Children and digital media

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Abstract

Digital revolution has transformed childhood very profusely. The goal of this work is to present the way digital technology influences education, in what way it shapes various dimensions of life and the identity of preschool children and the challenges upbringing parents are faced with. Numerous researches have indicated that digital media can be a worthy source of knowledge, encourage and develop various children's abilities and skills if they are used appropriately and under adult guidance. However, uncontrolled and excessive use of media in early children's age can potentially have extremely negative and harmful effects on the child's growth and development and endanger his/her health and happiness. Parents and other adults in charge of children's care significantly affect children's approach to the media and media content. This paper has concluded on the fact that social media has dual effect on the child; therefore, it is necessary to offer quality preventive programmes and workshops not only for parents and educators but also for children and youth.

Keywords: Digital media, education, parents, the child, digital revolution.

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1. Introduction

1.1. New digital era

The digital era followed the industrial era and in its narrow meaning pertains to the time after 1970. Its main determinant is the sudden development and prevalence of information technology that provides fast and efficient transfer of information. Many connect it with the widespread use of the Internet. It is a time in which social, economic and political activities depend on information and communication technology (Tella, 2019).

Technological progress and societal changes are also reflected on the cognitive, social, physical, moral and emotional growth of the individual. In the last couple of years, the influence of technology on the overall development of younger population is increasingly spoken and written about (Lasic-Lazic, Spiranec & Banek Zorica, 2012). In order to point out the connection between children and youth and new technologies, they are often called the Generation Z, Generation Alpha, Digital Natives, Cyber-children, Generation V (virtual generation) and alike. Since today's children and youth live and grow up in technologically abundant environment, the prevailing opinion is that they are very skilful in using new information and communication technologies, which will ultimately be positively reflected on their future. However, different opinions also exist. Carr (2008) considers that frequent use of technologies decreases the ability of thinking due to changes in cerebral structure on the cellular level. For this reason, younger generations differ from the older; they have different inclinations and attitudes as well as the way of processing information.

2. The child and the media

A large number of children have become a part of the media world immediately after birth – parents post the moment of their birth, first steps, smiles, words and cries on various social networks. As they grow up, the number of screens surrounding them, from television to computer screens, smartphones and tablets, also increases. Children grow up in the world of media and they become an integral part of their lives. The stated is maybe best illustrated by Mandaric (2012) in claiming that children in Europe spend more time in front of television and computer screens than at school desks. From the age of 16 to the age of 18 (primary and secondary school period), the young spend 11000 hours in front of the school board and 15,000 hours in front of the television.

The first national research in the Republic of Croatia about preschool children in front of the television screen was implemented by the Zagreb Child and Youth Protection Centre and Brave Phone for children. The research was implemented on the sample of 655 parents of preschool children during 2016 and 2017. According to the research results, almost all 700 preschoolers about whom their parents reported use at least one electronic device. The results show that 97.2% of the children watch television, more than two-thirds of the children use a mobile phone or tablet and 60% use the computer. The preschoolers spend on average 2.4 hours in front of the screen on a work day and 3 hours during the weekend; around 15% of the children play games on their consoles, around 1 hour per day. The preschool age children spend most time in front of the television. 27% of the children have a television in their bedrooms, 8% have a computer and 5% have a games console (https://www.poliklinika-djeca.hr/istrazivanja/prvo-nacionalno-istrazivanje-o-predskolskoj-djeci-pred-malim-ekranima/).

In frame of the large international project of the EU named Kids Online, a research on digital habits and safety of children on the Internet was also implemented in the Republic of Croatia. The research included 1,017 children from 9 to 17 years of age and their parents. The key research results are as

follows: most children have the possibility of Internet access whenever they want; the children access the Internet via their mobile/smartphones most frequently; the amount of time spent on the Internet increases with the children's age; and the children listen to music on the Internet most frequently. Despite recommendations from experts that children should not spend more than 2–3 hours a day on the Internet, the research has shown that almost every fourth child spends more than 4 hours a day on the Internet during the working week and more than one-third of the children over the weekend (Ciboci, Cosic Pregrad, Kanizaj, Potocnik &Vinkovic, 2020).

As technology develops more and more, there is a great probability that the number of hours children and youth spend in front of various kinds of screens will be even more increased. The media, especially television, the Internet and smartphones, have become the most important factor of socialisation. They strongly affect social behaviours; they have become inevitable means of informing, forming and transferring values. They create the vision of life and world, shape the lifestyle and identity of individuals (Mandaric, 2012).

From all the aforementioned, it is clear that the role of the media in everyday life of children and youth should be put under serious consideration. It is important to stress that digital technology and media can have a dual role; they can be positive and stimulating, but, on the other hand, they can have a negative, harmful and endangering role in children's lives and welfare.

