CHILDREN IN A DIGITAL AGE

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CHILDREN IN A DIGITAL AGE

A GUIDE FOR SAFE AND CONSTRUCTIVE USE OF DIGITAL TECHNOLOGIES AND THE INTERNET

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ALL TERMS USED IN THE MASCULINE GRAMMAR GENDER REFER TO PERSONS OF BOTH MALE AND FEMALE GENDER.

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Introduction

Who is this publication for?

The publication *Children in a Digital Age* is intended for educators, parents, carers, i.e. everyone working with children, participating in their upbringing and education, and all those who want to be informed about the ways in which they can contribute to safe and constructive use of digital devices and the Internet by children of pre-school and lower-primary school age.

What is our goal?

Our goal is to encourage adults to explore, learn and use the numerous opportunities and advantages of the Internet as an important cultural tool.

Our goal is to support and empower adults, and to 'free them from fear' – the findings of domestic and foreign research tell us that adults are scared and worried about the harmful effects of using digital technology and the Internet – by demonstrating that digital technology is not harmful in itself, but can certainly be if not used properly. For the safe and proper use of digital technology and the Internet, it is necessary to possess the appropriate digital literacy skills, and to understand the ways in which they are used in working with the youngest.

Finally, our goal is to encourage adults to continually improve their own digital skills, as this in turn contributes to children's digital literacy and, therefore, is in their best interest.

What does the publication contain?

The first part provides an overview of the latest theoretical knowledge regarding the use of digital technology and the Internet in childhood, supported by the results of scientific research. The second part of the publication contains workshop scenarios for working with parents and preschool and lower-primary school children.

The publication contains a list of resources, i.e. links to web pages, applications, and various web tools, thus making it easier to find useful and interesting information online. The resources contain recommendations for parents and educators on how to apply technical protection measures when using digital technology; how to use digital devices and digital content in working with

children with developmental and learning disabilities; how to promote early development along with correct use of digital technology, assess the quality of digital resources for children, integrate technology into the educational process, etc. Finally, the publication contains a dictionary of professional (foreign) terms used in the text (for some of them it is not easy to find the appropriate equivalent in the Serbian language), which will, hopefully, facilitate its understanding.

How can it be used?

The publication has multiple purposes. It can serve as a resource for improving adults' knowledge and digital skills, helping them to explore a vast 'knowledge base' available online, but also as a practical manual or a guide to train children and adults on the safe and constructive use of digital tools and the Internet.

We want you to enjoy reading, learning, implementing workshops and 'travelling' the internet together with children, just as much as we enjoyed preparing this publication.

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THEORETICAL FRAMEWORK

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CHILDREN IN A DIGITAL AGE

DIGITAL AGE FACTS

We live in a digital age. The world we live in has become digital. Digital technology has changed and is rapidly changing the ("developed") world. All aspects of modern life, ranging from the cash desk in a supermarket to the controls of nuclear weapons are "in the power" of digital devices. Digital technology is changing the childhood of millions of children worldwide. The number of Internet users, including children and young people, is getting bigger every day...

The sentences you have just read have 'flooded' the popular, but also scientific literature of 21st century. Living in the digital age, expressed in figures, looks like this:

- In mid-2018, **55%** of the world's population and **85%** of Europe's population had Internet access.[1].
- Serbia takes **41st** place in Europe with **72%** of the population having Internet access.
- One third of all Internet users are younger than **18**.
- Facebook, one of the best known social networking sites, has about **2.5 billion active users** (including children under the age of 13, despite the prescribed minimum age limit).
- Google, the best known web search engine, records **over 5 billion searches** in the course of just one day.
- YouTube, one of the most popular video sharing platforms, records **about 6 billion** views a day[2].

For generations that are surrounded by digital devices and the Internet from earliest childhood – the so-called digital natives (Prensky, 2001) – the claim that we live in the digital age is not an issue at all. It is indisputable that most of today's children accept digital technology with great interest and excitement, and it could be said that one of the main challenges of parenting in the digital age is to 'separate' children from their digital devices.

[1] https://www.internetworldstats.com/stats4.htm
[2] http://www.internetlivestats.com/ (downloaded on July 12, 2018)

Digital technology is gaining an increasingly important role children's lives of, shaping their everyday activities: the way they spend free time, communicate, play and socialize with peers, learn and acquire new experiences.

Digital technology shapes the present, but also the future of children, offering them unprecedented opportunities.

Every day, new 'smarter' digital devices, online platforms and applications are becoming available to children. The Internet of things, Internet of toys, social robots, virtual and augmented reality, artificial intelligence, machine learning, are just some of the digital age products that create new opportunities for children, but also new challenges.

On a global level, a large percentage of children do not have access to the Internet, especially when it comes to underdeveloped and developing countries (UNICEF, 2017). Even when they have access, children do not possess the appropriate skills to use digital technology (as well as the adults who care about them), so they are unable to use many of the opportunities provided by such technology, nor are they able to overcome potential risks in the digital environment.

In a world where 56% of websites are in English, and only 10 world languages dominate the Internet, many children are unable to find any content in a language they understand (UNICEF, 2017).

Differences in digital technology access and the level of digital skills development reflect deeper socioeconomic differences: between educated and uneducated, rich and poor, men and women, rural and urban populations (Claro et al., 2012; Fraillon et al., 2014).

Beside numerous opportunities, the use of digital technology and the Internet, especially when it comes to children, brings along a number of risks: personal data storage, endangered privacy, abuse of children for commercial purposes, exposure to harmful content (pornographic, violent, racist), false news, consumer culture, etc.

Despite the fact that children make up about one third of the total number of the Internet users, the focus of current international and national digital policies is not on children but adults (UNICEF, 2017). This fact raises an important question of child rights in the digital age.

Children enter the digital world without proper digital skills, which makes them more susceptible to potential risks.

