DIGITIZATION OF SOCIETY AND CHALLENGES TO CHILDREN’S BEHAVIOR ONLINE

DOI: http://doi.org/10.26758/10.1.12

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Abstract

Objectives. This article aims to analyze the digitization of the society and some changes that occur in the family upbringing process when digital devices enter, such as: computers, tablets, internet, mobile phones.

Material and methods. The analysis focuses on the challenges of online child behavior and some of its negative effects, such as: aggression, high anxiety, insecurity and emotional discomfort. The paper is based on results obtained through qualitative methods in the course of research project "Digital Media Literacy in the context of "Knowledge Society": state and challenges" (KII-06-H25/4, with team leader V. Milenkova). The main methods for obtaining information were in-depth interviews (30) and focus groups (2) with parents in Blagoevgrad.

Results. This study reveals the positive aspects of digitization as well as it focuses on the problems that accompany digitization in social processes and people's personal lives, especially children's contact with digital tools and their protection against the different risks of online communication. Another consequence is the fact that long online time does not make children more digital and media literate. In this sense, parents have to seriously reconsider their children's access to digital devices, which affects children's personal potential and psychological comfort.

Conclusions. The participation in modern digital environment includes access to different e-resources, devices and information products and services. It should be taken into account that the acquiring of digital skills for work in interactive environment improves their efficiency with respect to creativity and innovatively pursuing education activity.

Keywords: digitization, online behavior, online risks, parental support.

Introduction

This paper analyzes some changes that occur in the family upbringing processes when entering the digital devices, like: computers, tablets, Internet, mobile phones in the modern environment. In the modern world, digital media are everywhere, they participate in education, in the profession, in everyday contacts - in communicating with people of different ages and with different social status. In this digital environment, children are also an active participant, and often they come across inappropriate characters or content that is inconsistent with their age and knowledge. Parents are concerned about the normal mental development of their children in the digital world, which carries various risks.

The main research questions of the article are: What are the positive and negative effects of global digitization? Do parents believe that the children could be protected from a variety of
negative effects associated with aggression, high anxiety, uncertainty and emotional discomfort related to digital media socialization? The analysis focuses on the support that the children receive from parents in the context of mass digitization. Parents are the ones with whom children can discuss different topics, events, shows or movies viewed in the media as well as issues requiring further information or clarification from the parents (Genner and Suss, 2017: 1).

The new environment requires the development of digital skills that enable effective information management and the proper use of ICT (Milenkova, Peicheva and Marinov, 2018; Cartelli, 2013; Tzvetkov, 2016). Digitization, interactivity and virtuality are constantly opening up new possibilities and extending the boundaries of learning (Rosengren, 2014).

Digital technologies have already changed the world, they have great potential to broaden the range of information they are handling, so they constantly adapt and become an integral part of the lives of modern people. The internet and new technologies create prerequisites being part of the global network, linked to the upgrading and dynamic flow of information, fast communication and easy access to various institutions (Frau-Meigs and Hibbard, 2016).

Digital media connect people to various social environments. Connected children and young people express their views through blogs, videos, social media, cartoons, hashtags, podcasts and other forms. They recognize the potential of digital resources to help them access information and seek solutions to problems affecting their communities. Young people (aged 15-24) are the most closely related age group. Globally, 71% of them are online, compared to 48% of the total population. Digital technologies provide opportunities for training and education for children. They also allow children to access information on issues that affect their communities and can provide them with a role to play in solving them (UNICEF, 2017).

Material and methods

The methodology that provides empirical material of this article includes qualitative methods: interviews and focus groups carried out under the project: "Digital Media Literacy in the context of "Knowledge Society": state and challenges" (KP-06-H25/4), with team leader V. Milenkova. The fieldwork was conducted between March and May 2019 in different settlements of Southwest Bulgaria randomly selected.

The choice of methods followed the understanding that qualitative methods allow a deeper rationalizing different issues and a free sharing of views by respondents on the topics discussed. A total of 30 in-depth interviews with university and school lecturers, researchers from scientific organizations, representatives of the non-government sector, politics, parents were held, following the methodological requirements laid down in the project.