3. Positive influences of digital technology on the child

When we consider the positive sides of digital technology, the one that stands out the most is the educational factor in the context of various shows, animated features and applications motivating and developing children's cognitive abilities. Genc (2014) claims that the use of digital technology can lead to the following positive learning outcomes: acquiring operational skills, widening knowledge and understanding of the world and affinity to learning. Through media contents, it is possible to develop the skills of writing and counting in children as well as cooperative relationships via programmes, video games and applications in which such behaviour is applied. Older children can develop intellectual skills, such as problem-solving and critical thinking, by playing video games (Ciboci, Kanizaj & Labas, 2021). Kovac (2011, acc. to Duran, Koprivnjak & Macek, 2019) underlines multimedia fairy tales as extremely interesting because they motivate children's imagination, influence development of reading comprehension and enrich one's vocabulary. In extensive literature review, Close (2004) inferred that watching quality television content can have positive effects on language abilities, vocabulary, attention, comprehension and storytelling skills in 2–5-year-old children. Pitchford (2015) states the research results according to which the use of tablets in learning maths yields better results than traditional learning methods. Children who used tablets in learning maths through certain time have achieved results twice as better than the children exposed to traditional learning methods.

A multimedia computer can develop imagination, musical memory and sense of rhythm, and provide children with the opportunity to get acquainted with the sounds of various instruments and create their own melodies (Tabol, 2002, acc. to Duran et al., 2019).

Positive sides of digital technology have been observed also in children with learning difficulties. Batorowicz, Missiuna & Pollock (2012) emphasise that some technologies can facilitate the compensation of weaknesses and stimulate good sides in children with some learning disability.

Barr (2008) stresses that being exposed to quality digital content improves cognitive development, language development and prosocial skills in children.

Media can motivate tolerance, mutual appreciation and cooperation in children and numerous other positive forms of social behaviour (Jurcic, 2017).

Suparmi, Suardiman & Budiningsih (2020) consider that electronic media stimulate children's creativity. They stress the importance of developing educational games and television programmes which will motivate children to exploration of their own creativity.

Numerous positive influences of the media and digital technologies on children are visible in the above stated facts. However, it is by all means important to emphasise that children need to be exposed to it in a controlled environment and use them moderately.

4. Negative influences of digital technology on the child

As stated previously, digital technology has many positive sides. However, negative sides exist alongside the positive, which is often the focus of discussion, especially when it comes to children.

According to the recommendations of the American Academy of Paediatrics (2016), children under 18 months should not use the media, because research has shown they slow down their cognitive development. Children up to the age of three believe that all audiovisual content they see is real. Only with the development of logical thinking, around the age of 5, children can distinguish between the programmes such as the news from the ones showing fiction. However, this discernment is not total and it is gradually perfected with the child's growth and development (Barr, Muentener & Garcia, 2007). Therefore, great caution is required in exposing children of early age to audiovisual content.

Media content and technology can evoke unpleasant emotions. Hence, preschoolers and younger primary school children are mostly afraid of scary characters and events (e.g., spirits, witches, monsters), regardless of them being positive or negative characters (Cantor & Nathanson, 1996). Based on numerous researches, it can be inferred that being exposed to violence through media and technology increases the probability of aggressive behaviour's occurrence in viewers. However, it does not mean that media violence is the cause of aggressive and violent behaviour, but can be an important risk factor for the emergence of the stated forms of behaviour (Bushman & Anderson, 2015).

Research results about the influence of violence in comedies and animation features show that both children and adults perceive physical violence of characters less disturbing or do not experience it as violence at all. Due to the stated, violent behaviours in animated films are more easily tolerated by children. The similar also pertains to aggressive behaviour with regard to comedies, but, on the other hand, violence in animated films without the context of humour is perceived as violence by children as well as adults. Research shows that after viewing comedy animated films, the probability of a child being aggressive towards things more than towards people increases (Kirsh, 2006). In individual play or one with peers, children very often identify with animated characters and imitate their speech and movements, which is worrying when violent scenes are being replayed. Superheroes often use violence in order to win and children are sent a message that such behaviour is acceptable (Ciboci & Labas, 2015). Numerous researches show there is more violence in animated films than in other contents that are intended for adults (Potter & Warren, 1998).

Sigman (2010) warns that the lengthy periods of time children spend in front of television screens impede physical metabolism, stops the development of the child's brain and increases the probability of a child developing attention deficit hyperactivity disorder. The use of media is connected with mild, but a significant increase in body weight index in preschool children, which can be a trigger for gaining weight in later age (American Academy of Paediatrics, 2016).

Hosokawa and Katsura (2018) state the results of research that suggest the existence of the connection between children's frequent use of mobile phones and the occurrence of emotional problems (behavioural problems). Excessive use of mobile devices, including smartphones and tablets, might interfere with children's development in relation to social adjustment.

