The Impact of Information and Communication Technologies in the Social and Economical Domain

Serbanescu, Luminita

Universitatea din Pitesti

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Luminița Şerbănescu ***lect. univ. dr. University of Piteşti***

ABSTRACT. C'est déjà connu que la technologie a produit des changements dramatiques en éducation, culture, communication et économie. Comme résultat, trouver, transmettre et consommer l'information en forme digitale sont devenues des fonctions critiques dans la société humaine et ont beaucoup influencé les relations sociales.

La réforme de l'enseignement dans les pays développés économiquement a aporté l'utilisation de nouveaux concepts, comme les laboratoires virtuels, l'éducation ouverte et à la distance, les bibliothèques virtuelles ou les média center. En même temps on a expérimenté de nouvelles structures d'organisation, de nouvelles modalités de management et de nouvelles voies d'utiliser la technologie.

Le niveau du développement du marché de communications électroniques et la technologie de l'information (TIC), les indicateurs sur la pénétration de l'Internet et la degré de pénétration des connexions en bande large, le degré d'intégration des applications TIC dans le milieu d'affaires sont très importants du point de vue du développement de la société informatique et dans la création d'une société basée sur la connaissance.

Même si ces indicateurs sont à des niveaux encore réduits, leur évolution positive reflète l'attenuation des décalages entre la Roumanie et les pays de la région.

In order to create the most competitive knowledge-based society, an essential part has to be given to the education strategy. Although each individual country is ultimately responsible for organizing its national educational system, the EU included the e-learning initiative in the eEurope1[1] project for promoting this new training system in all the member countries. The goal of eEurope project is the creation by 2010 of the most competitive knowledge-based economy, capable of sustained economical growth, which will create new jobs and will allow better social cohesion.

This new training system is a complementary system, which allows a continuous professional training, more accessible than the classical methods and very beneficial by the elimination of the geographical boundaries, unlimited and equal access for all the users' categories. The possibilities of information personalization offered by e-learning, both as language and contents structure, transform this unit into a powerful instrument for the EU objective of social integration and cultural diversity preservation.

Besides the specific benefits of unlimited access to information, the e-learning training also has long term social and economical effects. This way the citizens are going to become increasingly used to computers and Internet services which in time is creating both the trained man power for producing the information goods in the new economy and the customers for those goods and services as well.

At the very center of the eEurope project is the premise that the Internet network is essential for future economical growth, creating new jobs and improving the quality of life not just in Europe, but everywhere in the world.

One of the first EU objectives in the eEurope project is the updating of the regulations of Internet access in order to obtain a unique telecommunications market. The liberalizatio

[1] Information retrieved from the EU portal *europa.eu.int*, from the document released in October 2002: "Towards a knowledge based Europe. The European Union and the information society".

of the telecommunications services started in 1980 with the objective of eliminating the monopoly situations created by the national phone companies. In March 2002 EU adopted new legal acts to bring down the number of regulations from 23 to 8, allowing thus the free competition in order to decrease the prices and increase the quality of telecommunication services. The direct result is a cheaper and faster Internet access, available for all the citizens. (Table 1)