The idea was to form a constellation of digitization and digital literacy shared by the respondents, as well as to trace the differentiating influence of the professional and activity engagement of the surveyed persons.

Description of the sample:
- By gender: interviewed are: 19 women and 11 men;
- By age, the respondents formed the following groups: up to 35: 5 persons; 36 - 45: 9 respondents; 46-55: 6 persons; 56-65: 8 respondents; over 65: 2 persons;
- By "education", the respondents are divided into: Master degree - 15 persons; Doctoral degree - 15 persons;
- By "professional field", the interviewees are representatives of: Social sciences - 9 persons, Humanities - 9 persons, Computer and information activities - 7 persons, Law - 5 persons.

The following topics were discussed:
- The essence of digitization: main features and contribution to society;
- "Digital skills and digital literacy": interaction with technologies, specific dimensions and connotations;
- Does modern education stimulate digital literacy?
- What is the digitization of modern education?
- Positive and "negative" aspects of digitization.

The other method used was focus group. There were carried out 2 focus groups with parents. One focus group includes 8 parents of children aged 7 to 11 years. The second focus group included parents of children aged 12 to 16. The parents in the focus groups range from 37-50 years. The gender distribution is 53.3% female and 46.7% male. All parents are from Sofia. The topics that were discussed in the group discussions included: benefits and risks from the digitalisation of society; the dangers that can accompany web browsing, how children should use digital media, what role the family plays in the process of accessing digital media, what is the role of school and education in the process of digitization.

Results

According to our respondents (in conducted in-depth interviews), digitization has actively penetrated people's lives, both in the personal, professional and social areas. It has become a very important part of the activities of institutions at different levels and in different fields. The data show that business, public and non-governmental sectors use systematically various digital assets and services in their activities.

This means that digitization is ubiquitous and global, it changes generations and their thinking, attitudes and qualities; it affects and reformats social structures and relationships, imposing them on digital technology requirements. Here are several opinions as evidence.

The digitization of society is expressed in:
"...use of new technologies in all spheres of personal, social, political, cultural, scientific life. The digitization of society, however, is more - in fact, it expresses the degree of maturity, progressiveness and entrepreneurship of its individual members. Acceptance or rejection, duration of use and time to adapt to the implication of digitization is a testimony of whether a system is conservative or adaptable and open to novelties" (female, 34, PR in a public organization).

"It is not only personal access to digital devices but also a wide and publicly accessible application" (female, 43, researcher at a research institute).

"People is linked to digital data because digital technology has become an important and somewhat indispensable part of his life. Every business process is somehow connected to "new" technologies - access to internet and digital devices are needed. According to NSI, 84% of businesses in Bulgaria have access to the Internet in 2018 and this trend has grown over the years" (female, 38, university lecturer).

The digitization of society is an indisputable fact and this is definitely a prerequisite for social development because it means providing new opportunities for institution development as well as for forming new skills and qualities. At the same time, there are communities that are hard to digitize, and this creates serious divisions in an age, ethnic, educational aspect. Often times, the availability of digital literacy and skills can be combined with low general culture, insufficient social skills, which means that these states need to be carefully considered and ways to deal with these divisions are sought.

Here are some answers to the question: "Does digitization and digital literacy contribute to the development of society?"

"Certainly, because they require the formation of a new type of abilities - skills for working with information and communication technologies, skills for using digital platforms and media for a variety of purposes and in a wide variety of contexts, searching, verifying and disseminating information, skills to critically evaluate media content. The development of these abilities leads to rethinking education and citizenship - we talk about digital education and digital citizenship" (male, 59, university professor).
"The process of digitization should not make us slaves of technology, but should be designed to help and facilitate us in our day-to-day work and professional, as well as in our interaction with institutions and public services" (female, 43, representative of NGO).

"Digitization is an inevitable and fundamental prerequisite for the development of the knowledge society, because it extends the possibilities of knowledge, the possibilities for passing on, learning and finding it. In practice, it is not possible to achieve a knowledge society without the digitization of the activities, without the digital competences of the people and without their connection with the institutions and the social networks" (female, 56, researcher at a scientific institute, BAS).

