THE PROBLEM OF THE DIGITAL DIVIDE VERSUS PROFESSIONAL COMPETENCE

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Abstract

Quick progress in modern technologies resulting in the Internet development causes more and more institutions to offer their services through the network. The problem is the consequences of the division of people into those who can, are able to and want to use informational technologies and those whose awareness in this area is very little or none. The faster and faster development leads to great differences in qualifications between groups who do not have access to the Internet and the remaining part of the society. Both the administration and the business community have already noticed the issue of not using ICT by people as an important social problem.
The article presents the analysis on how many people still do not have digital competence, as the situation evolved over the years. As the conclusion the Authors pointed out that in many sectors of the economy the knowledge of ITC is a prerequisite for getting a job.

Key words: digital competence, digital divide, labour market

The Internet revolution can be compared to the revolution caused by printing invention. Gutenberg's invention divided people into those who could not read or write and those illiterate ones. Now the Internet begins to divide people into those using computers and the Internet and "digital laymen".

Quick progress in modern technologies resulting in the Internet development causes more and more institutions to offer their services through the network [4]. The problem are consequences of the division into those who can, are able to and want to use informational technologies and those whose awareness in this matter is very little or none. The faster and faster speed of development leads to great differences in qualifications between groups who do not have access to the Internet and the remaining part of the society. No access to the Internet means no access to information and communication technology [6], which leads to marginalizing and excluding the whole groups

from the information society. This disadvantageous phenomenon is called a digital divide. Groups endangered with the digital divide in Poland are the unemployed, people in a difficult economic situation, women out of work, the disabled, the elderly, people requiring care, youngsters from risk groups, isolated countryside communities and other groups endangered with marginalization. Access to the Internet and using modern technologies has influence on economic growth and the life standard of the society. Communication and information technologies play bigger and bigger role in everyday life, too. The advantages of using technologies are visible in areas such as science, education [5], trade, services, health, leisure, culture and entertainment.

Skills connected with using computers, tools and information techniques are more meaningful in looking for a job or being active professionally. The Internet is becoming a more and more useful tool in looking for a job. Many Internet services offer advice connected with job hunting, tests for professional aptitude, models of application documents. A person looking for a job can view job offers according to their own criteria. They can place their own documents in a chosen database, follow the news from the job market, search information about courses and trainings, get familiar with rules, etc. Using the facilities of the Internet tools requires, besides the knowledge of modern methods of looking for a job, basic skills in using computers and the Internet.

In many economic areas it is necessary to have IT qualifications to find a job. Access to technologies makes information available and it often decides about the possibility to take part in important events [6]. People who do not use modern technologies can find it hard to function in the modern world. Using computers and the Internet makes life better. The problem of not using information and communication technologies is seen as an important issue in the society by administration and enterprisers.

Research in society diagnosis has been carried out since 2003. The research is panel, which makes it possible to compare results of other research for the same group of responders. In 2011 two thirds of the surveyed households had computers, 50% had access to the Internet, 15% used mobile access offered by mobile phone operators.

According to the initial diagnosis in 2013 70.2% of households have computers and 66,9% of the surveyed households have access to the Internet. The number of the mobile Internet users is also growing. Internet users use Internet links through local networks or cable TV providers. The number of landline users is decreasing by about 10% in comparison to 2011. The number of PCs is falling as they are replaced by laptops used by nearly half of computer users. Popularity of tablets used by 9.3% of the general number of computer users is also going up.

Although there are more Internet users, the use of networks is varied due to various social and demographic factors. Research results show that financial aspects are vital for about 10% of the surveyed in 2011 and about 13% in

2013 and no technical possibilities of connection is given as the reason of not using the Internet by only slightly more than 1% of people not using it.

There is clear division of people using the Internet according to age. Most people using the Internet are young. In the age group of 16-24 more than 90% of people used the Internet in 2011. In the age group of 25-35 the percentage of users fell from 85% for twenty-five-year-olds to 75% for thirty-five-year-olds. Among forty-five-year-olds there were only 60% of the Internet users. There has been a clear decrease of the number of users since the 45th year of life according to age. Among sixty-year-olds there were only 25% of Internet users. If we look at the problem of the Internet access in particular age groups, we will see that in all age ranges there were differences between the numbers of people having access to the Internet at home and those using it. The youngest people used the Internet more than had access to it at home. At 25 it was quite the opposite and the number of people not using the Internet despite having access to it grew according to age and between 45 and 60 it was about 20%. It is similar in 2013, which can be seen in the figure 1 below.

