

THE DIGITAL DIVIDE IN THE EDUCATIONAL SYSTEM IN BULGARIA

Daniela N. Ilieva

VUZF University, Sofia, Bulgaria

Abstract

The digital divide existed ever since technology and Internet became common and massively used. Originally, the term “digital divide” was considered a gap between those who had access to technology and those who did not. However, with technology becoming cheaper, more affordable and available, the divide is more related to the gap between those who have the skills to use it productively, and those who only have the skills to use technology for ‘lifestyle’ and social purposes.

When it comes to education, the digital divide in Bulgaria is vast in many ways – between teachers’ outdated skills and students’ by default generational competencies, and between the major cities access to technology and countryside regions lack of such.

This paper aims to analyze the numerous aspects of the problem of digital divide in the Bulgarian educational system, and to provide solutions based on the European Commission’s policies, recommendations and guidelines, as well as using best practices examples of other European countries which have successfully overcome the gap.

Investing in the digital infrastructure, skills and education within the educational system in Bulgaria, but in particular in the digital skills of teachers and others involved in the educational process, is a way to guarantee not only bridging this crucial digital divide, but also securing generational gaps, sociological barriers, stronger educational system, and thus, logical development of the educational system.

Keywords: education, digital divide, educational system, Bulgarian education

1. INTRODUCTION

According to the Merriam Webster Dictionary, “digital divide is the economic, educational, and social inequalities between those who have computers and online access and those who do not”.¹ OECD defines it as “the gap between individuals, households, businesses and geographic areas at different socio-economic levels with regard to both their opportunities to access information and communication technologies (ICTs) and to their use of the Internet for a wide variety of activities”. However, there is an addition to the definition, which adds that the digital divide reflects differences among and within countries.²

In the research conducted, the author has reached to an unofficial non-academic definition of the term, which very much aligns with the proposition of the paper. It states that the digital divide, or the digital split, is a social issue referring to the differing amount of information between those who have access to the Internet and those who do not have access.

Incorporating information technology into education, drastically transforms society, especially for those who have access to these services. The large discrepancy in access to information and communication technologies may be either geographic or socio-economic, and the education sector is affected by this disruption. The impact of digital divide is felt in all spheres of life, and we have to also discuss how the digital divide affects education. While many papers, analysis and research discuss the above mentioned discrepancies, there is more of a gap in education, especially in Bulgaria and in other developing countries in Europe.

¹ Merriam Webster Dictionary, accessed in June, 2019, <https://www.merriam-webster.com/dictionary/digital%20divide>

² OECD Statistical Portal, accessed April, 2019, <https://stats.oecd.org/glossary/detail.asp?ID=4719>

According to the Digital Divide Council³, access to ICT in today's technological era is a broad-based theme that includes both the availability of hardware, software, accessories and networks, and unrestricted access to reliable information, especially in formal learning. Inequality in access to technology is clear in every society, with some of the factors contributing to the digital divide including poverty and poor infrastructure, corruption and bureaucracy, as well as education and technical support. The educational factor in the digital divide is like the dilemma for the egg and the hen - both are interconnected and it is difficult to understand which depends on which.

2. DIGITAL DIVIDE IN EDUCATION

Given the vital role of ICT in school, how to overcome the digital divide in education is a key focus for countries around the world to ensure effective equality in education. Efforts to overcome the gap are increasing around the world and go beyond just providing devices and equipment. Some of the most important additions to narrowing the digital divide include promoting digital literacy to the education providers - teachers and trainers, through campaigns or incentives, sustainable partnerships with successful organizations and establishment of trustworthy partnering networks for sharing good practices. Overcoming the digital divide in education is a gradual and costly process.

According to Herbert Kubicek, director of the Institute for Information Management Bremen and scientific director of the Digital Opportunities Foundation in Berlin, Germany, "The Internet should be integrated into [school curriculums] because unequal distribution corresponds to unequal educational and social chances." Interviewees in a study conducted by the Economist Magazine Intelligence Unit agree that governments around the world need to do more to integrate ICT into formal education.⁴ OECD agrees that among the important indicators of digital divide, concern differences in the profiles of countries, individuals and businesses that use, and make the most use of, the possibilities offered by the new information technologies and the Internet. Harmonized cross-country data collection does not exist for measuring some of the relevant phenomena, figures and statistics presented are often not comparable in terms of time and coverage. However, because access to and development of information, communication and e-commerce resources are increasingly viewed as crucial for economic and social development (for reasons of efficiency and because of network effects), OECD countries have begun to examine how best to ensure access for citizens, businesses and regions to these technologies and services. To do so efficiently and effectively, it is important that governments have information on the nature and extent of the digital divide and on the kinds of measures that can help to overcome it.