The digital age imposes numerous challenges, but also calls for responsibility, not only of parents/carers, educators, psychologists, pedagogues, paediatricians – who are most directly involved in raising children – but also representatives of the information technology (IT) industry (especially those that produce content for children), Internet providers, private sector, state authorities, policy makers, and so on.

One of the most important tasks of adults in the digital age is to place children at the centre of digital policy.

THE USE OF DIGITAL DEVICES BY CHILDREN: THE WORLD AND SERBIA

Most of the studies carried out so far on the use of digital technology and the Internet by children and young people included children aged 9 to 17, while a few focused on children under the age of 9 (Chaudron, 2015). Recent studies, however, shift their focus towards younger ages (0 to 8 years old), with parents (not children) involved in the sample reporting on their children's digital activities and skills.

In order to gain a basic insight into the use of digital technology in preschool and lower primary school children, both in the world and in our country, we provide here a short review of empirical research findings.

Numerous research results show that today's children are beginning to use digital devices and the Internet at an increasingly younger age.

Almost every child in America under the age of 8 (98% of them) has access to mobile devices at home (Common Sense, 2018). In 2011, less than 1% of American children of 0 to 8 years of age owned their own tablet; in 2017, the number increased to 42% of children of this age who had their own device (tablet computer). American children younger than 2 spend about 40 minutes a day (on average) in front of screens (including television); children aged between 2 and 4 spend 2 hours and 40 minutes, while children between 5 and 8 have 3 hours of screen time per day. The same research (carried out on a representative sample of US parents), confirmed a positive correlation between the degree of use of digital technology in children and their parents (Rideout, 2017). One should bear in mind that most of the parents of today's children were born after the emergence of the Internet and digital technology; that is, digital technology has become an integral part of family life.

A tablet computer is the most commonly used digital device among preschool children worldwide.

Studies conducted in European countries also show that children under the age of 8 are heavily involved in the digital world and are surrounded by numerous digital devices in their homes all the time (Kumpulainen & Gillen, 2017).

Half of children aged between 6 and 36 months use mobile devices with a touchscreen on a daily basis (Taylor et al., 2017).

In England, children aged 3–4 spend 7 hours and 54 minutes online per week (which is

slightly more than an hour a day); at the age of 5–7, they spend 9 hours and 6 minutes, while children aged 8–11 are online for 13 hours and 24 minutes per week. Some 86% of children aged 3–4 have access to a tablet at home, and 21% of them possess their own tablet (Ofcom, 2017). According to the results of another study (Marsh et al., 2015), conducted on a sample of parents of children aged 0–5, children use a tablet for 1 hour and 19 minutes (on average) during a typical weekday and 1 hour and 23 minutes at the weekend.

The time children spend online increases along with their age.

When it comes to Serbia, the results of the international survey Global Kids Online, conducted in 2016 (UNICEF and the Institute of Psychology), show that an average 10-year-old began using the Internet at the age of 6, which is four years earlier than an average 17-year-old, who first accessed the Internet at the age of 10 (Popadić et al., 2016).

So far, no research on the use of digital technology and the Internet on a representative sample of children under the age of 9 has been done in our country. The results of the research conducted by UNICEF and the Institute for Psychology in mid-2018 – the first research in Serbia that focused on children aged 4 to 8 – confirm the results of foreign studies; however, due to the characteristics of the sample, it is not possible to generalize the results to the population of children of this age in Serbia. According to the reports of parents who participated in this research, less than 10% of children aged 4 to 8 did not use digital devices. Seven- and eight-year-olds began using the Internet at the age of 5, while three- and four-year-olds stepped into the online world before their third birthday. The most common online activities of children are: watching videos (such as YouTube), viewing photos, listening to music, taking photos and recording videos with digital devices, chatting and playing video games (about 50% of preschool age children and over 80% of lower primary school children play video games).

Adults are concerned about the harmful effects of digital technology and they need support to actively intervene in their children's use of it.

IF YOU WANT TO LEARN MORE:

- **Children in a Digital World (Abstract in Serbian)**

  https://www.unicef.org/serbia/reports/deca-u-digitalnom-svetu

- **Children in a Digital World**

  https://www.unicef.org/publications/files/SOWC_2017_ENG_WEB.pdf

[3] Popadić, D., Kuzmanović, D. & Pavlović, Z. (2018). Safe Family Net – initial research results. Belgrade: UNICEF (unpublished results)

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CHILD RIGHTS IN THE DIGITAL AGE

The Convention on the Rights of the Child – the most important international document protecting the rights of the child, binding on all the signatory states, including Serbia – was adopted in 1989, at a time when the Internet was still in its early stages of development. Consequently, the Convention does not recognize the terms that refer to the digital environment, which, meanwhile, has become the 'natural setting' of children who grow up in the digital age.

Fifteen years ago, when digital technology development expanded, there started a debate on whether the rights of the child, guaranteed by the Convention, were to be applied in the digital world as well. The debate was short, and if there was any dilemma at all, it was resolved quickly—the rights of the child apply equally to the digital world. This has been confirmed from various sources, but certainly the most important one was the position of the *Committee on the Rights of the Child* (2017); the Committee, acting as the supreme authority for interpreting the provisions of the Convention, gave its recommendations and comments and eliminated any dilemma on this subject. Since then, instead of asking *whether the rights of the child are to be applied in the digital world* (which is now out of date), another, much more complex question has been launched: *how to ensure full respect for the rights of the child in the digital world*; this question is still current. We perceive this publication as a part of the answer to it.

The rights of the child guaranteed by the Convention on the Rights of the Child also apply to the digital environment.

At first, the Internet used to be a phenomenon of developed countries and the English speaking world. Public policy makers tacitly assumed that Internet users were adults, and the Internet designers did not even have children in mind. Unfortunately, the Internet is still 'blind' to the developmental needs and capacities of children, as potentially its most vulnerable users. Despite the fact that more and more child-friendly content is offered online, though not always well suited, the Internet has opened up many opportunities for endangering the rights of the child. By 'filtering' and 'blocking' access to inappropriate content, adults will not make the Internet a 'better place for kids'. After almost three decades from the emergence of the World Wide Web (www) and the adoption of the Convention, the rights of the child in the digital environment remain **under-recognized** by those who manage the Internet globally (Livingstone et al., 2016).