Adegboyega (2020) conducted a research on the influence of social media on primary school students' behaviour. According to the statements of teachers, social networks negatively influence the students' social behaviour. Students who use social media more are also more prone to playing games instead of studying, show lack of concentration in school activities and are ready to steal someone else's mobile phone or money in order to access social networks.

Apart from the stated, via the offered content, the today's media can motivate in children and youth various behaviour and actions that can jeopardise children's welfare. Therefore, children need to be educated on responsible behaviour and moderate consumption of electronic media.

5. The child, parents and the media

Parenting presents a substantial challenge nowadays. Parents have a major responsibility towards their children. Basic human and social values are instated; habits, attitudes and the view of life and the world is formed; self-image and the perception of other people is created, all in the family home. Parents' obligation is to ensure the conditions for optimal growth and development of a child. In order for the child to develop all its potentials, parents need to secure a stimulating environment. The accessibility of the media is, amongst other things, considered as stimulating environment. Digital media can significantly influence children's development and this influence can be positive if used appropriately and with adult control and guidance.

Children's use of electronic media (television, Internet and smartphones) is under great influence of parental attitudes (Sanchez et al., 2017, acc. to Jimenez-Morales Montana & Medina-Bravo, 2020). Parents are the ones who need to determine which media content are to be consummated, when and to what extent. With regard to regulating the use of electronic media (watching audiovisual contents), researchers distinguish between four types of parents (Rosengren & Windahl, 1989): restrictive, non-restrictive, promotional and selective.

Restrictive – parents strictly limit audiovisual content a child is exposed to. These parents' children watch less content inappropriate for children, but also less educational content. Since the time intended for watching television is strictly limited, children watch it when parents are not at home.

Non-restrictive – parents do not limit their children when it comes to content they watch or the time they spend in front of the television. These parents' children watch educational shows much less and those of entertainment character a lot more. Children watch television without the presence of parents, so they can be exposed to inappropriate contents.

Promotional – parents stimulate children to watch television programme. These children normally watch television together with their parents, which gives the parents opportunity to comment the seen programmes with the children.

Selective – parents choose and select contents their children watch. These parents' children watch more educational and informative shows and less entertainment shows.

The influence of television and all other media in the family home, whether positive or negative, is in the hands of parents. Parents should teach children about the media, i.e., teach them to control the media use and realise how different media determine their time and influence their thinking and

feelings (Duran et al., 2019). In order for children to navigate through the media, it is necessary to develop media literacy since the earliest age. Cosic Pregrad (2019) defines media literacy as the group of skills empowering analysing and questioning contents we are exposed to, and evaluating their accuracy and source reliability. Parents can develop media literacy in children in more ways as follows:

- by showing interest – parents should follow their child's interest and his/her reactions to certain media content. After watching a television programme together or playing some game, it is important to talk to the child about the done activity;

- by setting boundaries – media are very attractive, but it is the parent's role to limit the time spent using the media;

- by teaching children critical thinking and questioning – parents provide children with the basic tools which will facilitate successful navigation and protection in the world of the media;

- by providing information – parents themselves should be informed about new technologies;

- by using parents as models – children are more inclined to believe their parents' behaviour than words. Children attentively observe how often their parents look at their smartphone, how they use it, which shows and films they watch. It is important for their parents to live the values they wish to teach the children.

Parents should set family rules about using the media with their children and then uphold these rules.

6. Conclusion

Today, more than ever before, the media have an enormous influence both on the individual and society as a whole. This influence is especially visible and powerful in children and adolescents. Media have become a dominant source of knowledge; they form the hierarchy of human values, shape opinions and standpoints and dictate behaviours and ways of reacting. Information that they provide are questioned less and less. Some parents, afraid of the negative influences of electronic media on the child, strive to limit their use or even forbid it. However, it brings more damage than gain because children are in such a way deprived from valuable sources of knowledge. Moreover, it is expected today that children and youth utilise digital technologies, because precisely digital competence, according to the recommendations of the European Parliament and the Council of Europe (2006), is one of the eight key competences in the frame of lifelong learning strategies. The responsibility of adults (parents, preschool teachers and teachers) is to capacitate children and youth for responsible and safe usage of electronic media.

It is evident that digital media have a dual effect on children's growth and development – positive and negative. It is a challenge for parents, preschool teachers and teachers to promote the use of media and not to endanger the health of children and youth in the process. Critical reflection on the contents and length of using media throughout childhood is primarily the responsibility of adults. In order to achieve the aforementioned, it is necessary to offer quality preventive programmes and workshops not only for parents and educators but also for children and youth. In such a way, digital culture will be created that will empower the use of media's benefits and at the same time realise holistic children's development.

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