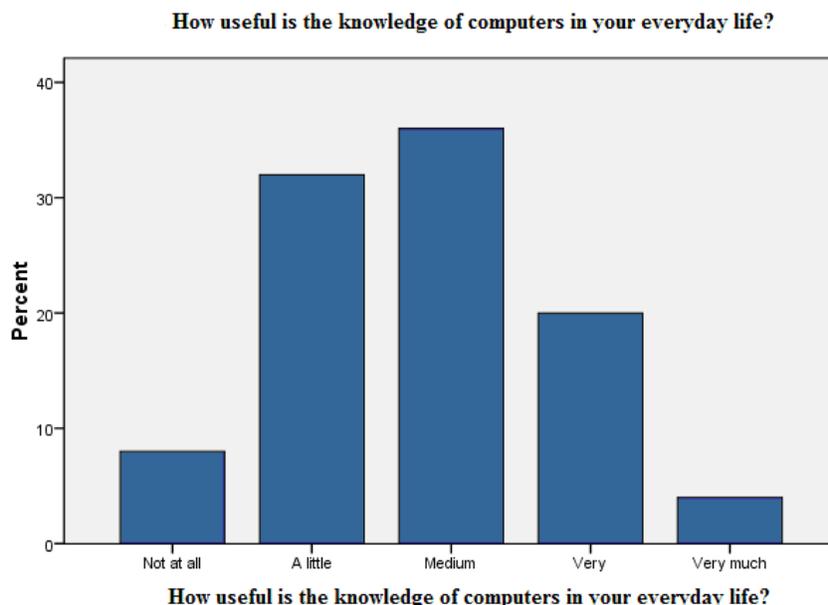


Figure 4. Usefulness of the knowledge of computers.

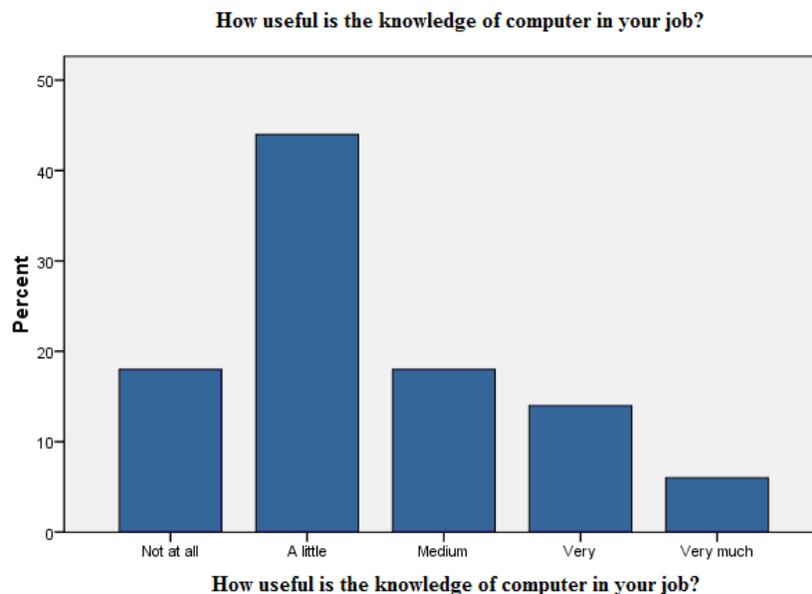


Figure 5. Usefulness of the knowledge of computers in your job.

familiar they are with some computer applications. As far as the Word processor (Word) is concerned, 52% of the respondents replied that they are very familiar with it, 16% are quite familiar, 20% are only a little familiar and, finally, 12% replied that they are not at all familiar (Figure 10). Concerning the use of spreadsheets, 44% responded that they are very familiar with them. The 28% shown in

the third bar chart believe that they are a little familiar, while 10% of the respondents replied that they do not have any familiarity with spreadsheets (Figure 11). For presentation software such as PowerPoint, there is some variation in the results. 30% responded that they have no familiarity, unlike the 12% that believe they have very good familiarity with this kind of software programs. 34%

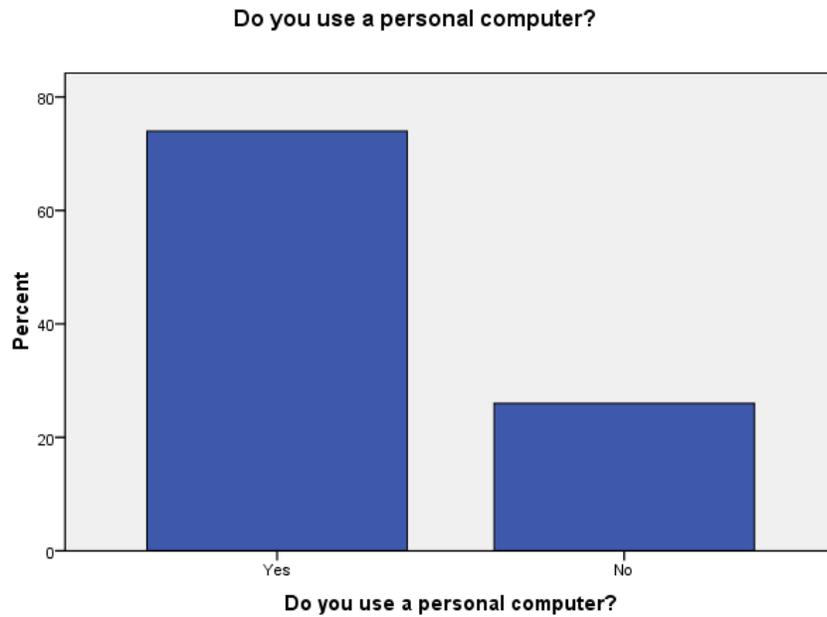


Figure 6. Use of a personal computer.