The development of digital skills and literacy among young people depends to a large extent on the participation of education (Marinov, 2015). At school, technology is present in abundance. Teachers assign homework that requires online research, and use software applications to manage these homework assignments. There are a number of examples in this direction that indicate digital technologies are entering and changing existing methods of teaching and learning in educational institutions. But education is a conservative environment that affects not only the material conditions, but also the teachers themselves and their methods of work; which means that sometimes there may be a lag in the attitudes of teachers on the inclusion of innovative approaches and digital content acquisition, digital literacy and literacy in students (Grusec and Hastings, 2014).

"Examples of digitization of education are computer literacy classes, digital "black" boards, and so on. But - using Google less and less people use libraries and less read books in general, which frankly leads to dullness and ignorance of important authors.

Another example of poor digital literacy in education - school exam questions are already closed (structured) rather than open and require a high level of thinking, creativity in writing and analysis. This stems from the excessive use of computers" (female, 43, representative of NGOs).

"There are countries such as Finland, Estonia, the Netherlands, Canada, etc. where education is close to the real needs of life; oriented mainly towards the successful practical realization of the learners; is based on developing critical thinking and there is no way not to stimulate the development of digital skills" (male, 59, lecturer at university).

"The problem of outdated teaching methods is that grown in the digital world children have very different habits of perception of information. Teachers often compare their own learning culture to their pupils' age and that of current students, and conclude that new generations lack attention, interest, ambition, persistence, and so on. The truth is that the change in the environment renders meaningless any attempt to adapt yesterday's methods" (female, 46, public organization).

Respondents say that Bulgarian education is digitized, but not always the digital devices that are purchased are actively used and become the real basis for innovation in the educational process. More consistency, continuity and activity are needed for the real digitization of education and its basing on successful practices and methods.

"The reporting of results shows that the country adheres to the requirements of the European Union related to the development of (digital) media literacy. In practice, it works in a piecemeal way without a complete strategy: buying equipment that is not used (at least not for developing critical thinking), usually the technological means in schools are out of date, students use completely different technological means; lack of methodologies; lack of sufficiently trained teachers" (male, 59, lecturer at university).

"In my view, the digitization of contemporary Bulgarian education is currently focused on the physical acquisition of new technologies and, to a very small extent, in their functional use to acquire new digital competences, not to learn and consolidate fundamental knowledge" (female, 34, PR in a public organization).

**Children in the family**

During the childhood, parents are the most important intermediaries in digital media socialization. Parents are the individuals who can provide the necessary cognitive and emotional
balance to their children and in the later ages. Parents are aware of the serious challenges they face in the current situation related to various negative aspects of the action and content of digital media. Parents said that with age and school attendance, it is becoming increasingly difficult to control children’s choice. The role of the school environment in this case is also of great importance. The assessment is that digital devices create conditions for widening divisions and inequalities among children, which complicates childhood assessments and perceptions (Grusec and Hastings, 2014). The basic element of media socialization are the parents, the extent to which media messages break through the prism of group norms and rules in the relationship between the personality and society (Peicheva et al., 2018).

The family is of great importance to media socialization, because parents are the ones from whom the children learn various aspects of the world, including the media; kids are informed for different sources of information thanks to their parents, and they receive access to various digital devices: computers, tablets, Internet, mobile phones. Namely, parents are the people who may impose certain restrictions on the viewing of TV programs or usage of the Internet; and not only on what to watch, but as to how long (Greenfield and Yan, 2006). Thus, the children can be protected from a variety of negative effects associated with aggression, high anxiety, uncertainty and emotional discomfort related with them. Parents are the ones with whom children can discuss a character, an event, a show or a movie viewed in the media as well as issues requiring further clarification, information or support.

Children get their first internet device at about 2 years of age - these are usually the smartphones that mothers give to children to have fun, not to cry and have fun on their own. More than half of Bulgarian households have tablets and just as much have smartphones. For many children, the virtual world is more real than the real world. It is well known how dangerous it can be surfing the net for a child that is 10 years old; the dating sites are also dangerous, where adolescents can be spoken by inappropriate people. There are various studies showing the impact of media usage on individuals, like violence and aggressive behavior in society (Lemish, 2015). The role of the environment is also determined as a decisive factor (Anderson, 2008).

