Study regarding the ICT knowledge evolution on the West region of Romania

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Abstract

ICT has become an important driver of everyday life and economic activity, increases the efficiency of public administration, public services and give priority to a better quality of life in society. The present paper is analyzing some statistics relating to knowledge in the field of information technology and communication from year 2009 to 2012. The data presented are the result of processing more than 100 surveys annually, from a part of the 5 west region of Romania, Timis, Arad and Caras-Severin Counties. Questionnaires have tried to include a higher sphere on ICT knowledge of the persons interviewed, from what is known as a simple user of usual programs, passing over aspects regarding minimum hardware knowledge and ending with the e-commerce. The study revealed a basic knowledge that allow writing, technical, calculations, surf the Internet and transmitting/receiving e-mails. In other areas (accounting, databases, CAD etc.), only those who work day by day in that domain, have knowledge about this software. The situation is the same at hardware chapter, where the vast majority of persons interviewed are not interested in this type of knowledge, even though in most cases would save time and money.

Keywords: ICT, statistics, knowledge society, urban-rural differences

Introduction

Knowledge is information with meaning the information that operates. Therefore, the knowledge society is possible only grafted on the information society and cannot be separated from it. The information society is characterized by the democratization of information, communication, understanding and cooperation. In essence, this company is based on the Internet. Computer Society is a new stage of human civilization, a new superior quality lifestyle that involves intensive use of IT in all spheres of activity and human existence, with a major economic and social impact. Computer Society allows wide access to information, a new way of working and knowledge, enhances the possibility of economic globalization and increased the social cohesion.

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The advance to the information society, based on knowledge, is considered worldwide as a necessary development to ensure sustainable development in the context of "new economy", based mainly on product and intellectual intensive activities.

Information society knowledge is more than progress of technology and data processing and communications applications, it integrates the social dimensions (impact on health care, solidarity and social protection, employment and labor market, education and lifelong learning, etc.), ambient (impact on resource use and environmental protection), cultural (impact on conservation and development of national and international cultural heritage, promote cultural pluralism, the need for child protection, industrial development and multimedia content production information) and economic (development of new paradigms digital economy and new economy based on knowledge, innovation, entrepreneurial culture and management, education of the citizen and consumer).

A study made at the beginning period of the survey, shows, that in our Country individuals who do not need to take a computer course because their computer skills are sufficient is about 8%, much smaller than in other EU countries, and also against the EU average, 24%, as shown in figure 1.

After 23 years of "Romanian" Internet, the information society is on a steady growth path. More than two decades of investment in ICT are bearing fruit, fuelling innovation in ICT areas and transforming the EU into a knowledge-based economy. Since 2005, the ICT sector has become increasingly driven by the expansion in the software market and relatively less by the electronic communication segment. This reflects innovation trends requiring more pervasive software products. Large sales in systems software and eBusiness applications indicate that businesses are adopting new and more mature eBusiness solutions, even if these new investments may still be limited to large companies or early adopters of advanced eBusiness solutions. Users are quickly embracing new services brought about by convergence (Băneş, A., Szabo, L., 2008).

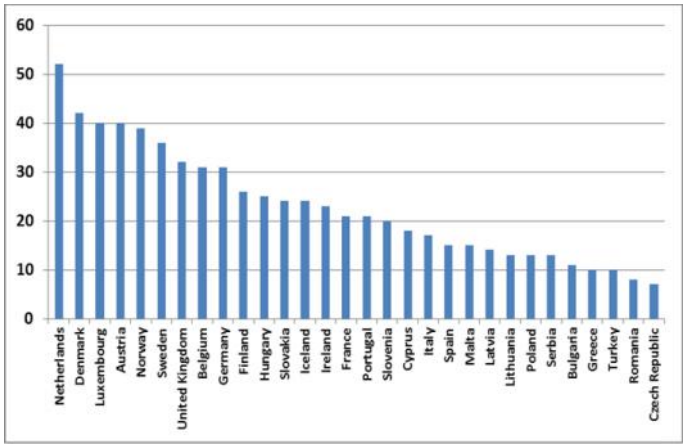


Figure 1. Individuals whose computer skills are sufficient, % (Băneş, A., Szabo, L., 2008)

Materials and methods

Study during college is different from high school and differ for students from day one in from distance learning. What teachers expect from students is to learn more on their own, and themes / activities / projects are usually much larger. Much of the learning process is related to the use of computers and e-learning platforms. As discussed, it is important to know the skills in ICT, in the area where potential future students will be selected.