In recent years, several initiatives have been launched, especially by international organizations dealing with the protection of children (UNICEF, Council of Europe), with the aim of effectively

protecting the rights of the child in the digital environment. One of these resulted in the *Digital Convention* (Children's Commissioner, 2017), in which most of the articles of the *Convention on the Rights of the Child* were redefined so that they directly point to the digital environment; the intention was to emphasize a strong link between the wide spectrum of the rights guaranteed by the Convention and practical situations children encounter in the digital environment. However, the adoption of the *General Comment* of the Committee on the Rights of the Child on the exercise of the rights of the child in the digital environment would be of great importance for more effective protection of the rights of the child.

In mid-2018, the Council of Europe adopted *New Recommendations to Member States on the rights of the child in the digital environment* (Council of Europe, 2018). Essentially, they define the ways to better protect and empower children as rights-holders in the digital world. Governments have been recommended to harmonize their legislation, policies and practices, in order to ensure the proper fulfilment of all child rights.

In the latest Concluding Observations (Concluding Observations on Combined Second and Third Periodic Reports of the Republic of Serbia), the Committee on the Rights of the Child expressed concern about the widespread cases of violence against children on the Internet, and accordingly ordered the Republic of Serbia to empower national programmes addressing the problem of violence in schools with the support of the Ministry of Education, Science and Technological Development of the Republic of Serbia, in order to establish standards, counselling and expert examination on violence in schools, and to provide training, including parents, on risks on the Internet. In this way, the Committee emphasized the need for greater involvement of the state in protecting child rights in the digital environment.

In the context of the use of digital devices and the Internet, it is particularly important to respect, protect and ensure the right of the child to **privacy** and **personal data protection**.

The right of the child to be protected from **Internet risks** – exposure to inappropriate content, commercial exploitation, child abuse for advertising and marketing purposes, sexual exploitation, paedophilia, trafficking and other types of risks – is set as an imperative of the digital age.

Many risks that children, as Internet users, are potentially exposed to, can violate the rights guaranteed by the Convention on the Rights of the Child. It often happens that even parents themselves, who care most about the well-being of their children, by their behaviour, e.g. by sharing photos of children online (so-called sharenting) unintentionally expose children to a number of risks, thus violating their children's right to privacy.

The right of the child to be protected from all forms of violence and discrimination, in all situations, also applies to the digital world.

Therefore, the responsibility of adults –

[4] http://www.ljudskaprava.gov.rs/sh/node/19966

parents, educators, teachers, producers of the Internet content for children, Internet policy creators, decision-makers – is to provide children with adequate protection and support in order to undisturbedly enjoy their rights in the digital world. Thus, one of the main tasks of ours is to provide children with the opportunities to acquire digital skills within their formal education, but also in the informal context, to help them use digital devices and the Internet safely and constructively, and even more: to help them shape their world in a safe, critical and creative way.

The right to education in which children acquire proper digital literacy skills is one of the fundamental rights of the child in the digital age.

IF YOU WANT TO LEARN MORE:

- **The Convention on the Rights of the Child**

  https://www.unicef.org/serbia/reports/konvencija-o-pravima-deteta

- **Child Rights Album**

  https://www.unicef.org/serbia/reports/album-de%C4%8Djih-prava

- **New Recommendation on the rights of the child in the digital environment**

  https://www.coe.int/en/web/children/-/new-recommendation-adopted-on-children-s-rights-in-the-digital-environment

- **Growing Up Digital (Digital Convention, p. 17)**

  https://www.childrenscommissioner.gov.uk/wp-content/uploads/2017/06/Growing-Up-Digital-Taskforce-Report-January-2017_0.pdf

- **One in Three: Internet Governance and Children's Rights**

  https://www.cigionline.org/sites/default/files/no22_2.pdf

- **Internet Literacy Handbook**

  https://rm.coe.int/internet-literacy-handbook/1680766c85

3

DIGITAL LITERACY

Life in the digital age requires the possession of a number of complex skills (e.g. problem solving, critical thinking, creativity, teamwork, etc.) including skills for the **safe and constructive use of digital technology** in different life situations. In the professional literature, the terms of **digital literacy and digital competence,** as well as other related concepts (e.g. ICT literacy, information literacy, media literacy, etc.), are often used to denote these skills.

Note that the contemporary meaning of the term 'literacy' is more complex than the traditional understanding of it as the skill of reading, writing and calculating. Nowadays, being **literate** means having functional knowledge and using it to solve various problems in everyday life. The terms 'literacy' and 'competence' are often used as synonyms—as is the case in this text as well. In many languages (e.g. Scandinavian languages), the word literacy does not exist, and the term competence is used, and, as a rule, the same term is used in documents related to education policies. **Competence** is a combination of knowledge, skills and attitudes that are necessary for personal development and active participation in society.

In addition to extending the meaning of the term literacy, the development of new technologies has also led to the emergence of new types of literacy, and digital literacy is one of them.

Over the past decade, the importance of digital literacy for lifelong learning and life in modern society has been highlighted in numerous strategic documents. According to the *Key Competences for Lifelong Learning (European Reference Framework)*, adopted in 2006, digital competence is one of the eight key competences for lifelong learning and active participation in society (European Parliament and the Council, 2006). In mid-2018, new, revised *Recommendations on Key Competences for Lifelong Learning* (Official Journal of the European Union, 2018) were adopted, within which digital competence has been redefined in line with the *European Digital Competence Framework,* presented in the next section. In most European countries, digital competence is integrated into compulsory curriculum (the United Kingdom has introduced IT education from 5 years of age), and in some countries (e.g. Estonia, Norway) its assessment is part of the obligatory evaluation at the end of compulsory education (Balanskat & Engelhardt, 2015).