The Internet offers many opportunities but also hides a number of dangers, especially for those who do not know how to guarantee their security. Children are one of the most vulnerable groups. According to statistics in 2018, 50% of adolescents are already using the Internet before they reach 7 years. They often start communicating with different people across the screen, and this is an ideal opportunity for pedophiles and fraudsters (Valcheva, 2018), reason or which the children need to be educated to cope with cyber attack and aggression on the Internet, phenomena that are increasingly common throughout the world and with extremely serious effects (Baciu, 2019).

The "National Safer Internet Center Marketlinx" conducted in 2016 a National Representative Survey on online behavior of children in Bulgaria, as the UNICEF (2017) report on children and digitization shows. The study is concerned with exploring the use of the Internet, information and communication technologies by children between 9 and 17 years of age and their parents. The results show that today's children are using the Internet ever earlier, more often and using increasingly diverse mobile devices, which increases the risks they face online.

In 2016 Bulgarian children start using the Internet at the average age of eight, which is one year earlier than in 2010). Many Bulgarian children enter the online world for the first time in about 7 years. Around 97% are active users, a big leap compared to 81% in 2010. In addition, Bulgarian children go online more often in both school and non-academic time. Increased use increases the risks. 40% of kids users have public Facebook profiles. The most endangered by the traps that the net hides are children aged 8-14 (UNICEF, 2017).

Also, the same report shows that Bulgarian children are increasingly falling on harmful content on the Internet. About 15% of them say they have been worried or afraid of something they've seen online in the past year. An alarmingly high percentage of social networking accounts are public, with the percentage being highest for an average age group (12-14). About 87% of
children use social networks (following the results from the national survey conducted in 2016), which is significantly above 54% in 2010. One third of Bulgarian children have communicated with a person they have not met live. Online and offline child abuse has grown significantly over the past six years. About 30% have been offended or affected by a peer in the past year. The percentage of children using sexting (sending and receiving textual or visual content of a sexual nature) has not increased compared to 2010 (last survey), but remains worryingly high. Risks even hide innocent photos posted on the web with inappropriate content, which can lead to harassment and extortion. Experts suggest that one of the most important factors to ensure the safety of children on the Internet is to build a strong relationship of trust (Livingstone, 2009).

In the focus groups, respondents shared that:
"Parents must have constant control over what access children have to the Internet. Many people say today's children are born to be literate on the net. But, doing well does not make them digitally literate and does not make them safe for all risks online" (female, 45).

Parents commented that more than half of children get information on sites with inappropriate content, and they do not want it, which is very damaging to them.
"Parents do not even suspect that children often go to inappropriate games - violent ones" (female, 35).

The age of admission of minors on the web, including making a social networking account, is steadily decreasing. Therefore, these activities should be under the control of parents.)
"Virtual communication itself can become aggressive in real life" (male, 52).

Efforts are needed to protect children from the dangers of the Internet. The technique is constantly improving and more and more opportunities for Internet access appear. Progress in the field of technology places children with both unique opportunities and unpredictable dangers. One such danger is cyberbullying, which is a consequence of the uncritical manipulation of digital means.

It consists in spreading discrediting information, photos, sending threatening messages, hacking into accounts and send messages to the contacts list in order defamation. The most important feature of online bullying is that it is public and destroys authority, and can negatively affect the confidence and self-concept of the child itself, since once shared information can spread very quickly across all platforms.

In one of the interviews, a parent said that after consulting with a psychologist he had his child close down his account to stop the attacks on him. Parents are concerned about the effect of the online world on the emotional and physical condition of their children. Children's threats online are equally real with adults, such as viruses, identity theft, online fraud. The problem is that children are more trustworthy and have less experience. Children can give information without thinking about the consequences that this may have.