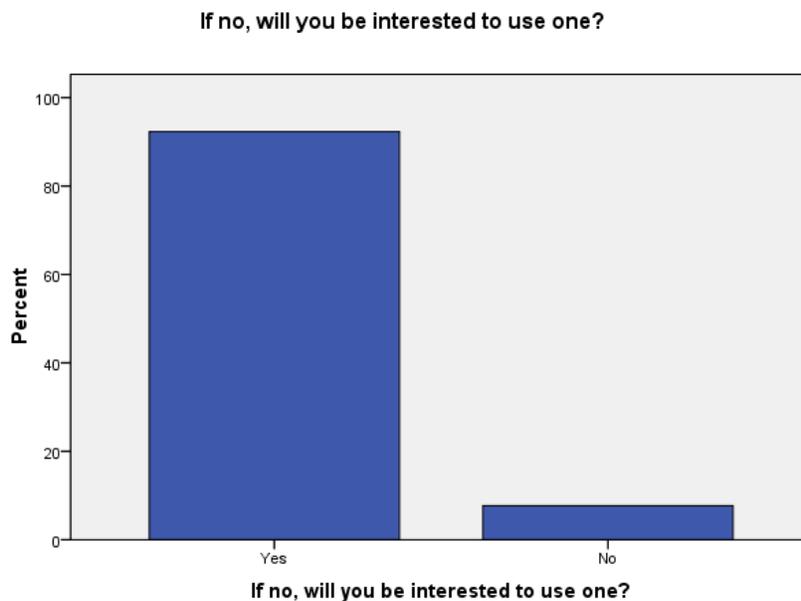


Figure 7. Interest in the use of computer.

think that they have fairly good familiarity with such software and 24% have minimum (Figure 12). Although 66% said that they are very familiar with the Internet, 18% believe that they are a little familiar with the Internet. 12% of the people asked have a pretty good relationship with the cyberspace, while 4% do not have any

relationship whatsoever (Figure 13). Fifty-four percent are familiar with search engines. 22% is also quite familiar with them, but all other distributions do not present any particular answer variation, as seen in the bar chart (Figure 14).

The email is used by 64% of the participants and they

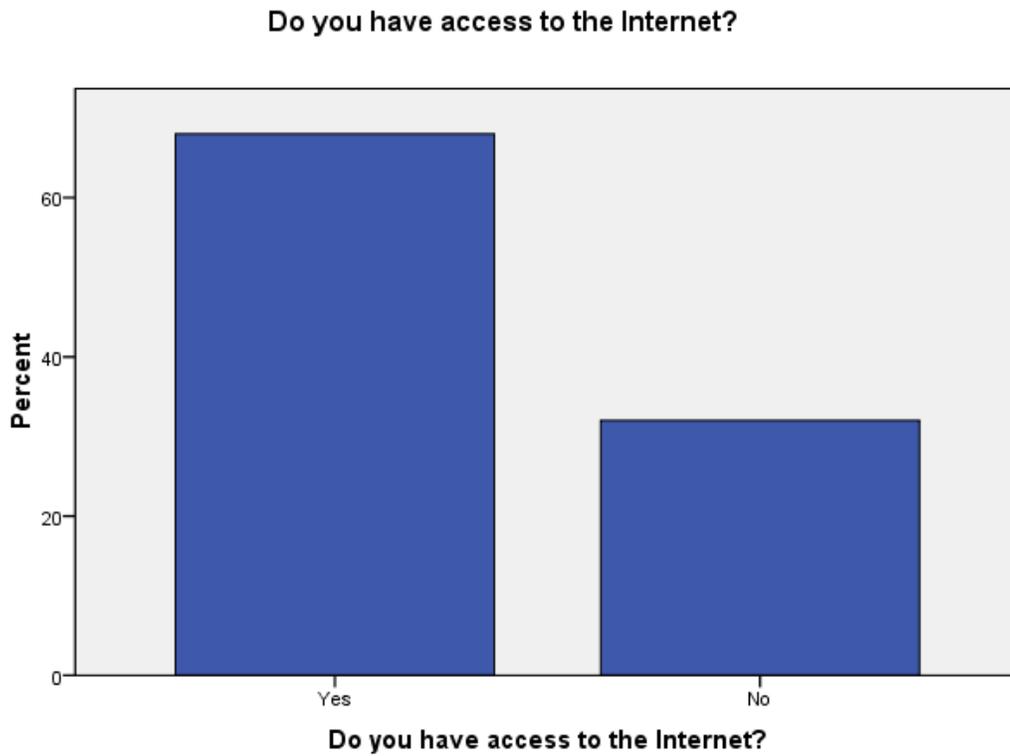


Figure 8. Access to the Internet.

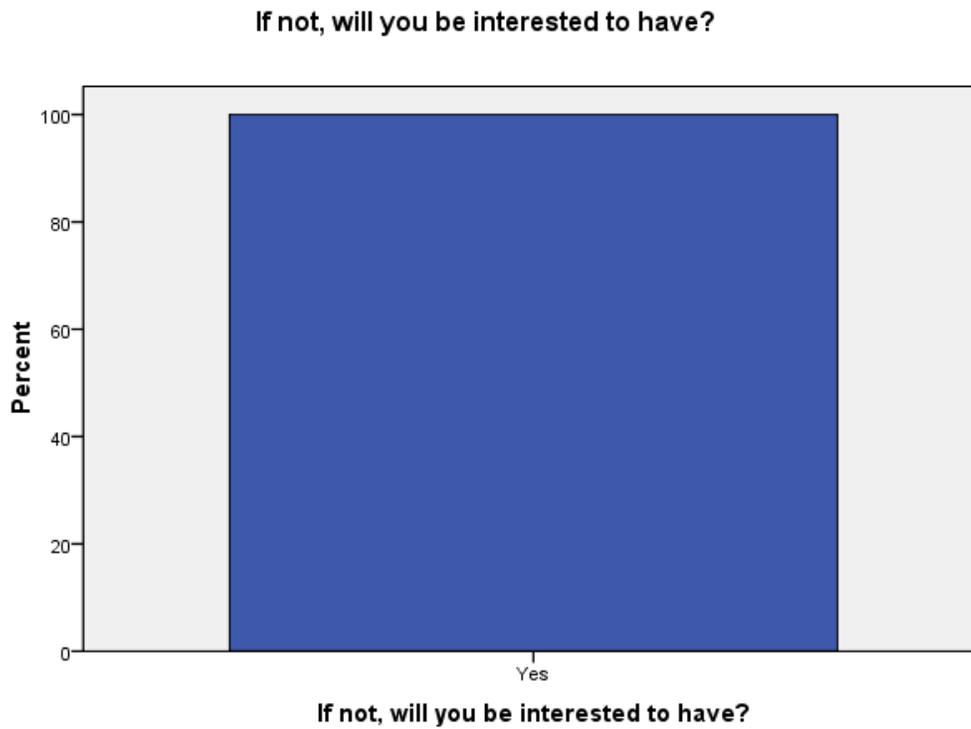


Figure 9. Interest in having access to internet.