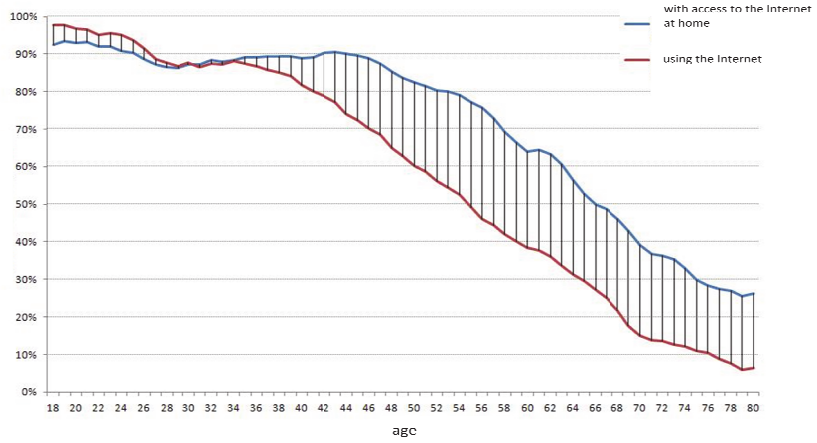

Figure 1. Access to and use of the Internet according to age. Source [1]

The situation is slightly better in the age group of 35 where almost all computer users use the Internet. The number of computer users grew in comparison to 2011 in the age group of 35-45 from 80% to 90% and for sixty-year-olds from 60% to 65%. The elderly still use PCs. A large number of people do not use either computers or the Internet as they do not need to. Some people are not users because of lack of basic skills or knowledge. Research in the group of people not using the information and communication technologies shows that in 2011 44% of people did not feel the need to and 31% did not have proper equipment. In 2013 no need to have access to the

Internet is declared by 57% out of the non-user group and 30.4% give lack of proper equipment as the reason. Lack of proper skills is still an obstacle declared by 26.5% people. Among people older than 45 still more than 20% of people do not use the Internet despite the fact that they have access to it at home.

There is a clear division in using the Internet and computers according to education. Comparison of these dependencies according to five surveys is shown in figure 2.

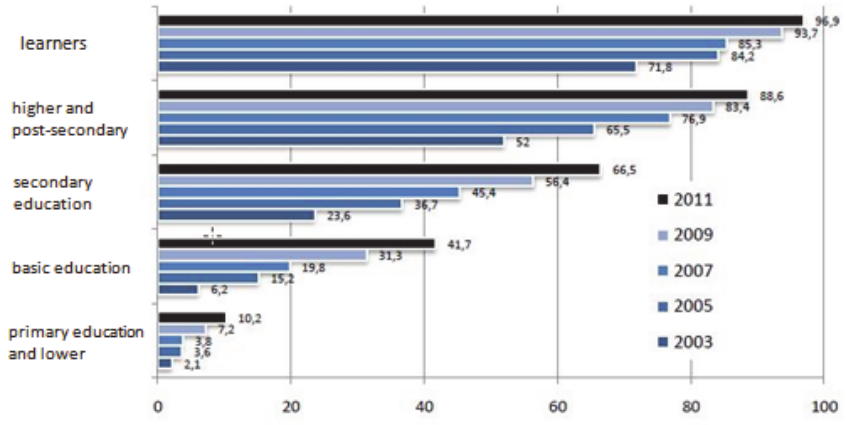

Figure 2. The percentage of people using the Internet in various groups according to education in the years 2003-2011, Source [2]

In 2011 almost all students used the Internet (96.9%), 88.6% people with university degrees, 66.5% with GCEs, 42% of people with vocational education, 41.7% of teenagers after middle school, only 10.2% of people with primary or lower education. Despite the fact that the number of users has grown by about six times in comparison with the results from 2003, for the group of people with primary or lower education the general level of using computers and the Internet is alarmingly low and did not exceed 12% in 2013. [1] (10,2% in 2011). In the vocational and middle school education group of people the number of users reaches 47% in 2013. In other groups the numbers grew slightly from 3% to 5% in comparison to 2011 [1].

It can be noticed that there is a clear connection of the social status with the use of computers and the Internet. Apart from students (96,9%), in 2011 most of the employed used the Internet: 83% working in the public sector, 85.2% of enterprisers, 75% of people working in the private sector. The Internet was less often used by farmers, only by 33%, and pensioners, about 20%. In 2011 there was a big increase of the number of the Internet users among the unemployed and the professionally passive from 41% in 2009 to 55% - in

the professionally passive group and 63% in the unemployed group. In the years 2011-2013 in these groups the growth was marginal, 0,9% and 2% respectively. [1] The biggest growth of the Internet users in comparison to 2011 was seen in the groups: farmers – by 10.1%, private sector workers and pensioners - by 7.2%, public sector workers - by 4.2%, retirees - by 2.8% and private enterprisers – by 2.7%.