Therefore, it is necessary to keep in contact with the children in order to be reasonable and to use the Internet responsibly, to be aware of the dangers in the network. Thus, the Internet will be a useful means of communicating and obtaining information that will not threaten their security.

Parents in focus groups say that in order to protect their children they must have basic knowledge of the Internet and what their children do when they communicate by instant messaging or "chat", browse web pages or do something else on the web. This information can be obtained through a variety of software programs that offer parental control, which stops inappropriate messages and images that appear on the computer screen, and prevents children from opening dangerous pages. It was shared that:
"These filtering or blocking programs do not provide 100 percent protection. Additionally, older youngsters understand computers and learn how to ignore or outsmart these programs" (male, 43).

That is why parents have to determine when children can use the Internet and for how long, as well as what websites they can visit and what websites are forbidden. According to parents,
this should not have the nature of a ban or coercion, but of explanation and discussion with the children, and why it is necessary.

One of the participants in the focus groups said that "children should go to specific educational sites dedicated to animals, nature, science" (female, 38) or "make a list of Internet libraries, dictionaries and tutorials" (female, 40).

Another problem that parents have pointed out is that they cannot keep track of what their children do when parents are not at home. It is therefore important that the control of the Internet is not a single action, and it is a continuous process of mutual trust, the formation of values, the observance of rules so that kids can make the right decisions even when they are alone. In this sense, the finding that the protection, which parents can ensure by monitoring children's activities is limited. The principles that parents teach their children and the example they give can achieve much more in this respect. Therefore, it is time to discuss with children the dangers of using the Internet.

"Open communication with children is the best protection against hidden threats on the Internet" (male, 46).

There are a variety of digital devices, each of which is associated with different benefits:

**Mobile phones.** In the focus groups, respondents shared that the average age at which children receive their first smartphone is 10 years. The smartphone provides a number of advantages with regard to the constant connection and location of the children: where they are, what friends they are with, when the children will return home, as well as to stay in contact for an extended period of time or to have a quick response if parents need to respond quickly when needed.

The advantages of smartphones, however, can also become their shortcomings because they are personal devices and may not always have full control over them by parents, and that makes children highly vulnerable. In the focus groups, some of the parents shared how they could limit the continued use of smartphones:

"I basically strive to give myself a personal example by not keeping my phone on the table, not calling while driving" (female, 37).

"I think there should be limitations, for example, how many hours a day the phone can use, but I think this is difficult to realize, and it is known that when you restrict someone, you stimulate him to show a trick, to try to invent ways to disregard the restrictions, so great care must be taken" (male, 45).

**Online games.** Massively children aged 3 to 17 play video and online games. Children can play alone or with some of their peers they know, or with others who do not know it but have met online. The games form different skills related to rapid reaction, imagination and creativity, perspective thinking, teamwork. Some of the games also have a cognitive element. Online gaming is a prerequisite for creating new contacts with other gamers, even from around the world, which opens the possibility of abuse.

Threats related to online gaming can be manifested in several ways (Lemish, 2015):
- Violence is present in the games, quality of vengeance is developing; the very process of play is accompanied by nervous overload, high adrenaline, which affects the child's psyche.
- The games go through different levels, which requires a prolonged stay in front of the computer and actually tears the child out of his or her schooling or homework duties. Children do not exercise and do little to do.
- Children can create relationships with other players and become subject to online harassment.

In the focus groups, parents say that they are trying to discuss their children's online games in order to give them advice or to share their personal experiences, to help their children, to support them when they have difficulty.

**Social networks.** Teens are the most active age group on social networks, using more than one platform but spending at least 3-4 hours daily. Moreover, it is the contacts they make on social
networks are a priority for them, rather than finding the learning materials they need for school or university. Social networks become very important because they contribute to developing age identity, peer association, posting information about different events or people. In this sense, social networks develop dependence on teenagers, as they are the basis of contacts with strangers, sharing inappropriate content or cyberbullying. It is therefore necessary to set boundaries with regard to the long standing in the social networks and the risks that it hides.

In the focus groups, parents share that one of the ways of control is to regulate privacy settings, and to monitor the child's online activities, which would allow parents to respond preventively. According to our respondents, profiling and social networking should be limited as long as possible to protect children from adverse and risky influences or addictions.