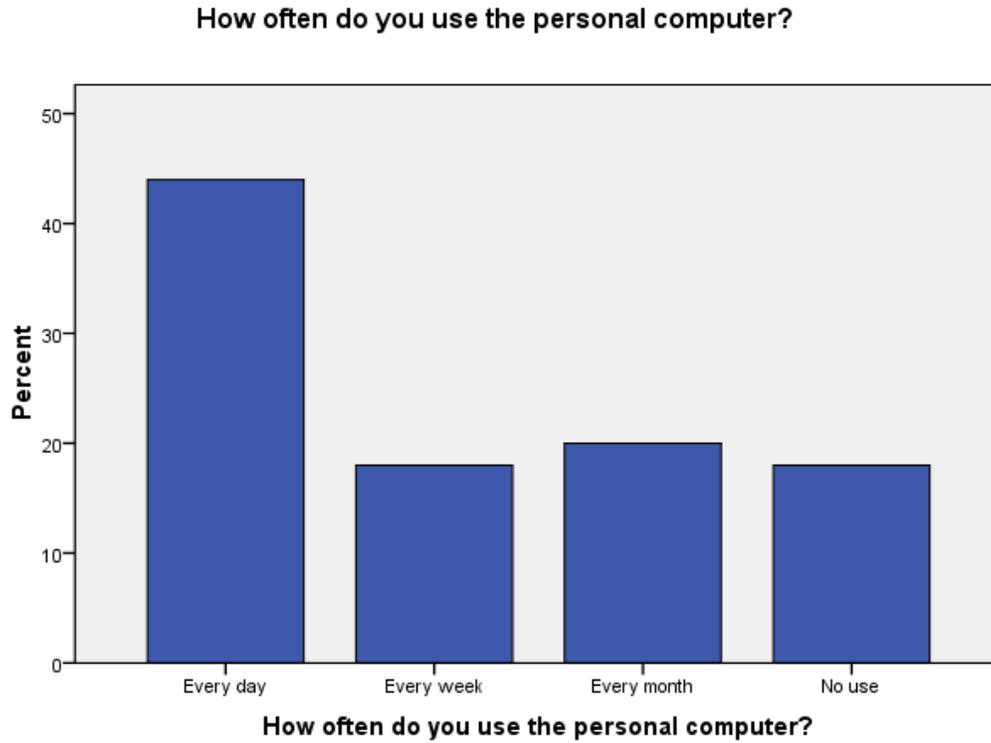


Figure 10. Frequency of computer use.

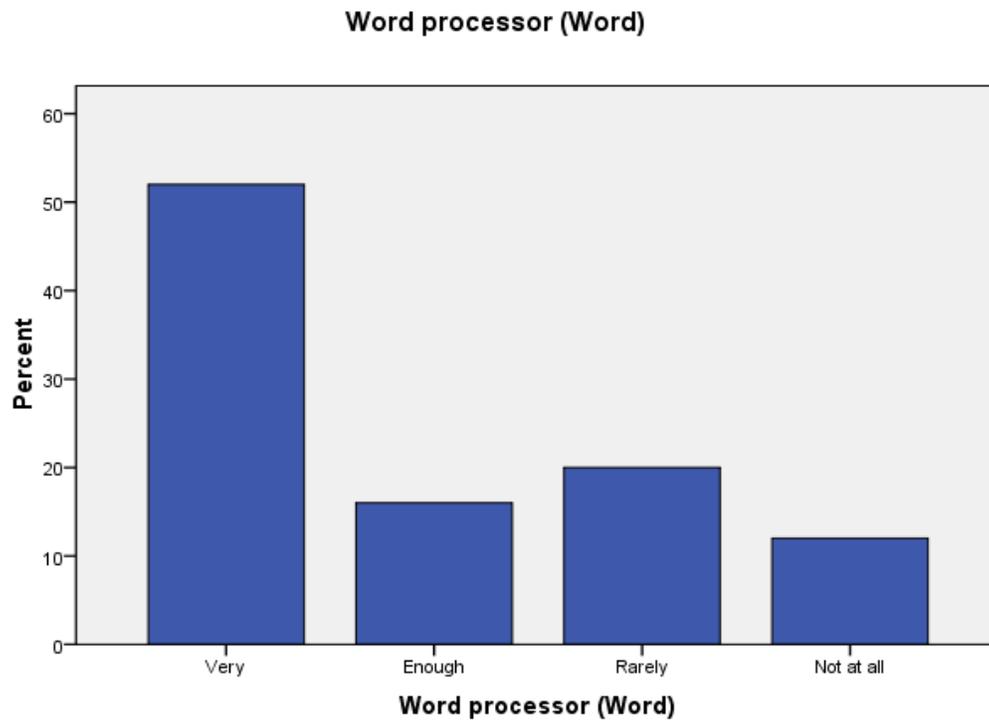


Figure 11. Word processor.

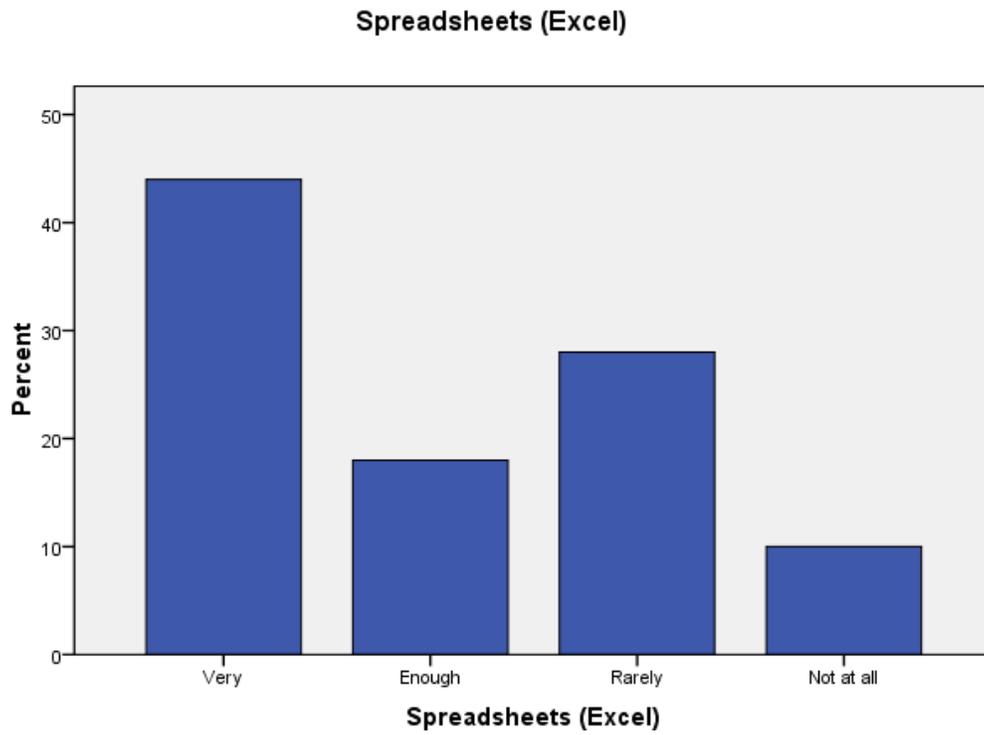


Figure 12. Use of Spread sheets (Excel).