In an article by the G20 Insights from May 2018, it is stated that the G20 requires a holistic digital skills upliftment strategy which entails the following proposals: (1) identify the core digital skills required by employers, (2) establish a digital skills standard-setting body to balance the needs of institutions that demand and supply of digital skills, and (3) respond appropriately to socio-cultural norms which impede women's access to digital skills training and the resultant opportunities.⁵

3. THE DIGITAL DIVIDE IN THE BULGARIAN EDUCATION

When we talk about education in Bulgaria, digital divide is significant in many areas - naturally, one strand is at the heart of the understanding of digital divide as described above, but also between the old-fashioned teachers' skills and the high tech, somewhat "born" skills of pupils, as well as between the access to technology in schools in large cities and the lack of access to provincial small (and not only) populated areas. The largest cities in Bulgaria – Sofia, Plovdiv, Varna, Burgas, are often quoted as "not an example of Bulgaria". Education-wise it is like this. Simply said – large cities attract families, thus there are more children, schools are larger, more, better equipped and employed, the general city and the specific school infrastructures are in a much better condition than in the smaller towns, and the whole picture seems somehow brighter. On the opposite, the countryside (being cautious with generalization)

³ <http://www.digitaldividecouncil.com/what-is-the-digital-divide/>

⁴ <http://unpan1.un.org/intradoc/groups/public/documents/un-dpadm/unpan049753.pdf>

⁵ https://www.g20-insights.org/policy_briefs/bridging-digital-divide-skills-new-age/

is “years behind” in terms of number of students, number of schools, teachers, preparedness to meet with the constant update and upgrade of everything teaching and learning related.

Investments in technological infrastructure, skills and training within our education system, especially in the development of digital skills of teachers and those involved in educational processes, are some of the ways to ensure the overcoming of the digital divide. These measures should also help overcome generational differences and socio-cultural barriers, resulting in a stronger educational system that develops adequately and logically the changes in technology, and the skills required to deal with them. This paper emphasizes on the major digital gap in the Bulgarian education – namely the gap between the students’ and the teachers’ digital skills. The modern teacher should not only enter the classroom, but he himself must be “in tune” with the trends. Many teachers in the countryside regions do not have access to digitalization themselves, not to mention digital preparedness for a digital classroom full of digital “gurus” by default. In order to deserve even the fragile confidence and respect of their students, the teacher should demonstrate knowledge beyond what he teaches, and how he teaches it.⁶

4. THE BULGARIAN POLICIES

The Ministry of Education’s Strategy for Effective Implementation of Information and Communication Technologies in Education and Science of the Republic of Bulgaria (2014-2020) refers to some key figures: 2600 active educational institutions, 85 000 teachers and trainers, 100 000 computer and terminal devices. What is the status of these computers and devices? Who has access to them and under what conditions? It is worth discussing these important questions.

The Academic Staff Development Act⁷ somewhat obliges university lecturers⁸ to develop and update their digital literacy skills, to participate in conferences and events, and often, to take part in national or international projects. The situation in schools is different.

In Economist report “Smart policies to close the digital divide”⁹ they say that governments cannot do it alone and maybe they are right. The public sector often struggles in helping people make productive use of ICT, and increasingly, successful policies are developed by other sectors. Bulgaria is not different. The conclusions made in the report state that governments should work with NGOs and companies to make solutions sustainable. According to Kubicek, in Germany the government has abandoned digital inclusion efforts and now views it as a market choice. According to Stylin, in Russia the lack of public-private partnership as one of the reasons for the continuing divide. In the UK, Singleton says that the government needs the cooperation of the public, private and civil society sectors to get the last 10% of the population online because it is the most difficult segment to reach, and one that is more likely to be bridged through community organisations. Kroes states that “some of the actions aren’t best done by governments at all, but by NGOs and activists able to reach out to those most at risk of Internet exclusion”.

It is not news that the teaching staff in Bulgaria is aging and the amount of teachers’ pay affects negatively the interest of young people in the teaching profession. Logically, not being well paid, teachers and educators cannot afford the technology and the access to technology to maintain and update their personal digital skills, before their professional. This leads to self-confidence or the lack of it, and consequentially, to the respect of students/ pupils who have access to, digitally know and are technologically capable of so much more than their teachers. The good news is that, with a decision by the Minister of Education in 2018, teacher salaries have been increased since January 1, 2019. This gives rise to the hope that the profession will be able to attract more young and flexible educators – teachers;

⁶ In Bulgaria the employed teachers are primarily female, and the author deliberately uses the masculine form in order to emphasize the importance of male teachers in the system.

⁷ <http://www.iict.bas.bg/docs/zkn-akad-sastav-26-02-2019.pdf>

⁸ The university lecturer’s contracts are temporary and involve a requirement for academic development and progression before becoming constant. In order to progress, each lecturer must write and publish books, academic articles, which requires certain digital skills. In addition, the curriculum requires computer presentation skills.

