

Digital Literacy in Slovakia 2011

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Institute for Public Affairs (IPA), with the support of Accenture – Pontis Foundation, Cisco Slovakia, Hewlett-Packard Slovakia, Microsoft Slovakia and the Slovak Telekom Foundation Fund, has carried out the fourth year of the *Digital Literacy in Slovakia* survey. Findings from the representative sociologic survey offer answers to questions to answers regarding the ratio of digital literacy and illiteracy within the Slovak population; population's experience with the info-communication technologies (ICT); level of their digital skills, and adaptation to the ICT.

I. SHARE OF DIGITALLY LITERATE SLOVAK POPULATION

Being one of the key indicators of the development in the are of society's informatisation, digital literacy of the Slovak population is relatively positive when compared to international standards. According to research results by Eurostat, from 2005 to 2009, digital skills of Slovaks were slightly above the European level (EU 25).

As shown in Figure 1, the proportion of the digitally literate people ranged from 65 % to 71%, with the EU

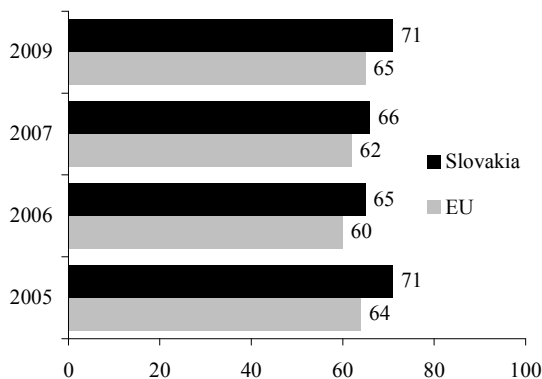


Figure 1. Share of digitally literate population in Slovakia and EU average (in %)

average for the individual monitored periods reached 62 % to 65 % at the most. For example, in 2009 Slovakia outperformed Belgium, Bulgaria, Czech Republic, Estonia, Ireland, Greece, Spain, Italy, Latvia, Lithuania, Cyprus, Hungary, Malta, Poland, Portugal and Romania [5].

The latest results of a survey conducted by Institute for Public Affairs on group of 1138 respondents over the age of 14 showed the share of the digitally literate population in Slovakia has again increased (see Figure 2). The share of the digitally literate and the digitally illiterate is 76 % : 24 % [4].

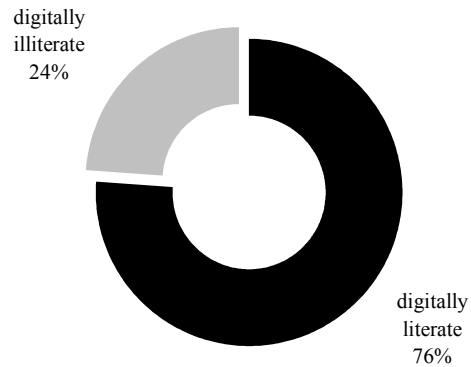


Figure 2. Share of digitally literate and digitally illiterate population in Slovakia – 2011

The largest segment of the population has 'common' skills, such as working with a PC (including laptops, tablets and smartphones), sending text and multimedia messages (SMS and MMS), e-mailing, working with a text processor, Internet browser, searching for information and registering access to various online services, or printing out documents. These skills are declared by 64 % to 72 % respondents.

On the other hand, a far smaller portion of the respondents are able to work with more sophisticated technologies. For example, working with databases, working with a network (searching, transferring or copying data on a LAN), working with a graphic editor, online banking, or installing applications and setting up PC functions are tasks that can be handled by only half of the respondents. However, the fact that a proportion of the population is skilled with ICT does not necessarily mean the users are also able to use ICT without any problems. Such usage is, as will be demonstrated by further details about the level of digital literacy, indeed quite differentiated.