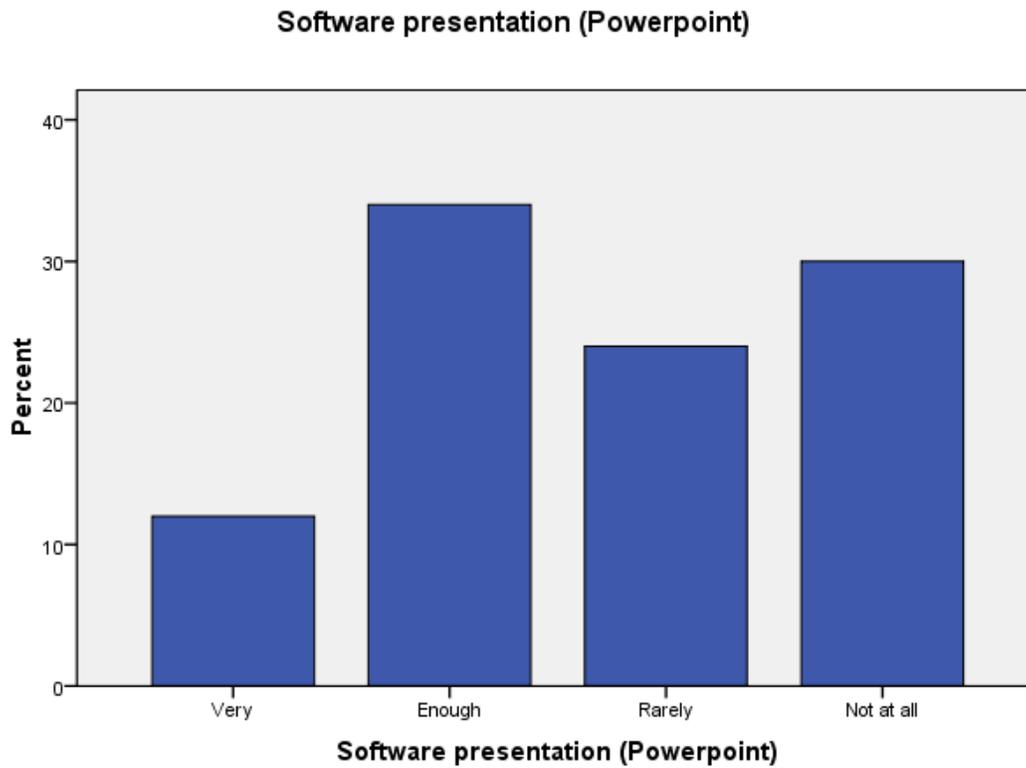


Figure 13. Use of Software presentation (Powerpoint).

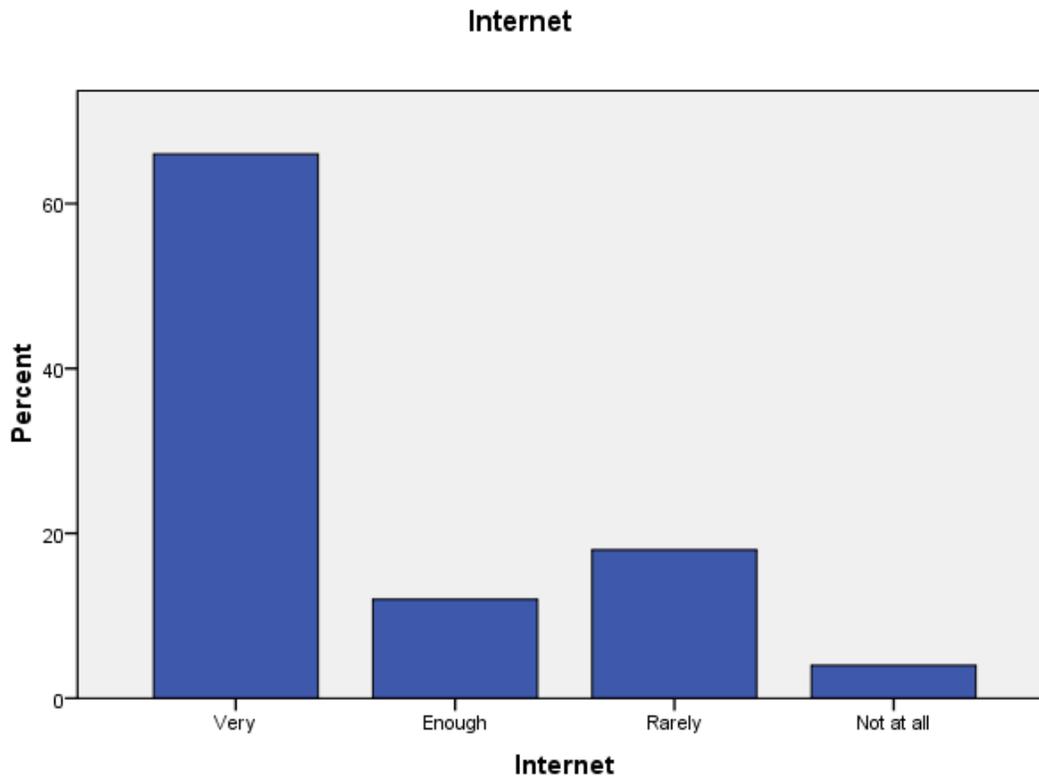


Figure 14. Use of Internet.

have very good familiarity with it, while 16% is quite familiar. 4% of the respondents stated that they are not at all familiar with the use of the email (Figure 15).

As far as Skype is concerned, the situation is a little different. The answers of the respondents are almost identically distributed. As shown in the bar chart, around 20% of the people asked replied that they are a little or not at all familiar with video calling, while around 30% are very familiar or on an average degree (Figure 16). As for blogs, 34% are not familiar with their use. 18% believe that they are very good users, while 26% that they are quite good blog users. Finally, the 22% have nothing to do with blogs (Figure 17).