The Strategy for the Development of Education in Serbia by 2020 emphasizes the importance of digital competence for the development of the education system, as well as of society as a whole (MoE, 2012). The acquisition of digital competence within the compulsory education system is prescribed by the latest *Law on Foundations of the Education System of the Republic*

of Serbia[5]. As the first level in the education system, preschool education is the basis for the continuous development of digital competence.

Adopting the basics of digital literacy through project teaching from the first grade of the primary school is envisaged by the *Rulebook on the teaching and learning plan for the first cycle of primary education*[6]. Upon completion of the first grade, students are expected to: turn on the computer, run a drawing program, use the program's appropriate tools, save their drawing and shut down the computer; use the Internet for learning and finding information with the help of teachers; sit properly when working at a computer; list possible health effects due to improper use of digital devices (Official Gazette of the Republic of Serbia - Educational Gazette, No. 10/2017 dated 14/12/2017).

Starting from the school year 2017/18, digital literacy has been included as one of the three main thematic areas within the subject of Informatics and Computing, which is gradually introduced as a compulsory subject in the second cycle of primary education: at first for fifth grade students, and then, from the school year 2018/19 for students of the sixth grade, and finally, in the next two years it will become a compulsory subject in all grades of the second cycle of primary education (from fifth to eighth grades).

WHAT IS DIGITAL LITERACY?

There are several different definitions of digital literacy. They all have in common that, apart from **technical knowledge and skills**, the so-called hardware skills (Department of eLearning, 2015), they include more **complex cognitive skills** (solving problems in the digital environment, critical thinking, creativity, collaboration, ethical and safe use of technology, etc).

The most comprehensive theoretical framework for digital literacy which is currently most widely accepted (at least in Europe), resulting from the integration of several theoretical frameworks, was developed by the European Commission in 2012 (Ferrari, 2013), and then revised twice (2016 and 2017).

Digital literacy means much more than possession of technical knowledge and skills.

According to the revised framework, digital literacy involves a set of knowledge, skills and attitudes necessary when using digital technology for performing various tasks, problem solving, communication, information management, collaboration, creation and sharing of content and designing knowledge; in a way that is effective, critical, creative, autonomous, flexible, ethical and reflexive; at work, in leisure time, for the purposes of participation in the society, learning and socializing (Vuorekari et al., 2016).

Digital literacy is defined through **5 domains:** information and data, communication and collaboration, digital content creation, safety and problem solving, as well as **21 competences** (Figure 1). The digital literacy competences within these domains are operationalized through

[5] http://www.mpn.gov.rs/wp-content/uploads/2015/09/ZOSOV_SI_gl_88_17.pdf

[6] https://zuov.gov.rs/download/pravilnik-o-planu-nastave-i-ucenja-za-prvi-ciklus-osnovnog-obrazovanja-i-vaspitanja-i-programu-nastave-i-ucenja-za-prvi-razred-osnovnog-obrazovanja-i-vaspitanja/

indicators that are described in three levels of achievement (basic, intermediate and advanced) in the first revised version, or at eight levels, in the latest version of the theoretical framework. More information on the theoretical framework of digital literacy can be found in the recommended literature.

The following figure shows the domains of digital literacy and the competences within individual domains.

INFORMATION AND DATA	• View, search and selection of information in digital format • Assessing information • Organizing, storing and reusing information
COMMUNICATION AND COLLABORATION	• Interaction through digital technology • Data and information sharing • Social engagement through digital technology • Collaboration in the digital environment • Rules of conduct on the Internet • Digital identity management
DIGITAL CONTENT CREATION	• Digital content development • Integrating digital content • Copyright and licences • Programming
SAFETY	• Protection of digital devices • Protection of personal data and privacy • Protection of health and well-being • Environmental protection
PROBLEM SOLVING	• Solving technical problems • Identifying needs and own responses • Creative use of digital technology • Identifying own limitations

Figure 1. Domains and competences of digital literacy (Vuorekari et al., 2016)

Although differences in accessing the Internet – the so-called *digital divide of the first level* (Hargittai, 2002) – are becoming less evident, the differences in the way of use and digital skills of users of digital devices and the Internet – the so-called *digital divide of the second level* – are more and more noticeable.

Access to digital devices and the Internet is a necessary but not sufficient precondition for their safe and constructive use.

Digital skills of adults are not at an optimal level of development, even in developed European countries where digital technology has become widely available to citizens much earlier than in our country. According to the European Commission, 45% of adult European citizens do not have the appropriate digital skills (Kiss, 2017).

Adults often consider their own digital skills underdeveloped; they even underestimate them in relation to the digital skills of their children/students, as indicated by the results of our research (Popadić and Kuzmanović, 2016; Kuzmanović, 2017).

In order to adequately intervene in the child's use of digital technology and be able to maximize the benefits for the child – that is safe and constructive use of digital devices and the Internet – adults (parents, guardians, teachers, educators) are expected to have competent digital literacy skills.

DIGITAL LITERACY OF EMPLOYEES IN EDUCATION

In Europe, a number of initiatives have been launched to develop and support the digital competences of employees in education.

In Serbia, in 2017, based on the previously described theoretical framework of digital competence, *Digital Competence Framework for Teachers*, was created in order to support teachers in the process of integrating digital content into everyday teaching practice (MoE, 2017).

According to the recently adopted *Standards of Competence for the Profession of Educators and their Professional Development*, digital competence is one of the key competences of educators to enhance their professional practice. All educators involved in teaching children within the preschool education system are expected to:

- possess knowledge on the use of digital technology;
- apply and integrate technology in their immediate educational work;
- use advantages, control potential hazards of digital technology and develop awareness and habits for their adequate use both in children and parents;
- use digital technology in planning activities and conceiving necessary materials, in monitoring, evaluating and documenting;
- work in different databases (for keeping records about children, parents, evaluation);

- use digital technology when sharing information with a child's family, colleagues, associates, local community and other interested persons and institutions;
- use digital technology for professional development;
- foster the culture of using digital technology in programme development (MoE, 2018).