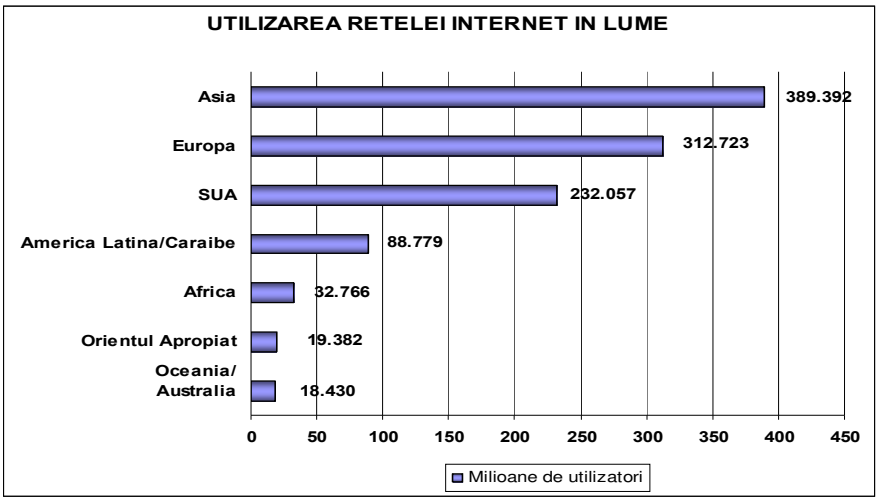
As the number of Internet users increased, the enhancement of information security measures became a necessity. The EU Commission adopted in this direction security strategies for networks including the legal system to fight the information terrorism. Equally important for maintaining the users' confidence is personal data protection. Even since 1995 the European legislation in this direction was created and addendum was adopted in 1998, which insured personal data transfer between different countries using similar protection standards.

Table 1. World Internet Network Usage

World Regions	Population (2007 Est.)	Population % of World	Internet Usage, Latest Data	% Population (Penetration))	Usage % of World	Usage Growth 2000-2007
Africa	933,448,292	14.2 %	**32,765,700**	3.5 %	3.0 %	625.8 %
Asia	3,712,527,624	56.5 %	**389,392,288**	10.5 %	35.6 %	240.7 %
Europe	809,624,686	12.3 %	**312,722,892**	38.6 %	28.6 %	197.6 %
Middle East	193,452,727	2.9 %	**19,382,400**	10.0 %	1.8 %	490.1 %
North America	334,538,018	5.1 %	**232,057,067**	69.4 %	21.2 %	114.7 %
Latin America / Caribbean	556,606,627	8.5 %	**88,778,986**	16.0 %	8.1 %	391.3 %
Oceania / Australia	34,468,443	0.5 %	**18,430,359**	53.5 %	1.7 %	141.9 %
WORLD TOTAL	6,574,666,417	100.0 %	**1,093,529,692**	16.6 %	100.0 %	202.9 %

Source: http://www.internetworldstats.com (Internet World Stats – Usage and Population Statistics-2007)

Diagram 1. World Internet Network Usage



As a result of these measures, by the end of 2006 more than 38% of the EU citizens had Internet access meaning 312 million people, as you may notice in Table 1. In absolute figures, the European number of users is greater than the US corresponding number, but in

percentages, the North American continent leads by far, having almost the double percentage (69.4%), due to leading world information technologies available there. The total number of Internet users passed 1 billion by the beginning of 2007.

The statistical data in the previous table shows some big differences between World regions, the so called digital gap. Thusly, North America, Oceania/Australia and Europe have good percentages of Internet users comparatively to the total population in these regions (in North America and Oceania/Australia even over 50%), while other densely populated regions such as Asia have low percentages of users. Considering this point of view, the globalization becomes dangerous as the advantages are going to belong only to the powerful regions while the gap is deepening. This is the reason why the building of a balanced information society without gaps became a priority for all the responsible governments and the international organisms and institutions.

The broadband networks technology is dynamically developing. Together with the fixed (wired) networks there are also developing the wireless networks, the optic fiber connections and satellite transmissions, as well as the newest technologies in the mobile phone industry.

The effort of the eEurope project is not meant for the creation of some institutions or regulations, but is driven towards the coordinating and establishing a common goal in some of the political activities already evolving at a national or European level. This way every EU member country has the full right to decide over the school system and public services. However, these states have decided to learn from each other by accepting common goals and by free information exchange in order to achieve the common objectives. This procedure is called "the method of open coordination" and its implementation is the responsibility of local authorities.