The study was done on a number of 122 questionnaires in 2012, 161 questionnaires in 2011, 70 questionnaires in 2010 and 84 questionnaires in 2009, a total of 159 from rural area and 278 from urban area, about half women, and age between 18 and 60 years. These questionnaires (Băneş A., Manuela-Dora Orboi, et. al., 2011) contain a total of 24 questions, each with one or more variations of response. Most of the questions have a single answer, yes or no type, to achieve simple quantification and processing of the results, but there are questions with 3 or more answers and also questions with answers that must be written.

Questions cover a pretty wide area, starting from knowledge of ICT considered basic, hardware knowledge and at the finish those concerns such as family income.

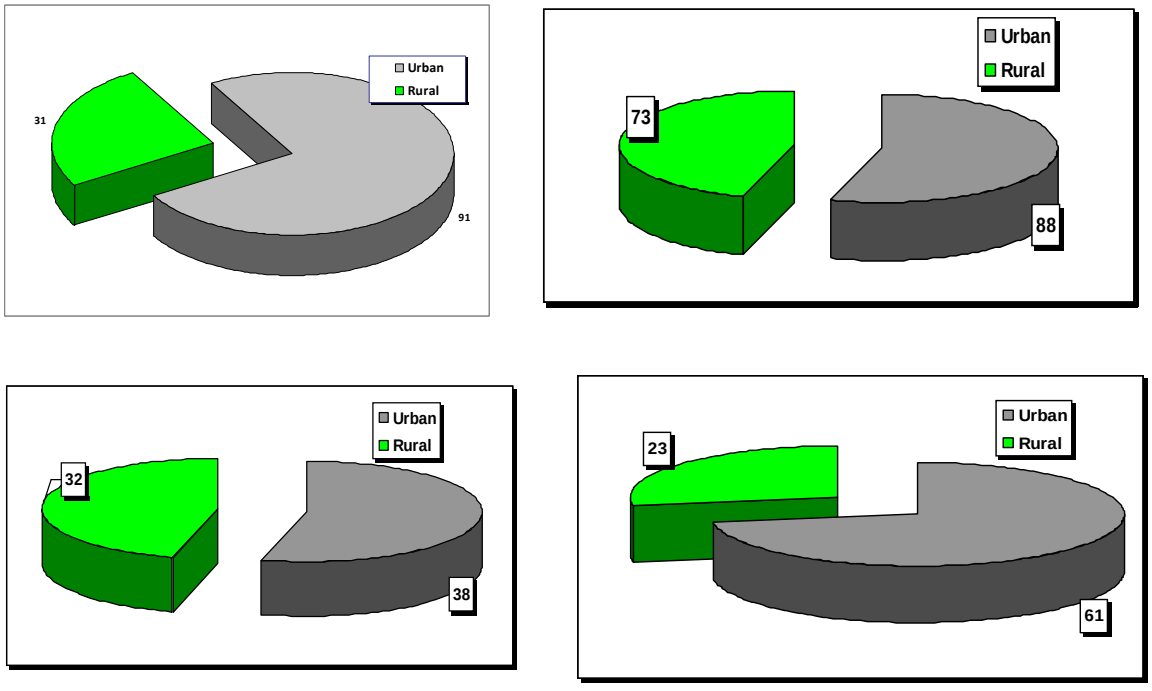


Figure 2. The structure of surveyed population (2012, 2011, 2010, 2009), number (source: the authors)

Results and discussion

The first study was one in which we want to know the so called basic skills of the respondents. In this basic knowledge there are programs from Microsoft Office package, namely MS Word (editing), MS Excel (spreadsheet and graphical representations), MS Access (databases) and PowerPoint (presentation). Another element that has been studied was about surfing the Internet and to know how to transfer and receive e-mail.

As seen in Figure 3 (year 2012), the vast majority of respondents have editing and spreadsheet knowledge, but their number is decreasing drastically to half or below when we refer to databases or CAD. The "presentation" situation is also not very low.

The situation (Figure 4, year 2012) reflects a good knowledge of using Internet and e-mail, in both cases most of the respondents (111 and 110 cases) having such knowledge.