IF YOU WANT TO LEARN MORE:

• **Empirical verification of the digital literacy construct and the analysis of the achievement predictors** (p. 196 – detailed theoretical framework of digital literacy)

http://dobrinkakuzmanovic.weebly.com/uploads/2/6/4/8/26488972/dr_20.11.2017.pdf

• **DIGCOMP: A Framework for Developing and Understanding Digital Competence in Europe (first version)**

http://publications.jrc.ec.europa.eu/repository/bitstream/JRC83167/lb-na-26035-enn.pdf

• **The Digital Competence Framework for Citizens With eight proficiency levels and examples of use (revised)**

http://publications.jrc.ec.europa.eu/repository/bitstream/JRC106281/web-digcomp2.1pdf_(online).pdf

• **Digital Competence Framework for Teachers**

http://www.mpn.gov.rs/wp-content/uploads/2015/08/Okvir-digitalnih-kompetencija.pdf

• **Standards of Competence for the Profession of Educators and their Professional Development**

http://bit.ly/2IOnoyr

• **Fundamentals of the preschool education program**

http://zuov.gov.rs/wp-content/uploads/2018/10/Године-узлета.pdf

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THE OPPORTUNITIES DIGITAL TECHNOLOGY PROVIDES CHILDREN WITH

There are numerous **opportunities** digital technology provides children with:

- Learning (in formal and non-formal contexts) and acquiring different competences necessary for successful functioning in the digital age (digital, language, mathematical and scientific literacy, problem solving skills, critical thinking, teamwork, learning foreign languages);
- Free access to and use of high quality educational resources, programs, applications, various platforms;
- Virtual visits to museums, libraries;
- Finding interesting and useful information;
- The use of so-called smart devices and toys;
- Creating different content in digital format and sharing with others, posting on digital media;
- Work on oneself, talent development, personal (artistic) expression;
- Communication and cooperation with peers and adults who are far away, in another part of the world;
- Fun and play (virtual and augmented reality);
- Internet shopping with the help of adults, etc.

According to the findings of the research conducted so far, children in Serbia **do not use positive aspects of digital technology much**; their digital skills are insufficiently developed, so they mostly act like 'recipients' rather than 'creators' of digital content (Popadić & Kuzmanović, 2016; Kuzmanović, 2017).

Digital technology provides children with many opportunities, which they can use only if they have the appropriate digital skills.

LEARNING WITH DIGITAL TECHNOLOGY

Digital technology is a powerful tool for learning and adopting various skills in childhood, provided that it is used in a manner that meets developmental needs of children, with the active participation and support of adults and peers (U.S. Department of Education, Office of Educational Technology, 2016). Learning here implies a wider meaning of the term, referring not only to learning in a school context, but also to a wide range of life situations.

When digital technology is used for learning at an early age, **the level of the child's development, his/her current needs and interests, health and general well-being** should be taken into account. Digital tools should be used to improve learning, but also to make it more interesting, meaningful, exciting and enjoyable. Technology should never be used for its own sake!

If used in a meaningful way, digital technology can be a very useful learning tool.

Digital technology should be **integrated into the existing curriculum**, whether it is preschool or school age, and used so that it does not exclude the use of other useful teaching tools and learning materials. The use of digital technology in education makes sense only when it **contributes to achieving learning goals and outcomes.**

Educational technology is under no circumstances able to replace educators and teachers in the learning process.

During the educational work, special attention is paid to the interaction with children through which adults learn, and plan the next steps by listening to the needs of children, and analyse and evaluate validity and achievement of the learning process and goals (Anđelković, 2008).

Developmentally appropriate use of digital technology enables children to learn through technology, but also to learn about technology and the ways of its safe and smart use.

Before we proceed with more details on developmentally appropriate use of educational technology in childhood and the ways adults can intervene in the learning process, read the following chapter in which we briefly describe characteristics of learning at an early age.

LEARNING AT AN EARLY AGE

Childhood is a period in life of an individual characterized by major changes in all aspects of development: biological, intellectual, social, emotional and physical. All these changes are under strong influence of physical, social and cultural environment.

The preschool period is the period of the **most intensive learning**. In early ages, children learn through everything they see, hear, feel and try. Learning and development are interlinked.

In order to develop their potential, children need plenty of various opportunities to search their surroundings, use language, participate in activities with peers and adults at home, in kindergarten and their community (Pavlović, Breneselović and Krnjaja, 2017).

Children learn by observing and listening to others (so-called learning by model), but mostly through **their own research activities**. Learning is never a passive process, knowledge **cannot be transferred** (although the phrase 'knowledge transfer' is very present in the public discourse), it is rather **constructed** (built up) by the learner's own mental activity. **Interaction with the social environment** (other people) is of vital importance for children's development and learning.

Modern learning theories, above all social constructivism (associated to the name of L. S. Vygotsky), on which modern education is based, emphasize the importance of the so-called **asymmetric social interactions** in the learning process, i.e. support by adults or more competent peers. Adults (parents, educators and teachers) are representatives of culture who mediate the development of the child's intellect, as well as the personality as a whole.

In the professional literature, the difference between what a child can achieve independently and what he/she can achieve in cooperation with a more competent person is referred to as **zone of proximal development** (Vygotsky, 1983). What exactly does it mean? If a preschool child is asked to do a task that cannot be performed independently (and is in the zone of proximal development), he/she will succeed in doing it with the help of fine-tuned, timely and dosed support of an adult, and later, the child will be able to perform it independently.