Such results could be influenced by subsidies from various sources, which is confirmed by the analysis of projects from the European Social Fund and government projects resources which were given to upgrading the digital qualifications of Polish people.

More detailed research shows that people using the Internet are less endangered by unemployment. Using the Internet results in shorter time of being unemployed when losing a job. Working Internet users upgrade their qualifications more often and they get new skills and they get promoted more often or they decide to change their jobs to better-paid ones. According to the diagnosis in 2011 every fourth Internet user got new qualifications while in the group of the Internet non-users it was every twentieth person. It is also confirmed by the survey in 2013 shown in figure 3.

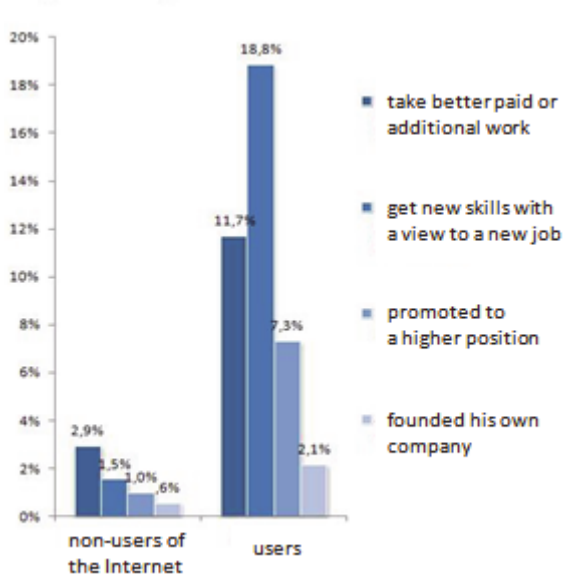

Figure 3. Active Internet users on the labour market. Source [1]

Despite great improvement in access to computers and the Internet there are still big differences in skills of the users. A common skill is using the Internet search engine. Basic skills in using computers are not so common. Is

true about using programs and basic activities connected with using a computer, installing new devices as well as using information available on the Internet.

Figure 4 shows the results of research on the Internet users' skills in the years 2007, 2009 and 2011.

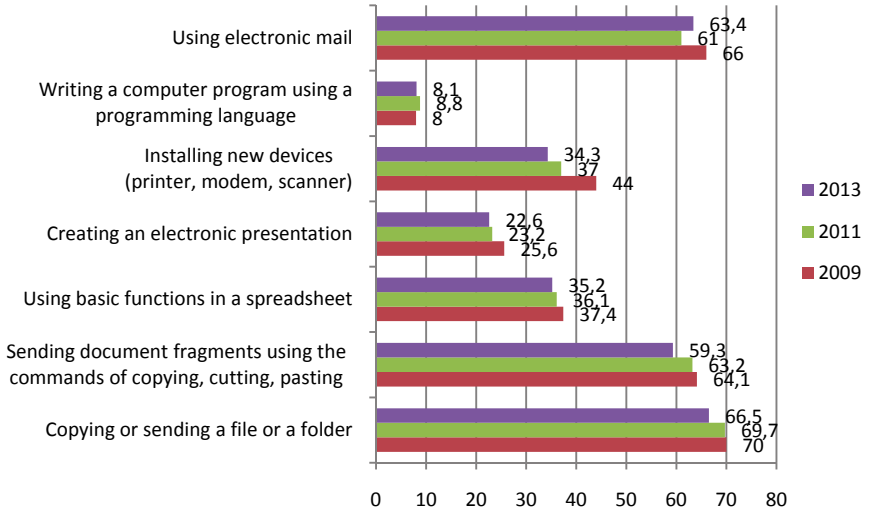

Figure 4. Skills of using computers in the years 2009-2013, (own study based on [2] and [3])

The highest percentage of users can do simple activities: searching for information using an Internet search engine 91.5%, operations on files such as copying, sending to, cutting and pasting 63.2%. Using programs is worse. Only 40% (36.1%) of users can use basic functions of a spreadsheet and 23.2% create an electronic presentation. Only 37% of users can install peripherals. The lower level of skill in 2011 in comparison with the levels of former research shows the increase of the number of Internet users with low IT skills. This trend is also confirmed by the increasing level of using an Internet search engine from 81.5% in 2009 to 91.5% in 2011.