Forty eight percent are very familiar with the Internet Relay Chat, while 20% said that they are sufficiently familiar with this specific application. All other distributions of responses are of no particular interest (Figure 18).

With regard to Podcasts, 34% answered that they are not very familiar with them, while 26% think that they are very good users of these applications. 26% have no adequate familiarity with Podcasts (Figure 19). As for the USB memory stick, again there is a uniform distribution in the answers of the respondents. 60% believe that they are a little or very little familiar with this device, as shown in the chart. The other 40% is shared between very and no use (Figure 20).

The participants were then asked if they use some kind of learning method. 76% responded that they indeed use some method, while the remaining 24% use no learning method (Figure 21).

Of the 38 individuals who responded positively to the question about using some learning method, 50% replied that they attend tutorial courses. 23.7% have a private tutor and 10.5% are learning using a personal computer (CD-ROM). 5.3% said that they are learning through the Internet, while four people out of 38 (that is, 10.5%), learn some other way (Figure 22).

Forty two percent of the respondents consider that knowing such programs like word or excel is highly useful and would like to improve it. 22% believe that is very useful, while 8% consider that it is not. Distributions of other replies do not show any particular variation (Figure 23). To the question of whether they believe that the computer can be used successfully to learn a specific subject, 62% of respondents replied that they agree with this opinion. The remaining 38% do not believe that the computer helps in learning a specific subject (Figure 25).

From the following diagram, it seems that not many would choose the learning of a specific subject by computer, given that 58% of the respondents stated that they would never choose a learning method through e-learning or CD-ROM. The remaining 42% would actually

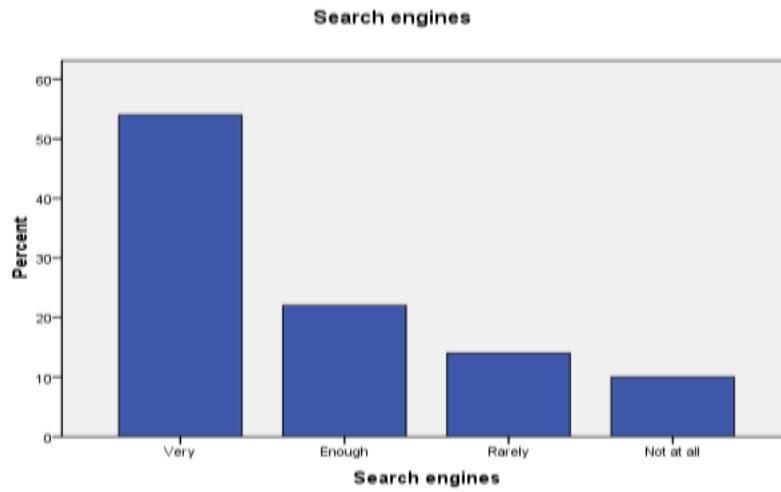


Figure 15. Use of Search engine.

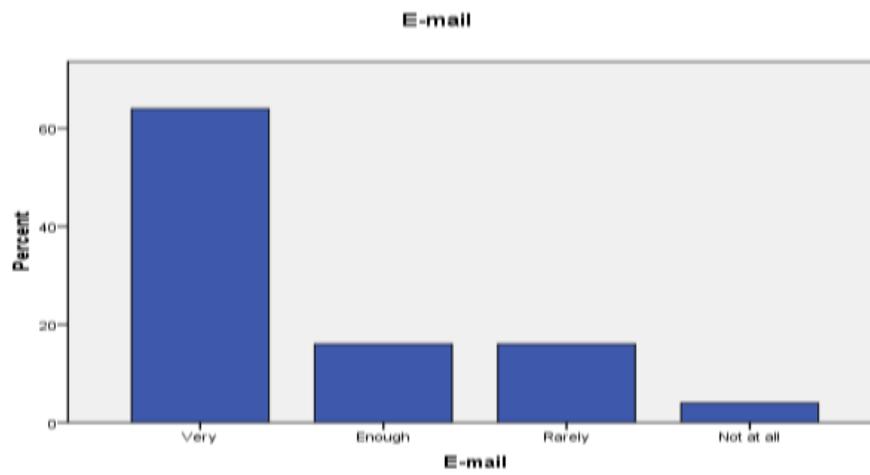


Figure 16. Use of E-mail.

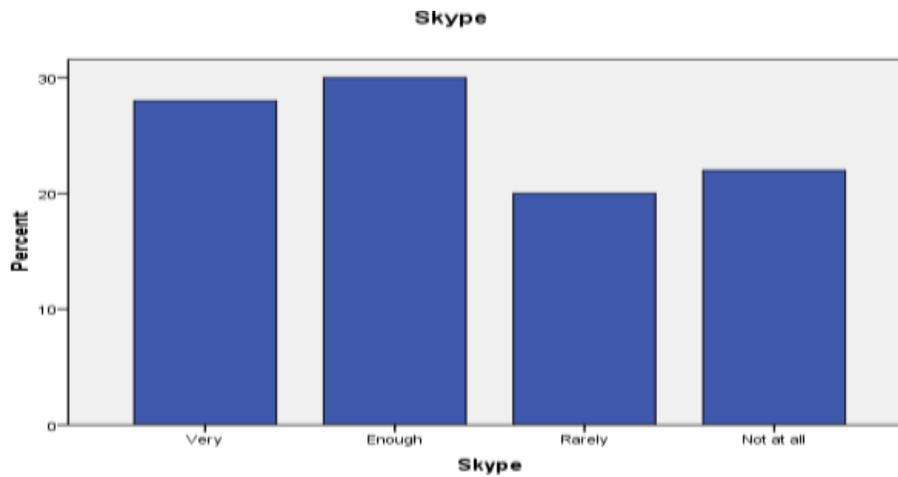


Figure 17. Use of Skype.