II. THE LEVEL OF DIGITAL LITERACY

On one hand, the share of the digitally literate and the digitally illiterate demonstrates the skills and capabilities within the population in general, i.e. whether the population is or is not experienced in working with ICT. On the other hand, this ratio does not say anything about the level (quality) of these skills – in other words, who 'good' or 'bad' the population is at using ICT. For the purposes of assessing such skills and capabilities, the Digital Literacy Index (DLI) is used. It takes into account 28 indicators – answers to questions that were asked the respondents in order to determine the level of their experience in working with ICT, its applications and services. The index provides values on a scale from 0 = digital illiteracy, to 1 = maximum level of digital literacy.

As shown in Figure 3, the overall level of the population's digital literacy did not change over the last two years. While the DLI value continually increased from 2005 to 2009, rising from 0.33 to 0.44 points, in 2011 it remained roughly on the same level as two years before – on 0.43 points. In other words, Slovakia's population aged 14 and above would score 43 out of the total possible 100 points for its digital literacy.

For better illustration: if there were three levels of digital literacy – Low, Medium, and High¹ – then from 2005 to 2011 Slovakia gradually 'worked its way' from Low to Medium level.

There might be various reasons why the relatively optimistic trend from the period of 2005 to 2009 had stopped. One of the hypotheses, supported also by the data on penetration and the use of personal computers and the Internet in Slovakia, could be a certain 'saturation' of ICT within the population. In other words, those who wanted or needed to find their way of accessing ICT, while at the same time gaining necessary skills for working with ICT. Another reason might be a subjective satisfaction with the achieved digital capabilities, a certain level beyond which there is no reason to go.

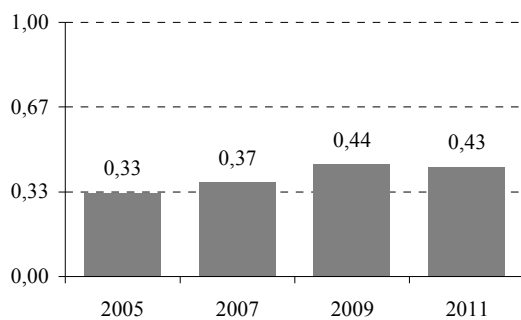


Figure 3. The level of digital literacy in Slovakia 2005-2011 (DLI – Digital Literacy Index)

Along with inner motivation, an important role is also being played by the ability to learn and adapt. For example, over the course of 6 years, the proportion of people who have problems with adapting to ICT practically did not change at all. As shown in Figure 4, this group still consists of one fifth of the population. Another 28% of those who refuse to adapt to ICT need to be added, too. It is this group of people who represent the greatest 'brake' on development.

III. WHICH AREAS IMPROVED AND WHICH WORSENE?

Assessment of specific digital skills shows that in comparison with 2009, the population's ability to work with hardware and software practically did not change [3]. The only exception is an improvement in working with mobile devices such as laptops, tablets or smartphones. This can be linked to the growing interest in mobile devices. For example, according to the latest data from mobile operators, every second mobile phone is a

¹ Low level < 0.33 points; Medium level = 0.34 to 0.66 points; High Level > 0.67 points.

smartphone. A very slight improvement occurred in the population's capability to work with information and services within the Internet's virtual environment, such as searching for information and registering for services, using Internetbanking, online shopping for products and services, downloading/uploading data, etc.

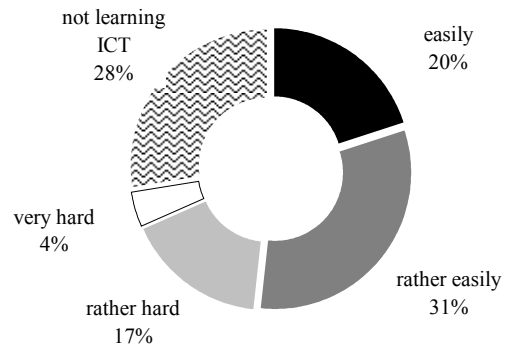


Figure 4. The willingness to adjust to/learn ICT in Slovak population

On the other hand, deterioration was most noticeable in the area of communication via text or multimedia messages. It is probable this development is due to the already mentioned penetration of smartphones, which some part of users is only starting to be 'acquainted' with. However, social network skills were at a relatively positive level.