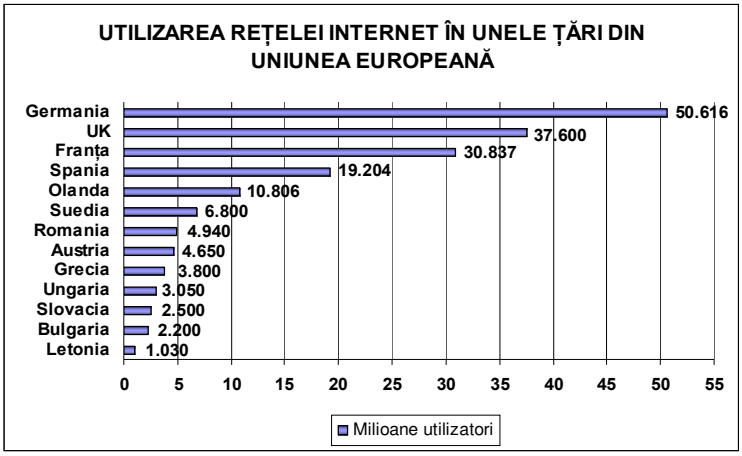
In the Internet economy, its consisting elements are in a complementary relation which means that the development of one of them is generating the development of the others. In the eEurope project, the creation of interesting, useful content in the own language is going to increase the customers demand for broadband services, which will help the investments in telecommunications' infrastructure. On the other hand, in the absence of this infrastructure, there will be no encouragement to create applications and valuable contents.

Table 2. EU Internet Network Usage

European Union	Population (2007 Est.)	Internet Usage, Latest Data	% Population (Penetration)	Usage % of EU	Usage Growth 2000-2007
Austria	8,213,947	**4,650,000**	56.6 %	1.9 %	121.4 %
Belgia	10,516,112	**5,100,000**	48.5 %	2.0 %	155.0 %
Bulgaria	7,673,215	**2,200,000**	28.7 %	12.3 %	411.6 %
Franța	61,350,009	**30,837,592**	50.3 %	12.3 %	262.8 %
Germania	82,509,367	**50,616,207**	61.3 %	20.2 %	110.9 %
Grecia	11,338,624	**3,800,000**	33.5 %	1.5 %	280.0 %
Ungaria	10,037,768	**3,050,000**	30.4 %	1.2 %	326.6 %
Italia	59,546,696	**30,763,848**	51.7 %	12.3 %	133.1 %
Letonia	2,279,366	**1,030,000**	45.2 %	0.4 %	586.7 %
Olanda	16,447,682	**10,806,328**	65.7 %	4.3 %	177.1 %
Polonia	38,109,499	**11,400,000**	29.9 %	4.5 %	307.1 %
Romania	21,154,226	**4,940,000**	23.4 %	27.7 %	517.5 %
Slovacia	5,379,455	**2,500,000**	46.5 %	1.0 %	284.6 %
Slovenia	1,962,856	**1,090,000**	55.5 %	0.4 %	263.3 %

Spania	45,003,663	**19,204,771**	42.7 %	7.7 %	256.4 %
Suedia	9,107,795	**6,800,000**	74.7 %	2.7 %	68.0 %
Marea Britanie	60,363,602	**37,600,000**	62.3 %	15.0 %	144.2 %
Uniunea Europeană	**493,119,161**	**251,031,906**	**50.9 %**	**100.0 %**	**165.9 %**

Diagram 2. EU Internet Network Usage



As a consequence of its integration to the European Union, Romania has to follow all the directions for the creation of an informational society previously presented. Our country has to reach the same development standards set in the eEurope project by the year 2010.

For Romania, the transition basis towards the informational society consists equally of the economical reforms and the fundamental changes in social organization, based by investments in education and scientific research, central institutions of a knowledge-based society, as well as by supporting and promoting the intellectual and science elites. These results will not be obtain unless major changes are going to be made in the mechanism of taking decisions at all levels and also major changes in mentalities of each of us are going to be done.

The admission of Romania in the EU offers multiple opportunities to speeding the construction of the knowledge-based society, having the fundaments of the strategy of creating the European space of research and superior education [1], sustained by international partnerships and projects to obtain the knowledge transfer for using the specific instruments of this new society type: innovation, communication, professionalism.