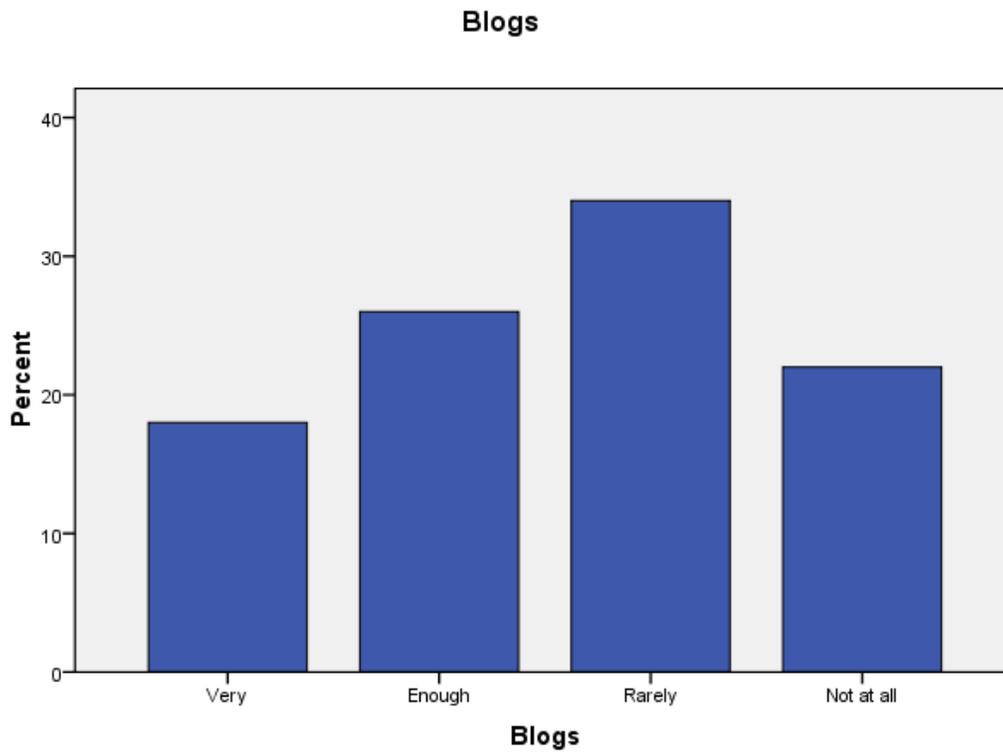


Figure 18. Use of Blogs.

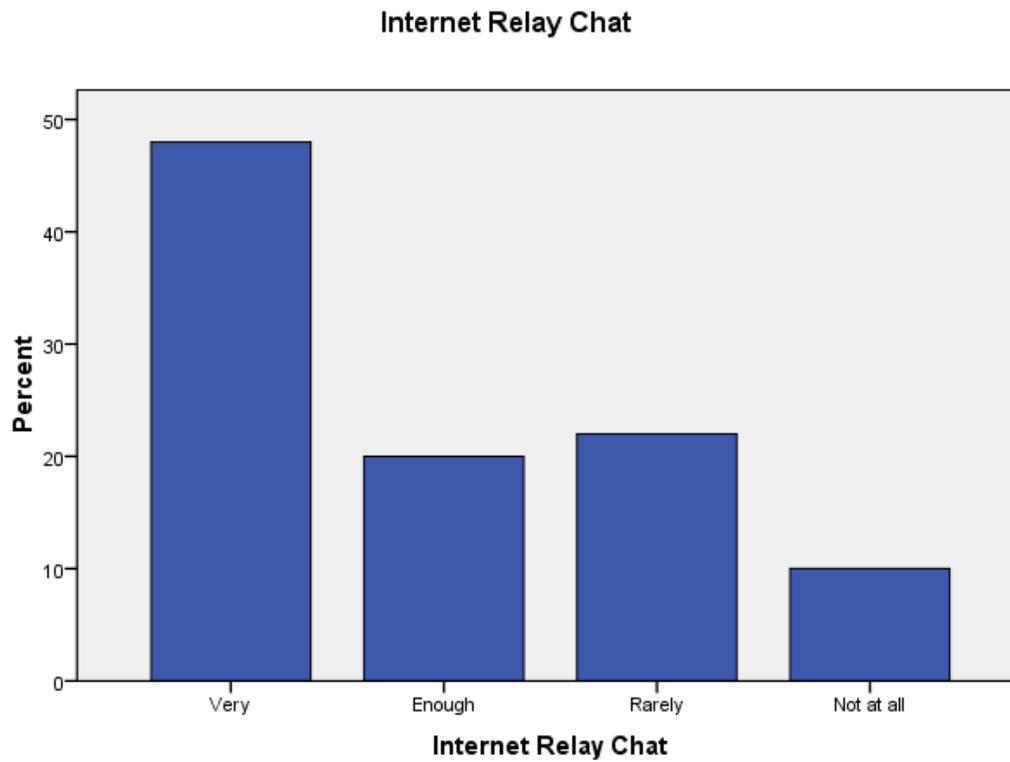


Figure 19. Use of Internet Relay Chat.

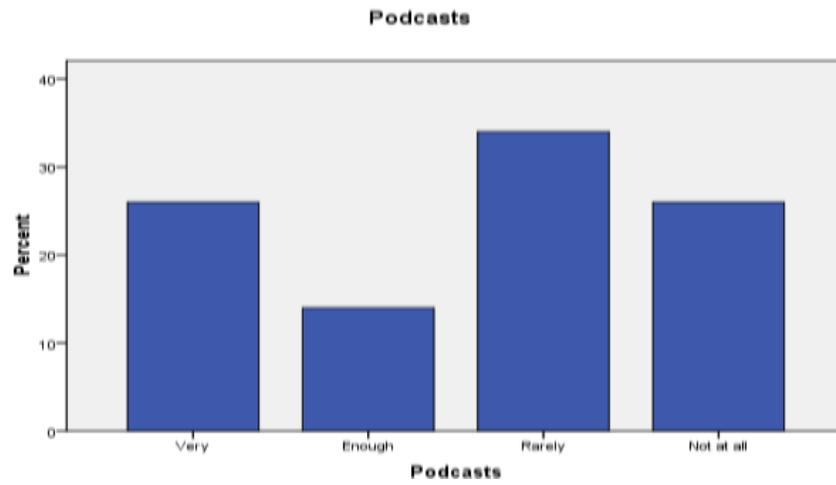


Figure 20. Use of Podcasts.

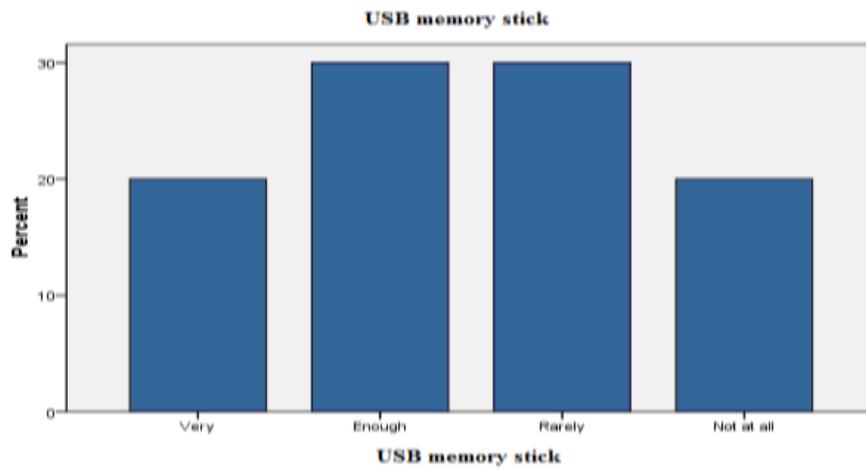


Figure 21. Use of USB memory sticks.