In 2011, majority of the assessed digital capabilities reached a medium level. Respondents have greatest problems with 'working on a network' (e.g. moving or copying data within a LAN, searching for various types of information, etc.), also with using databases and graphic applications, installing software and hardware, and setting up basic PC functions.

IV. HOW DIFFERENT SOCIAL GROUPS ADAPT TO AND LEARN WORKING WITH ICT?

The statistical analysis confirmed a strong link between the level of digital literacy and the adaptability.² In general, people who learn and adapt easier reach a much higher level of digital literacy, and vice-versa. 20 % of the population claiming they learn and adapt smoothly can be considered as having no problems in this area. Their digital literacy is high above the average level – 0.86 points. Another 32 % of respondents think they mastered ICT with small problems, but their skills are still above the national average (0.65 points). On the other hand, 17 % of respondents claim they learn 'with some difficulties', and reach only a very low level of digital literacy (0.27 points). Although another part of the population is small in volume (4 %), its members have great problems with using ICT – they adapt with considerable difficulties and their level of digital literacy reaches only 0.11 points. The remaining 27 % of the population completely ignores the process of learning new digital skills.

² The Kendall's tau_b correlation coefficient reaches the level of 0.807 points. From a statistical point of view, this demonstrates a very high degree of dependency.

Adapting to ICT is closely linked especially to age, education, social status and type of the household, and the related economic activity. For example, while as many as 90 % of those from the group aged 14 to 17 adapt easy, only 6 % from the group aged 60 and above adapt without problems. In a similar fashion, the population's ability to adapt drops dramatically with decreasing level of education. While among those university-educated 83 % adapt easily, only 34 % claim the same from the group with basic level of education. Significant differences occur also depending on the type and social status of the household. E.g. households of younger people and those with higher financial status adapt much better than those of older people and with poorer financial status.

Just like on the nation-wide level, the close relation between the ability to adapt and the level of digital literacy was found also on the level of various social-demographic groups. In other words, the higher the ability to learn and adapt within a given group (i.e. with less problems), the better its digital skills. Naturally, the ability and willingness to adapt is only one of the factors influencing digital literacy growth. Results already from previous years showed there are quite exogenous factors, such as work or school. [1].

With respect to the further development of digital literacy, the survey results also make it possible to identify certain risk groups, i.e. groups of people, who are very likely to have great difficulties with adapting digital skills (just like they did until now), or who will completely abandon any attempts at improving. In some groups, the share of those 'adapting with great difficulties' and those who 'do not adapt at all' is high above the average. This includes namely people above the age of 55 (more than 76 % of them), people with only basic level of education (66 %), the unemployed (62 %), pensioners (95 %), financially weak or poor households (72 %) or households of old people (96 %). In this aspect, population's adaptability is an important factor parameter, which contributes towards the so-called digital gap within a society.

V. DIGITAL DIVIDE IN SLOVAKIA

Several years of mapping the issue of digital literacy revealed an troublesome fact: that the society started to divide into the group of those who have access to ICT, and thus have the relevant level of digital literacy, and the group of those without such access and skills. As was confirmed by the results of this survey, the development