Therefore, with the support of people who have more knowledge and experience, children can achieve much more than independently. Only adults can process cultural content, make it accessible and closer to children in a form that is suitable to their developmental characteristics. In this way, through teaching activities, **adults or more competent peers can stimulate or 'pull' forward the child's development**. This is why it is important to systematically, consciously and continuously deal with preschool children (Pešikan and Antić, 2012).

The main form of learning at an early age is learning through a **game**. When it comes to children's development, a game is the most important form of their activity; it is one of the strongest drivers of intellectual, emotional, social and physical development.

Parents, as well as anyone using digital technology in activities with children, should be aware that the **use of technology can never replace a spontaneous, interactive, creative game that does not involve the use of technology, since children learn best through such a game** (US Department of Education, Office of Educational Technology, 2016).

A spontaneous game plays a more important role in the early development of a child's brain than any activity performed by the media.

CIRCUMSTANCES IN WHICH DIGITAL TECHNOLOGY IS A LEARNING TOOL

Digital technology can be a **learning tool** if the following conditions are met:

• A child is MENTALLY active during the use of technology

Interactive devices, such as tablets, stimulate activity more than traditional media, e.g. television or a printed book. Yet, it is very important to observe what type of activity is performed! By **clicking or dragging and dropping the icons on the screen of a mobile device, the child activates his/her finger, but not necessarily the brain!** Learning occurs only when a child is mentally engaged, when the activities performed on digital devices stimulate him/her to think, link new information to previously acquired knowledge, compare, spot similarities and differences, etc.

- **A child is DIRECTED TO THE TASK and there are NO DISTRACTORS in the digital environment**

What can interfere with learning in a digital environment? First of all, too much information (text, images, audio and video content) that a child cannot handle, the way information is arranged, various audio and visual signals, hyperlinks (which can confuse and disorient the child), but also different advertising materials that 'pop up' on the screen during online activities. The very nature of digital media is such that they contain disturbing factors; however, when it comes to child-friendly content, they should be reduced to the minimum.

- **Digital content is MEANINGFUL for the child**

When using digital devices, all activities performed by a child, as well as the content the child comes across, should be linked to his/her everyday activities, experience and interests, and suitable to the child's developmental needs.

- **Digital technology encourages SOCIAL INTERACTION**

Although the creators of digital tools do their best to make the tools simpler, more intuitive and more customized for their use at an early age, we should be aware of numerous studies showing that social interaction supports and facilitates learning.

- **Digital technology enables the child to EXPLORE, LED BY AN ADULT**

While learning in the digital environment, a child should have the freedom to explore, discover the world he/she is surrounded by, identify his/her own interests and ways of learning, as well as the freedom to play. The role of adults is not to offer a ready-made solution to the child, but to leave room for his/her independent search. Research results show that learning is most effective when the child's exploring activities are guided by experienced partners, i.e. when children are involved in **mutual activities** with adults (Zosh et al., 2017).

[7] Note that all web browsers contain blocking tools, so-called Ad Blockers.

LET'S SUMMARIZE!

If you want to make sure that the technology you use in your activities with children **matches their developmental needs**, answer the following questions:

- What is the quality of the digital **CONTENT** available to children? Does it encourage them to be engaged mentally, explore, be creative, develop and express their abilities and talents?
- In what **CONTEXT** is digital technology used? Do children have the opportunity to communicate with adults and peers before, during or after using technology? Does technology enrich or disturb children's usual activities?
- Is technology compatible with the needs, abilities and interests of the child, i.e. with his/her **PERSONAL CHARACTERISTICS?**

If the answer to all three questions is YES, you are on the right path!

FINDING INFORMATION ONLINE

The Internet is the largest source of information in the history of human civilization. We can find almost anything online. One of the leading American theorists and reformers of the media, Robert McChesney, in his book Digital Disconnect, states that YouTube generates more content in just one week than all films and television programmes Hollywood has produced during its existence. While this text was written, over 75,000 videos were viewed[8] on YouTube in just one second.

Internet browsing is not easy for children for many reasons.

Firstly, online content is the product of an enormous number of people and children are not their primary target group.

Secondly, due to the very nature of cognitive development, children of a certain age are not able to decentre – that is, 'put themselves in someone else's shoes' – they are unable to see the same thing from several different perspectives; in a word, they cannot think critically or evaluate. Of course, this does not mean that these skills are automatically acquired while growing up, so they need to be trained for skilful search of the Internet. For a successful functioning in the world characterized by an 'information explosion' we need critical reception: receipt, selection and evaluation of information. However, studies show that children will not become digitally literate using digital technology for entertainment and communication only.

[8] http://www.internetlivestats.com/one-second/

Although searching the Internet seems pretty intuitive and easy, many adults fail to find the information they want—not to mention quality information and advanced search. It is therefore very important to teach children and adults how to search, store, select and assess information found online.

OPPORTUNITIES DIGITAL TECHNOLOGY PROVIDES FOR CHILDREN WHO NEED ADDITIONAL SUPPORT

If used appropriately, digital technology can significantly improve the quality of life of children who need additional support in education and upbringing. The phrase 'children who need additional support' refers to two groups of children: children with developmental disorders and gifted children (who also require a special approach due to their above-average abilities). A group of children with disabilities is very heterogeneous and can include children with severe multiple disorders, as well as children with learning disabilities, physical disorders, and children who need support in communication (due to visual and hearing impairments).

Numerous digital tools that facilitate education of children with learning and developmental disabilities are available online and can be downloaded free of charge. They are known as **digital assistive technology**.

In addition, there are numerous applications and websites designed to provide personalized support (in line with the age and type of problem) for children with the following difficulties:

1. Difficulties in reading, writing, understanding (dyslexia, dysgraphia)
2. Difficulties in mathematics (dyscalculia)
3. Difficulties in speech development
4. Lack of social skills
5. Lack of skills in organization, planning, self-control
6. Problems with attention, hyperactivity (ADHD)
7. Problems in motor development
8. Disorders from the spectrum of autism.