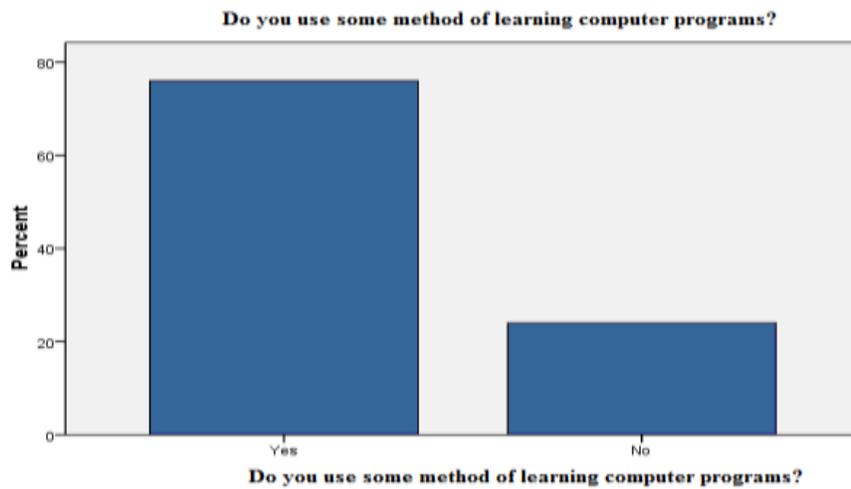


Figure 22. Method of learning computer programs.

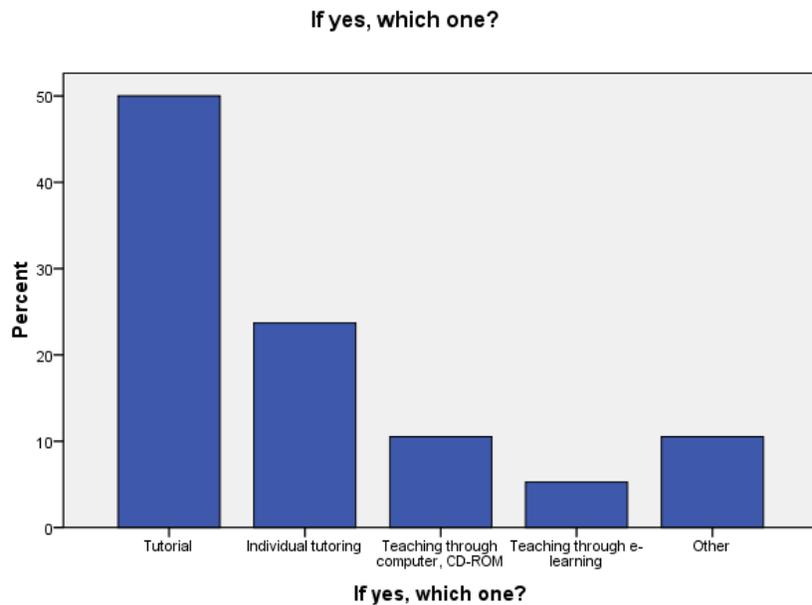


Figure 23. Types of methods.

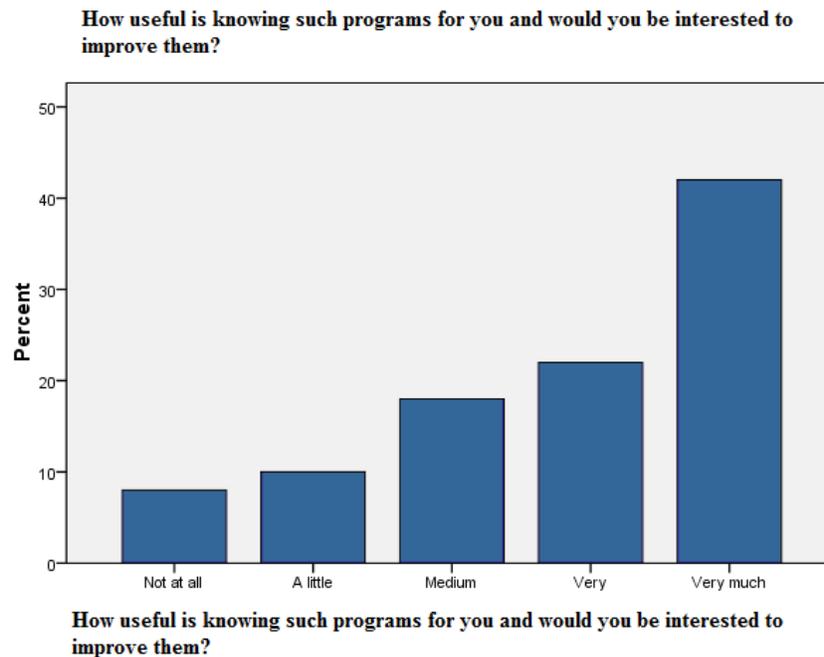


Figure 24. Importance of knowing such programs.

select this method (Figure 26).