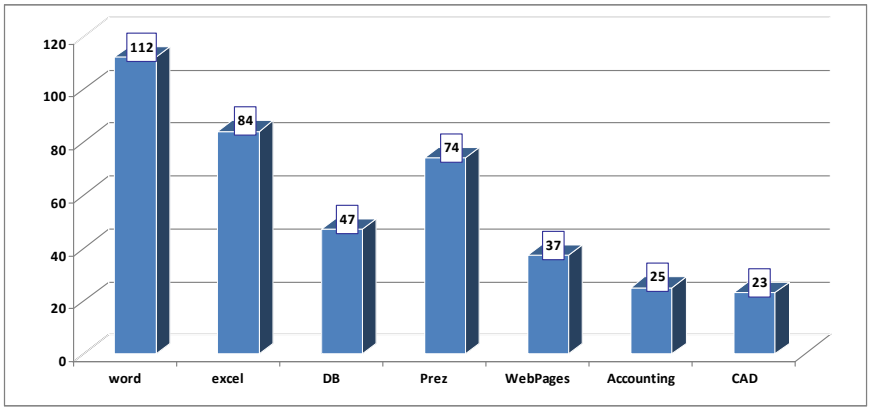


Figure 3. Basic and specific IT knowledge of surveyed population - 1 (2012), number of respondents (source: the authors)

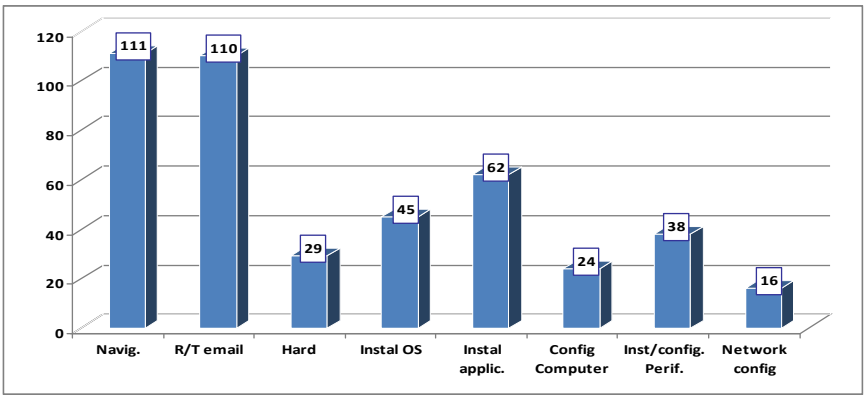


Figure 4. Basic and specific IT knowledge of surveyed population - 2 (2012), idem, (source: the authors)

The situation is not so good, when we are speaking about hardware and about configuring the computer and the applications.

What was the situation in previous years? We focused on basic knowledge, because to the other tracked items, the performance was very low. Also, we want to see if there are differences in urban vs. rural population.

The results are presented in figure 5 and 6, as percent, because the number of surveyed people was different in every year.

As seen, all these "basic" skills have almost the same value, from year 2010 to 2012. Is gratifying that for spreadsheet, database or presentation applications, the level is higher (in most cases) than in previous years.

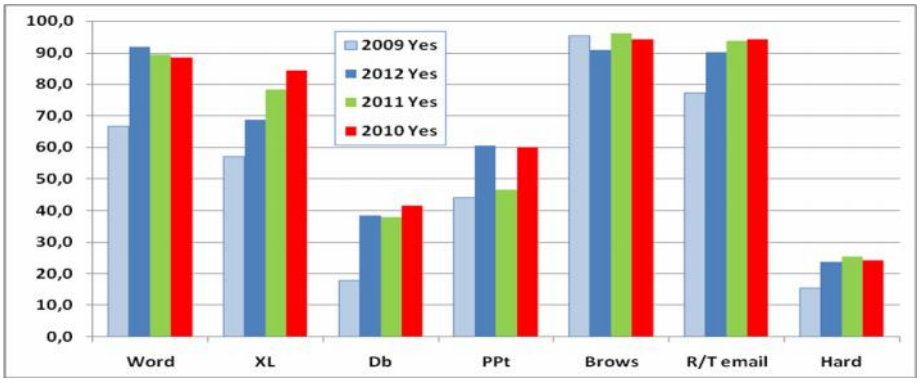


Figure 5. Some basic and specific IT knowledge of surveyed population (2009-2012), % (source: the authors)

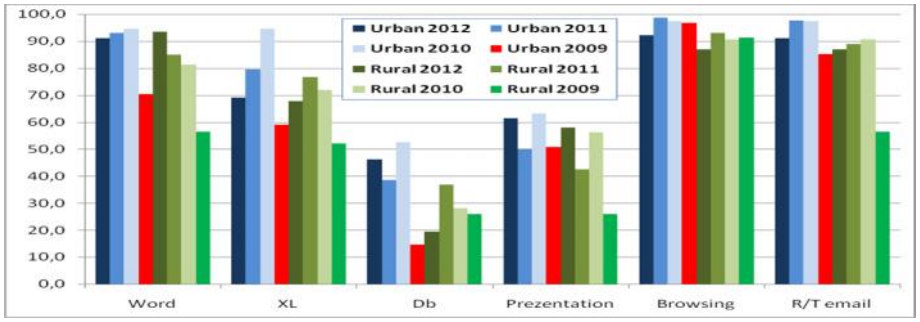


Figure 6. Basic and specific IT knowledge of surveyed population, urban vs. rural (2009-2012), % (source: the authors)

When we are speaking about rural area, the level of knowledge is much higher in year 2012 than in 2009, and is approaching to the urban level of knowledge.