IF YOU WANT TO LEARN MORE:

- **Early child development – what you should know**

https://www.unicef.rs/wp-content/uploads/2017/04/Rani_razvoj_deteta.pdf

- **Standards for development and learning of early aged children in Serbia**

https://www.udruzenjepedijatara.rs/pdf/OPSTA/2_Standardi_za_razvoj_i_ucenje_dece_ranih_uzrasta_u_Srbiji.pdf

- **Kaleidoscope: the basics of diversified preschool education programmes**

https://www.unicef.rs/wp-content/uploads/2017/01/Osnove-diversifikovanih-programa-PVO.pdf

- **Digital technology to support special educational needs**

https://www.e-skole.hr/wp-content/uploads/2018/03/Prirucnik_Digitalna-tehnologija-za-potporu-posebnim-odgojno-obrazovnim-potrebama.pdf

- **Assistive technology catalogue**

http://socijalnoukljucivanje.gov.rs/wp-content/uploads/2017/04/Katalog_asistivne_tehnologije.pdf

- **Assistive technology at school**

http://at.smp.edu.rs/at%20prirucnik%20final.pdf

- **Instructions for designing teaching materials in accordance with the principle of universal design**

http://www.mpn.gov.rs/wp-content/uploads/2016/04/uputstvo_za_izradu_nastavnog_materijala_univerzalni_dizajn-1.pdf

5

RISKS IN THE DIGITAL WORLD

The previous section dealt with the many opportunities digital technology and the Internet provide for children. Unfortunately, in the digital world, children can face a number of risks (related to their development, safety, etc.), which are even more serious unless digitally competent adults get involved with the children's use of digital technology (Livingstone et al., 2017).

What are the risks when it comes to preschool and lower primary school children? Here are the most prominent:

- Premature and over-use of digital devices/Internet addiction
- Exposure to harmful and inappropriate content (e.g. explicit sexual and pornographic content, vulgar language, hate speech, etc.)
- Digital violence (suffering from and committing cyberbullying)
- Exposure to commercial content (advertisements)
- Exposure to incorrect and unreliable information (so-called false news)
- Access to services and platforms before the prescribed age (failure to comply with the minimum age limit, which is usually 13 years of age)
- Contacts with malicious people aiming to abuse a child (sexually or otherwise) (so-called Internet predators)
- Sharing personal information on the Internet (including sharing by parents—so-called sharenting)
- Misuse of personal data, identity theft, phishing, Internet fraud
- Spending money (e.g. when playing video games or unintentional inside-app purchases)
- Viruses, spam, hacking, unwanted mail

The mentioned risks are most often grouped into three categories, referring to:

1. **CONTENTS** to which children may be exposed while using the Internet; such content might be unpleasant, disturbing or frightening;

2. **CONTACTS** with unknown people online; such people might abuse a child in different ways;

3. **BEHAVIOUR** of a child in the digital environment that, first and foremost, may endanger his/her safety, as well as the safety of family members and others (e.g. peers).

Some of the risks mentioned above will be discussed in other sections of this publication (for example, on premature and overuse of the Internet, see Section 7); the text that follows puts emphasis on the risks associated with the misuse of a child's personal data.

THE RISKS OF MISUSE OF A CHILD'S PERSONAL DATA

The exposure of children to online risks is closely linked to endangering the security of their **personal data.** The time we live in is characterized by a huge amount of data, the so-called 'big data era'. As more and more we hear or read that personal data has become the 'new oil', as well as the most popular means of payment online. The big data era has brought new ways of collecting data, monitoring Internet users' behaviour and targeted advertising (tailored to the customers' individual needs); it has transformed the global media, advertising industry and technologies (Montgomery et al., 2018). Thus, marketing and privacy have become inextricably intertwined. Children, as the youngest and most sensitive Internet users, are in the centre of a constantly growing personal data market.

The initiatives to regulate this field have recently become increasingly louder. In Europe, one of the most important steps in this direction is the **General Data Protection Regulation (GDPR)**[9], which has been applied in the European Union countries since May 2018, and is introduced in our country through the new **Law on Data Protection**[10] (which came into force in November 2018, effective as of August 2019). Due to the fact that children might be less aware of the risks, consequences, measures and rights in connection with the processing of personal data, they deserve special protection of privacy on the Internet (**GDPR, Article 38**). The right to special protection is primarily related to the use of personal information of children for the purpose of marketing or creation of personal or user profiles, as well as the collection of personal data about children when using services specifically intended for them.

SMART TOYS

The latest technological achievement in the children's toys market is so called 'smart toys' or 'toys connected to the Internet' (for example smart dolls Barbie and Kyle, smart bear, smart watch, robot, etc.). It is about a new generation of imaginative, interactive digital toys that are connected to the Internet through mobile applications and other devices (Montgomery et al., 2018), which are becoming increasingly popular worldwide (especially during the New Year's Eve and Christmas holidays, when their sales rise rapidly). Although 'smart toys' are usually 'toys connected to the Internet', some authors point to the difference between these two types of toys. Smart toys contain built-in electronic features (microphone, camera, sensors, accelerometer, gyroscope, compass) enabling them to communicate with their users and adapt to their actions. These toys are not necessarily connected to the Internet. Toys connected to the Internet, on the other hand, are

[9] http://www.privacy-regulation.eu/hr/1.htm

[10] https://www.poverenik.rs/sr-yu/%D0%B7%D0%B0%D0%BA%D0%BE%D0%BD%D0%B84/52-zakon-o-zastiti-podataka-o-licnosti.html

designed to be connected to the Internet, and therefore to remote servers that collect data and make toys intelligent. These toys are not necessarily 'smart' (FOSI, 2016).