The statistics about the existing computers and the Internet users in Romania are rather few. However, the annual growth rate of the Internet users is quite important, reaching even 23% lately, as shown in Table 3.

Table 3. Romania Internet Network Usage

Year	Users	Population	% Population (Penetration)	Source
2000	800,000	22,217,700	3.6 %	ITU[2]
2004	4,000,000	21,377,426	18.7 %	ITU
2006	4,940,000	21,266,679	23.2 %	C.I. Almanac[3]

[2] International Telecommunication Union
[3] Computer Industry Almanac

By referring to the main locations (venues) from where the Internet is accessed, we can see that almost half of the answers (47.7%) mentioned their working place and one third (33.6%) mentioned their homes[4]. (See Diagram 3).

Other locations are less preferred, being mentioned by smaller percentages: public locations (8.1%) and school/university (8.0%).

Diagram 3. Regular Internet Access Locations

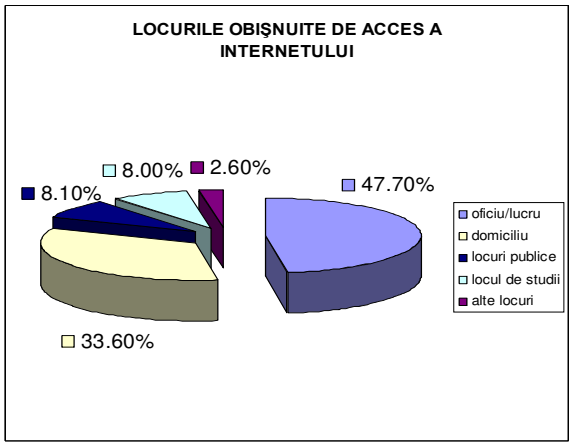
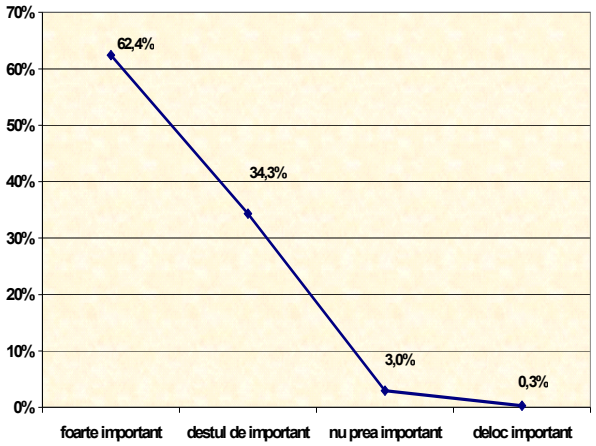


Diagram 4. The importance of the Internet in Users' Daily Lives



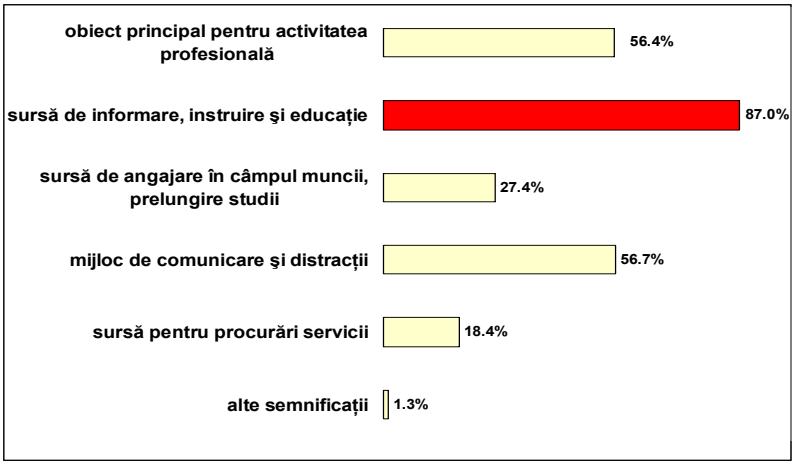
The highest level of Internet importance ("very important" option) is directly proportional to the Internet users' age – the older the user, the higher the importance of Internet – from 50.0% for the users up to 16 years old to 73.9% for the users above 51 years old.