⁹ <https://dig.watch/resources/smart-policies-close-digital-divide-best-practices-around-world>

firstly, because of the need of adaptation of the learning process to the requirements of the high-tech information age, and secondly, to inspire and respond to the inborn competences of adolescents.

In no case would we want to downplay and underestimate the skills of teachers and directors who do not fall into the "young" digital category. They come with their experience and wisdom. But we would like to appeal to more flexibility and proactivity, because there are opportunities. It is maybe unfair that the opportunities come easier to the larger cities, and that the countryside schools and teachers should make extra efforts to reach out to information. But it is as it is.

In January 2019, the Ministry of Education and Science announced 76 million BGN of funding for 17 national programs for the modernization of education, thus resources are there. There is the national Strategy, there are initiatives by the Ministry of Education and Science, as well as such by other organizations involved in educational initiatives, but the authors; research showed that funds reach only 15% of the schools. Lack of awareness, as well as lack of proactivity from the side of directors and teachers, are part of the mentioned problems in the study of this material. The more alert school principals or educators seek information, assemble the required documentation (which is immense for program funding), struggle, and sometimes even achieve "miracles". But the more common practice is passivity and reluctance to engage with anything else than the classroom. According to teachers, "the profession is anyways quite responsible, difficult and demanding".

5. CONCLUSIONS

In conclusion, the need for further, long-term training and education on ICT skills of teaching staff in the school network is highlighted in the Strategy. The activity of Bulgarian lecturers in courses on ICT in the pedagogical practice is above the EU average.

But we can not help wondering if policies are actually needed to promote the management experience of teachers and directors, training on how to make the most of the available resources and how to achieve new skills in a new environment, namely a teacher who is mentor, facilitator, role model, modern and technologically - more than literate.

Preparing for future divides Compared with just a decade ago, governments have made significant progress in expanding ICT access. Some developed countries are reaching near universal access through fixed and mobile connections. Bulgaria ranks among the countries with the best internet coverage and quality of the connections. Developing countries, meanwhile, have some way to go to catch up on access rates but are gaining ground by expanding mobile services. Policymakers cannot be complacent.

This report has highlighted new imperatives for the digital divide and its connotation in the Bulgarian education. Even though the government could somehow solve some of the current challenges, the goal to not only teach teachers how to use technology, but to also be aware and proactive to search for existing opportunities, funding, training and career development, in order to speed up the bridging, continues. to move—for example, the global trend towards ever higher fixed and mobile access speeds is set to expand divides between and within countries. Similarly, as access to faster networks improves, policymakers must continue to try to ensure that entire populations are skilled enough to use online services to their full potential. Just as social divides have always been part of history, digital divides are likely to continue well into the future, especially since the two are increasingly intertwined. If one gap is closed or reduced, another is likely to emerge or widen. Such is the nature of technological progress. But countries that take a proactive approach in implementing smarter policies now will be better prepared to respond to future challenges, and thus reap the benefits of more inclusive communities and richer economic prospects.¹⁰

¹⁰ <http://unpan1.un.org/intradoc/groups/public/documents/un-dpadm/unpan049753.pdf>

REFERENCES

1. Merriam Webster Dictionary, accessed in June, 2019, <https://www.merriam-webster.com/dictionary/digital%20divide>
2. OECD Statistical Portal, accessed April, 2019, <https://stats.oecd.org/glossary/detail.asp?ID=4719>
3. Carmen Steele, Feb 22, 2019, *What is the Digital Divide?* , Digital Divide Council, viewed Feb, 2019 <http://www.digitaldividecouncil.com/what-is-the-digital-divide/>
4. Economist Intelligence Unit 2012, *Smart policies to close the digital divide*, Economist Intelligence Unit, viewed March, 2019; <http://unpan1.un.org/intradoc/groups/public/documents/un-dpadm/unpan049753.pdf>
5. Krish Chetty (HSRC BRICS Research Centre) Jaya Josie (HSRC BRICS Research Centre) Nozibele Gcora (HSRC BRICS Research Centre) Urvashi Aneja (Tandem Research) Vidisha Mishra (Observer Research Foundation (ORF)), May 9, 2018, *Bridging the Digital Divide: Skills For The New Age, G20 Insights*, viewed May, 2019 https://www.g20-insights.org/policy_briefs/bridging-digital-divide-skills-new-age
6. Law on the Development of the academic staff in the Republic of Bulgaria <http://www.iict.bas.bg/docs/zkn-akad-sastav-26-02-2019.pdf>
7. <https://dig.watch/resources/smart-policies-close-digital-divide-best-practices-around-world>