**Discussions**

Digitization is a fact in modern society. All aspects of relationships, processes, institutional networks are under the sign of digitization. Relationships in family and child growth are also influenced by digital means (Rosengren, 2014). This study reveals the benefits of digitization as well as the problems that accompany the digitization of society; one of the issues is related to upbringing, as well as the way of children formation, the parental support and comfort that children need to have to form themselves as balanced and confident individuals. In this sense, parents should seriously rethink their children’s access to digital devices that become an active participant in the process of socialization.

One of the main findings about the relationship of children with digital tools regards their protection from various hazards that online communication lies. Therefore, it is necessary to talk to children, to have sustainable communication and clarifications, trust between parents and children.

Another implication is related to the fact that long online time does not make children more digital and media literate. With the prolonged use of digital media, children develop basic technical skills to handle digital devices, save files, organize online information, create social networking profiles and manage their settings, and so on. Also, children successfully use a variety of websites and digital communication platforms. Researchers (Poell, 2014), however, find deficits in children's critical thinking and social skills that make it difficult for them to assess the truth of information found online and to effectively collaborate with other users for common activities. These skills are at the heart of digital and media literacy and are needed to successfully exploit the great opportunities of the digital era (UNICEF, 2017).

The answer to the basic research question related to the risks of digitalisation and parents' attitudes towards this process is that the negative effects of digitalisation can be minimized when the whole of society is involved with its various public and non-governmental institutions. Only then will the efforts of the social actors lead to the expected positive result.

One way to control the behavior of children in the network is to achieve good communication with school structures by creating a symbiosis in the direction of action and approach to child education.

In the focus groups it was stated that the Bulgarian school excluded the dangers of the network from their point of view and the parents were left alone to deal with the digital control of their children.

The consequence of the penetration of digital technologies and educational processes is the transformation of digital access into a new dividing line, as millions of children who could benefit most from digital technologies do not have access to them (Van Dijk, 2014).

Internet and technological progress are identified as the main prerequisite for the emergence of digital divide. In general, the division is not only determined by access to the internet, but depends also on the economic capital of the family, the social environment. Digital divide reflects the prevailing economic disparities by increasing the benefits for children from richer
environments and not providing opportunities for the poorest and most disadvantaged children. In this way, the digital divide goes beyond the issue of access to computers and internet.

Important factors implying the emergence of digital divide include: digital technology usage skills; resources and literacy; training; lifestyle (Peicheva and Milenkova, 2017). There is also digital inequality between age groups as well as between genders. Worldwide, 12% more men than women used the Internet in 2017 (Peicheva, 2017: 152).

In the conducted interviews, special emphasis is placed on the digital divide:

"It should be noted that there are groups of people who do not have the same level of access to digital technologies (these are elderly people and people with low economic status, representatives of marginalized populations, including ethnic minorities, people living in remote and hard-to-reach regions of the country). This leads to the so-called digital gap (technological gap, mismatch, division), which - as I mentioned - is an inevitable social phenomenon. Society needs national programs to support the technological development of the aforementioned groups" (female, 43, representative of NGO).

Conclusions

In conclusion, it could be said that the participation in modern digital environment includes access to different e-ressources, devices and information products and services. It should be taken into account that the acquiring of digital skills for work in interactive environment improves their efficiency with respect to creativity and innovatively pursuing education activity. Achieving greater effectiveness in training and education involves the successful use of communication technologies, based on acquired skills for seeking and finding resources, as well as the capacity to analyze and combine the obtained information, to share different ideas, which they may discuss with their parents and teachers.

Acknowledgements

The article has been developed in the framework of the research project "Digital Media Literacy in the context of "Knowledge Society": state and challenges", № K11-06-H25/4, funded by National Science Fund – Bulgaria.

A summary of this paper was presented at International Conference: Individual, family, society - contemporary challenges, 3rd edition, 9 to 10 October 2019, Bucharest, Romania, and published in the journal Studii și Cercetări de Antropologie, No. 6/2019.

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