This data allows us to conclude the people that just began using the Internet do not understand/realize fully the utility, the role and the possibilities this technology has to offer.

Once we've learned the importance of the Internet for the people using it, it is natural to study what it means this technology to its users, why is the Internet so important.

The results we discovered in this matter certify that the Internet is perceived/considered mainly "an information, training and education source". (See Diagram 5).

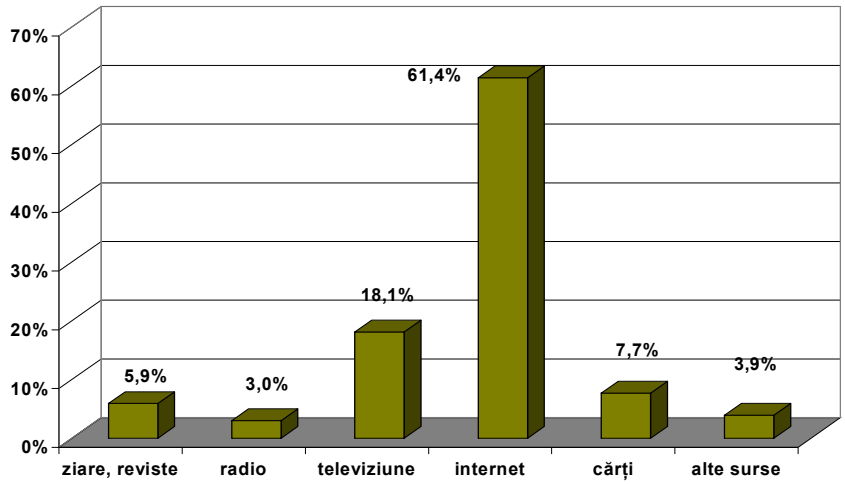
Diagram 5. The Significance of the Internet



[4] The Center for Analysis and Sociological, Policy and Psychology Investigations CIVIS

The Internet has first of all, the significance of an information, training and education source for the users [2]. The most of them (61.4%) retrieve their information and they train themselves using the Internet, and 18.1% get their information mainly from TV. Other information and training sources hold insignificant shares. (See Diagram 6).

Diagram 6. The Main Information and Training Sources



Conclusions

The study results show that the Internet is mainly used for communication, information and training: "sending/receiving e-mail", "reading news" and "searching information about/for education/studies/training".

Romania has made important progress in meeting (fulfilling, complying) some educational and training conditions demanded (asked, requested) by the European Union, such as taking part in communitarian programs Socrates, Leonardo and Youth, adapting the Romanian set of laws in education to the decisions, resolutions and communitarian declarations as the ones regarding the equal chances to all, insuring the mobility in the superior education, education in foreign languages, the use of educational technologies, distance education, continuous formation.

BIBLIOGRAPHY

[1]. FILIP, Florin, DRAGOMIRESCU, Horațiu – Problema societății cunoașterii în România. Reflecții în context european, p26, din lucrarea Societatea cunoașterii, Ed. Economică, 2006.

[2]. GREMALSCHI A., Impactul noilor tehnologii informationale în educatie, Chisinau,2003, http://www.gate.md:9000/studii/a_gremalsky.pdf

[3]. NOVEANU E., Competentele educatorului în scoala de mâine. Impactul informatizarii //Tehnologii educationale moderne, vol. V, Ed. Le mot, Bucuresti, 1999.

[4]. RĂDULESCU Magdalena, PÎRVU Daniela "Modern solutions for the banking distribtion channels", Revista de Management şi Inginerie Economică, nr. 2/2007, Cluj-Napoca.

[5]. VAIDEANU George, Educatia la frontiera dintre milenii, Editura Politica, Bucuresti, 1988.