Conclusion

The objective of this research is to measure how useful

the knowledge of computers is in the everyday life and work of adults. This research also attempts to outline issues relating to the adults' learning through computing. According to the answers they gave, it seems that they consider the usefulness of knowledge of computers major; however, the choice of learning through a computer

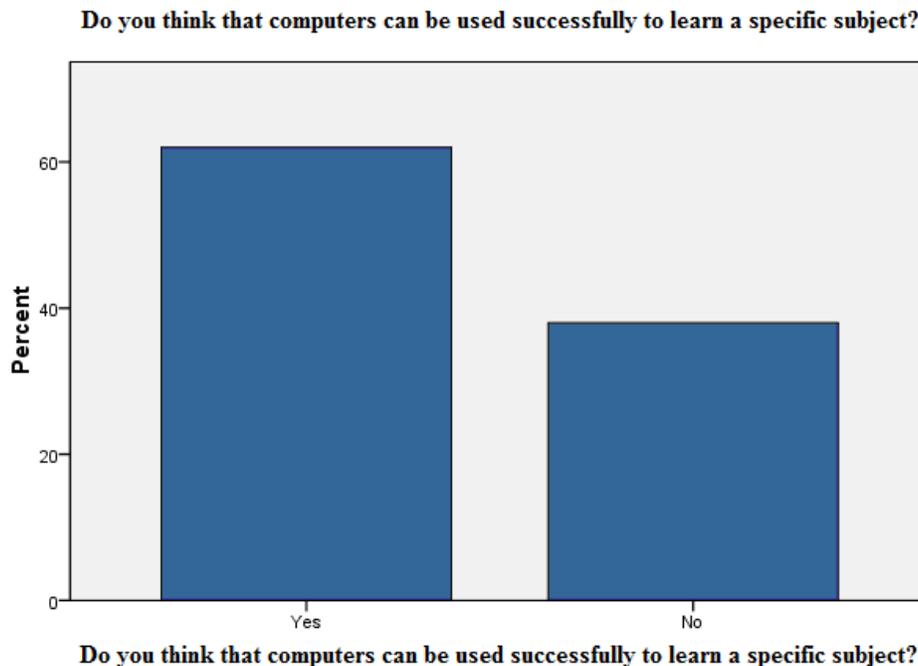


Figure 25. Use of computer to learn a specific subject.

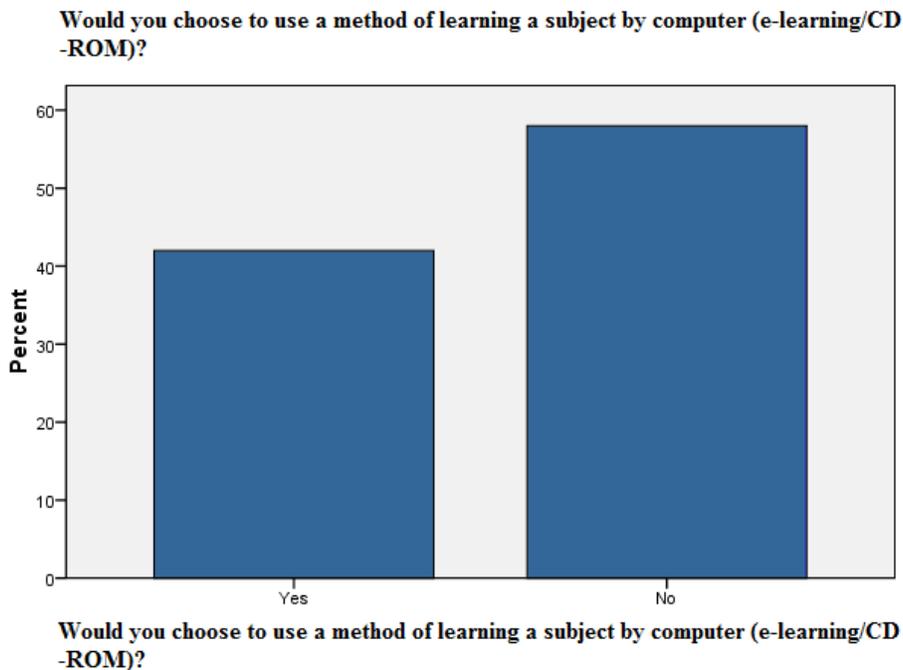


Figure 26. Choice of a method for learning a subject by computer.

does not appear to be of special acceptance. Several adults use computers nowadays and, although not everyone

has access to the Internet, everyone would like to have one. What is more, the frequency of use of computers by

adults is on a daily basis, although many use it on a weekly or even monthly basis.

Concerning the determination of the familiarity of adults with a series of simple computing applications, the findings are ambiguous. In some applications, adults seem to be better users than in some others. Excel, Word, Skype and the search engines are probably closer to the lives of adults, and in many cases, they use them in their work, as well. Thus, familiarity with them is inevitable.

The interest of adults for learning a specific subject with the use of a computer is quite remarkable, and all of them want to improve their knowledge. Many of them use different methods of learning, with tutorials and private tutoring being some of their first preferences.

In any case, of course, the opinion of adults for learning through the computer is not sufficiently encouraging. Most of them believe that learning through the computer is not profitable enough, and they would not select it.

In conclusion, it could be said that, although a large percentage of adults use computers in their everyday lives, they are not familiar enough with them so as to use them for other functions, such as learning a specific subject. Nevertheless, it would be useful to get information from the competent users as regards the benefits and advantages of the method of learning through the computer and for the distance education, as it could be used as an additional means of learning different subjects.

Conflict of Interests

The authors have not declared any conflicts of interests.

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Appendix**QUESTIONNAIRE**

Please tick the appropriate box for the following questions.

Demographic features

1. Gender	Male	Female			
2. Age	18-24	25-34	35-44	45-65	65+

B. RELATIONSHIP WITH COMPUTERS.

3. Define your knowledge level in computers	Excellent	Medium	Low		
4. How useful is the knowledge of computers in your everyday life?	Very much	Very	Medium	A little	Not at all
5. How useful is the knowledge of computers in your job?	Very much	Very	Medium	A little	Not at all

C. Familiarity with the use of a personal computer.

6a. Do you use a personal computer?	Yes	No			
6b. If not, would you be interested to use one?	Yes	No			
7a. Do you have access to the Internet?	Yes	No			
7b. If not, would you be interested to have?	Yes	No			
8. How often do you use the personal computer?	Every day	Every week	Every month	No use	

9. How familiar are you with the following applications/ software or device on the personal computer?

Application/ Software or Device	Very	Enough	Not very	Not at all
Word processor (Word)				
Spreadsheets (Excel)				
Software presentation (Powerpoint)				
Internet				
Search engines				
E-mail				
Skype				
Blogs				
Internet Relay Chat				
Podcasts				
USB memory stick				

D. Interest for learning computer programs such as windows, word etc.

10a. Do you use some method of learning computer programs? Yes No

10b. If yes, which one? Tutorial Individual tutoring Teaching through computer, CD-ROM Teaching through e-learning Other

11. How useful is knowing such programs for you and would you be interested to improve them? Very much Very Medium A little Not at all

E. Learning a specific subject using a computer.

12. Do you think that computers can be used successfully to learn a specific subject? Yes or No

13. Would you choose to use a method of learning a subject by computer (e-learning/CD-ROM)? Yes or No

14. Do you think that there are disadvantages in learning a specific subject with the e-learning method?

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