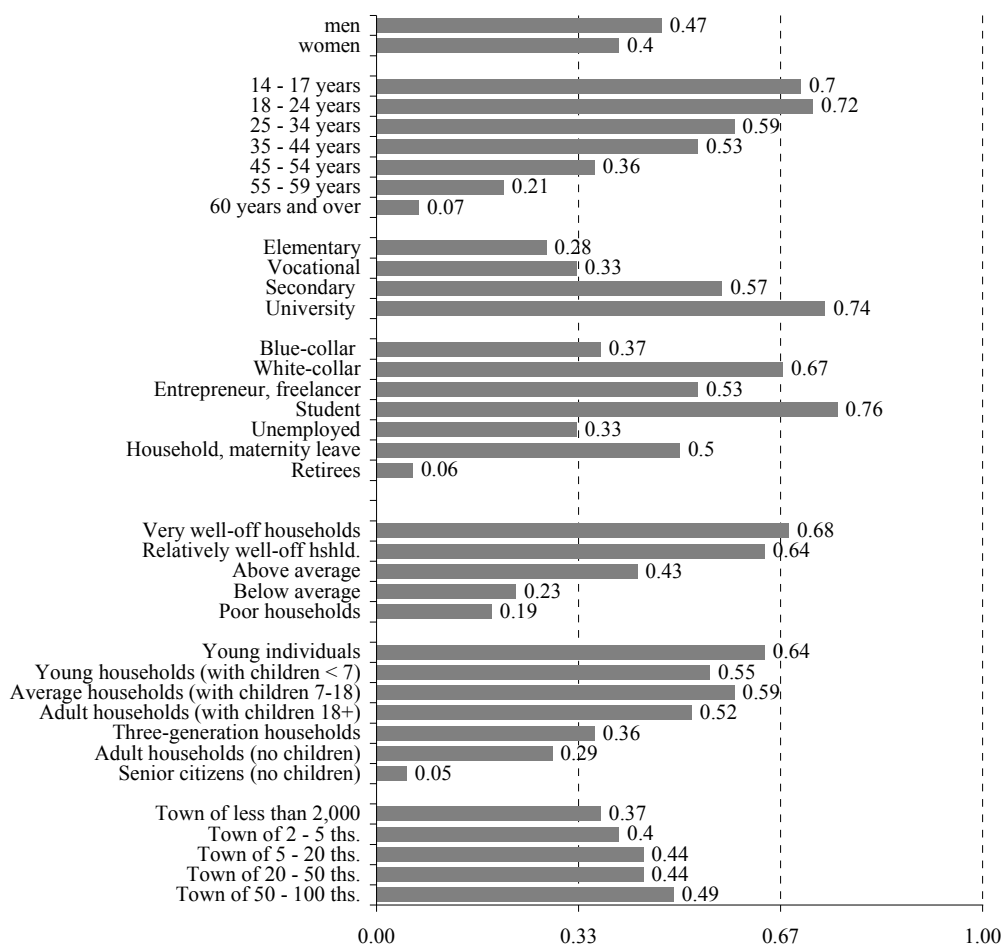


Figure 5. The level of digital literacy in social groups (DLI – Digital Literacy Index)

in 2011 has the same trend. During the last 6 years, Slovakia acquired characteristics of a digitally divided society. On one side, there are social groups that can be identified as being 'progressive' – is younger, more educated, better qualified, socially stronger and located more in urban areas. On the other side, there is the older, less educated economically inactive part of the population with lower qualification (pensioners, the unemployed). While the former continues to learn and improve, the latter is so-to-say stuck in one place, not being able to adapt. However, the last monitored period (2009 – 2011) is specific in that improvement was not achieved even in the 'progressive' groups of the population.

Nevertheless, just like in the past, in 2011 the group of the digitally most literate people includes those aged 14 to 24, with university, college or A-levels education, those working mentally and students, people employed in the public sector, financially strong households, households of the young people, and respondents from large cities with over 100,000 inhabitants.

On the other hand, long-term low level of digital literacy (or even digital illiteracy) is typical for people over the age of 55 (for the group of those aged 60 and above, this reaches the level of digital illiteracy), also for people with only basic and higher education without A-levels, the manual workers, pensioners, the unemployed, households of the old people, households with low level

of income, and respondents from small cities (up to 2,000 inhabitants).

One of the reasons for this situation is also the state's long-term ambivalent attitude towards the issue of human resources and improving the population's digital literacy. When we summarise the related projects from the recent years, we can say the state focuses predominantly on supporting digital skills within the official education system. In other words, it provides for acquiring digital literacy by the youngest part of the population – students of basic schools and higher education institutions (including teachers). Therefore, the issue of improving the digital literacy of those who were not able to develop related skills in school, is addressed by the private sector in cooperation with NGOs and schools.

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