More information on the Internet users' skills is in Table 1 which contains a breakdown of responders' answers according to Internet activities that are done by the Internet users surveyed regularly.

Table 1. Breakdown of answers according to Internet activities for regular users of search engines (in %), Source [3]

Internet activity	doing the activity		
	last week	ever	never
checking and sending e-mail	68,3	26,3	5,3
instant messaging	49	38,2	12,9
participation in chats	26	47,2	26,8
participation in groups or forums	28,6	40,2	31,2
phone calls over the Internet (VoIP, Skype)	32,1	45	23
creating or modify web pages	26,6	32	41,4
collecting materials needed for work or study	48,5	35	16,5
participation in courses and trainings over the Internet	26,8	30	43,3
job search, sending job offers	29,3	37,3	33,4
online purchase products and services	29,3	45,6	25,1
participating in online actions	31	35,4	33,6
playing on-line games	32	35	33,1
downloading free software,	28,9	39,8	31,4
downloading free music, movies	31,4	40,3	28,3
creation and publication of the texts (eg blog), graphics, music or other creations online	27,7	24,9	47,4
obtaining information from websites of public institutions	35,4	38,9	25,7
downloading or filling administrative forms	28,2	41,7	30,1
listening to the music or the radio on the Internet	42,3	37,4	20,3
watching TV, and video files	40,3	35,2	24,5
reading newspapers or books	37,3	39,7	23

The table above shows big differences among Internet users according to their skills. A small percentage of Internet users take part in online courses and trainings or use the Internet to look for a job.

Nowadays research shows that the biggest obstacles in popularizing computer and Internet use are lack of motivation resulting from lack of knowledge and skills among people not using the Internet as well as low level of digital qualifications [3] seen clearly among the unemployed.

The results of the initial social diagnosis in 2013 prove great differences in the level of IT qualifications of Polish people. About 30% of users use the

Internet only and do not even have basic computer skills, which means that average computer kills of users are decreasing. Comparison of skills in consecutive years is shown in the Table 2.

Table 2. Comparison of digital qualifications of Polish people in the years 2009-2011-2013 Source (Conclusions based on the social diagnosis 2007-2013)

Activity description	**Doing an activity by Internet users , % in a group of users**			
	Diagnosis 2007	Diagnosis 2009	Diagnosis 2011	Diagnosis 2013
Copying or sending a file or a folder	74,1	70	69,7	66,5
Sending document fragments using the commands of copying, cutting, pasting	67,4	64,1	63,2	59,3
Using basic functions in a spreadsheet	40,9	37,4	36,1	35,2
Creating an electronic presentation	23,6	25,6	23,2	22,6
Installing new devices (printer, modem, scanner)	41,5	44,0	37	34,3
Writing a computer program using a programming language	8,7	8,0	8,8	8,1
Using electronic mail	68	66	61	63,4
Using a communicator	51	49	41	38,4
Using a chat	14	14	16	18,1
Activity in forums and discussion groups	15	16	18	17,8
Using Internet telephonyVoIP, Skype	24	24	24	27,5
Shopping online outside auctions (last week)	16	18	20	30
Internet auctions (recently)	17	17	18	16,9

Data in Table 2 shows the decrease of the percentage of Internet users with basic computer skills in creating documents and presentations. The only growth are the numbers of users of electronic mail, chats and Internet telephony. Earlier forecast that with the development of IT technologies the differences between users will go to new, higher levels involving digital qualifications appears to be true. It is still an important problem not only to balance the level IT knowledge between generations but also to look into the quality of digital education of all Internet and computer users. The problem of limitations in using the Internet and digital divide of the whole groups can be a source of important social issues in the future. The fact that Internet users are omitted in online research is visible, e.g. online mobility of workers by Randstad [7]. In the description of methodology it is said: Caution! The way of doing the research influences the "underpresentation" of the elderly, less educated and those with limited access to the Internet.

There is also a trend of changing the definition of the IT divide [7] where losers are those who will not be able to access information, find the best offer among online banks, or those taken advantage of by the ones prepared to work in the digital environment. Preventing such an IT divide is a task of a modern E-school and it should be started as soon as possible.

People who do not have IT qualifications often appear not to fit in the modern era. In their helplessness they wait until somebody else takes proper measures and improves their situation. In this group the improvement of the standard of life rarely means possibilities of using modern information and communication technologies. It turns out that upgrading your qualifications and getting new skills is necessary. Not only the job market but also everyday life require getting familiar with a computer, electronic mail and many "intelligent" technical devices.

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