This means that even in rural areas, the computer and the Internet is no longer a mystery, and its use is said to bring benefits.

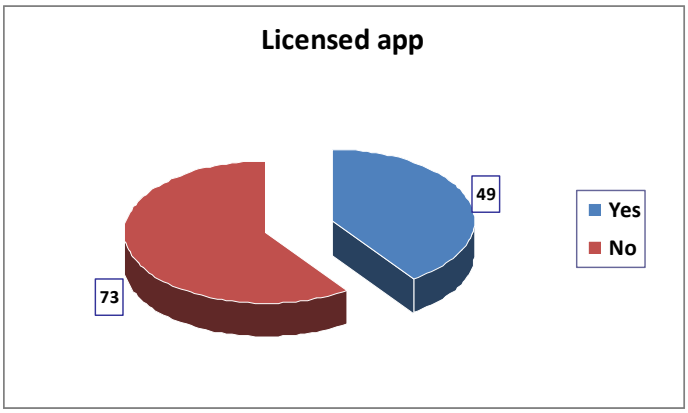
Conclusions

As discussed previously, the knowledge increased in the same field in the studied period, year 2012 compared to 2009, but also preserved the differences between applications. An interesting situation was in 2010, most values were higher compared to 2009 (as expected), but also higher compared to 2011. One of the reasons is perhaps, that 2010 being a year of crisis, many people have tried to specialize in working with computers, to find more easily a job.

There is also a problem (still), regarding the legality, the licenses for the software (figure 6). When we are speaking about operating system, in 2012, more then 50% are working with licensed OS. This is because now, every new computer came with a licensed OS (Microsoft Windows or other), so from this point of view everything is fine.

Regarding the applications, the situation is a little bit different, more than 50% of the surveyed people are using software without license, or shareware. The most common explanation was that they are too expensive, and nobody controls a home user (yet).

The information society is characterized by explosive growth of information "digital" products available through ICT. This means, for governments and administrations, public services more efficient, more transparent and faster, closer to citizens' needs and less costly.



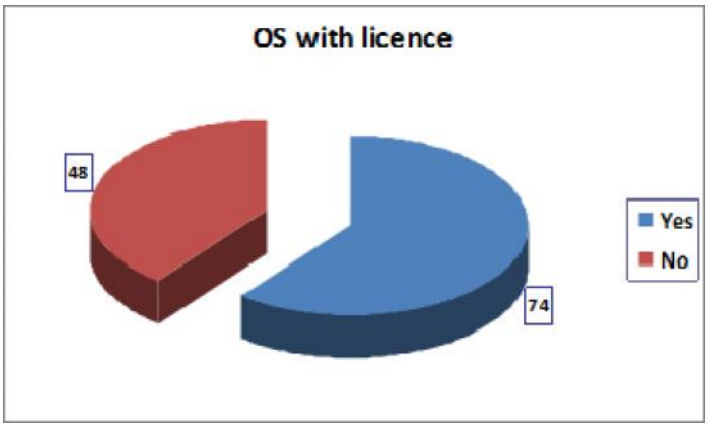


Figure 7. Licensed OS and application of surveyed population, (2012), number (source: the authors)

Romania should be prepared to meet new requirements imposed by the European and global development and the Romanian citizen must be able to use information as a resource in all activities they undertake.

Citizens' access to information is a current requirement of the development of Romanian society, in the context of globalization. Development of information society, based on technical infrastructure development, creates the need to ensure every citizen access to information.

Among the main components of the information society can be said: electronic documents, Internet and network services, electronic libraries and virtual libraries, information centers for citizens, distance education, electronic commerce and electronic payments, mobile telephony, government online services etc.

Recent decades have transformed the information and communication technology (ICT) of a product for a limited number of individuals, due to high cost and relatively large size in a ubiquitous tool in professional and personal lives of people.

Adult education cannot be separated from formal education, being in fact an extension of it throughout life. We believe that is useful and necessary the understanding and also deepening knowledge in ICT, to overcome the barrier of a minimal understanding, that will improve the skills and competencies in this area.

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