Although there are some benefits (which should not be ignored), the use of smart toys puts children at a number of risks:

- Data security (collecting and storing biographical data)
- Safety of the device (the toy can be hacked and used for surveillance of a user, an unknown person can be connected through a Bluetooth device with a toy and take control over it)
- Device safety (can be used to track the child)
- Children's privacy (recording secrets and collecting sensitive information that can be misused and shared much later)
- Excessive use that can lead to the lack of sleep, physical activity, socializing
- Lack of a genuine authentic play that is important for a child's proper development
- Lack of interaction with parents, which also has outstanding developmental significance
- The game is too controlled or unnatural – guided by algorithms (e.g. Barbie doll)
- Health implications (exposure to electromagnetic radiation) (Chaudron et al., 2017).

In recent years, many websites and blogs for parents often contain inscriptions such as: **Warning to parents - urgent destruction of this doll needed, Smart toys should be kept away from home.**

There are numerous examples in which fulfilment of the right of the child to privacy protection on the Internet is disputable. One example is of the United States-based VTech electronic toy manufacturing company: in 2018 this company paid a $65,000 penalty due to violation of the United States laws on child data collection[11]. Actually, this company unlawfully collected personal information on about 650,000 children who downloaded the Kid Connect application and used it together with VTech electronic toys; it did not even make sure that personal data was safely stored. Data were collected without asking for consent from parents, and the children were not informed what personal data were collected and what for.

CHILDREN AND INSIDE-APP ADS

Nowadays, it is rare to find and download an application, video game or some other content for children (regardless of the age and the type of content) without a message saying: Contains ads. In a sense, we have made progress, because, due to legal regulations, today's game makers have the obligation to communicate this information transparently to the user before accessing the game, which was not the case until recently.

According to recently published research results, which analysed advertising in applications

[11] https://www.bbc.com/news/technology-42620717

for children aged 1 to 5, as many as 95% of applications (129 out of 135 examined applications – paid or downloaded free of charge from the Google Store) contain **at least one type of advertising** (Marisa et al., 2019). It is possible to find different types of advertising in applications: those of commercial character, complete apps, video interruptions (so-called pop-ups), in-app purchases, requests to rate or share the app on a social network, disruptive ads such as banners on the screen, hidden ads with the wrong symbols (e.g. $), ads camouflaged in game elements. For example, in Disney Olaf Adventures, a click on a sparkling cake that is not marked as an advertisement takes the player to the store, while in the **Doctor Kids** game (labelled PEGI 3, which means it is appropriate for all ages), the character starts to cry if the player clicks away from the store that is inside the app.

Advertising is more prevalent in free apps (100% compared to 88% of paid apps), though it is similarly represented in applications labelled 'educational' compared to other application categories. As the authors of this research conclude, the applications targeted at youngsters have high rates of mobile advertising done through manipulative and disruptive methods. This finding has important implications for advertising regulation, parental selection of children's content and educational value of applications (Marisa et al., 2019).

Advertising affects children in different ways. The way children respond to ads they almost unavoidably encounter in applications, video games and all digital devices connected to the Internet, depends on several factors: age, knowledge and experience, or whether they had the opportunity to talk to adults about what they see in the media.

- Children **under the age of 2** are unable to differentiate between an ad and the actual program.
- **Pre-school children (aged 3 to 6**) can recognize ads and distinguish them from non-commercial content, but do not understand that the meaning of an ad is to sell something; they often interpret commercials as entertaining and useful and have no critical attitude towards their content. When it comes to preschool age children, it is necessary to limit their exposure to commercial content (television, YouTube).
- Children of the **lower-primary school age (aged 7 to 11)** understand that advertisers try to sell something to them; they can remember advertising messages; they might recognize some advertising techniques, but they may not always understand that the products are not as good as they are said to be, or that advertisers do not mention any bad side of a product.

Bearing in mind the degree to which modern media have been flooded by advertisements, the most important thing you can do to limit the effects of advertising on children of the younger school age is to talk to them about ads, encourage them to think critically, examine the content of advertisements and the truth of what seen in the media, as well as others' and their own behaviour in the digital environment.

SHARENTING

Sharenting implies the practice of parents sharing information (stories and photos) about themselves and their children on the Internet: on social networking platforms, their own blogs and vlogs (video blogs) or personal websites (Blum-Ross & Livingstone, 2017). This practice is becoming more and more present, not only in the world, but also in our country. Generally, it is not uncommon for mums to post photos of their newborn children on their Facebook or Instagram profiles. On personal blogs related to parenting (e.g. *Growing up Together, Mother's World, Mum and Dad*, and others of similar names), they publish not only personal experience related to child-raising (sometimes even 'by month'), but also photographs that document their positive parental practice.

Although very popular nowadays, sharenting has been analysed by experts in child development and child rights advocates, so inevitably we came to the question whether, in this way, despite their good intentions, parents endanger one of the basic rights of the child: the right to privacy and personal data protection. The new French law allows children (when they grow up) to sue their parents for violating this particular right (Chazan, 2016).

By sharing children's personal information in a public space such as the Internet, parents not only endanger their children's safety by exposing them to a number of risks (e.g. children's photographs could end up in the hands of paedophiles, identity thieves or criminals), but also shape their digital identity much earlier than the children themselves have the opportunity to become owners of personal profiles and make decisions independently.

Respecting the parental need and the right to free expression, experts recommend that before sharing any information about their child, parents should think carefully whether the potential damage is greater than the benefit gained by such behaviour. Parents should consider the objects of their disclosure, i.e. their children: autonomous beings, entitled not only to protection from physical harm, but also to be protected from non-material injuries resulting from inviting others into the life of a child without the child's prior informed consent (Steinberg, 2017).

Recommendations for parents to use the Internet in a way that promotes healthy development of children:

1. Get to know the **privacy policy** of websites and platforms on which you share information about children. Some of them provide the possibility to choose the audience with which the content will be shared, set up passwords and hide content on the Internet from the Google search algorithm.
2. Use the option of **receiving a notification** when the child's name appears in search results or when information about the child appears in someone else's post.
3. Consider the option of **anonymous sharing** (without revealing their name and the names of the children). When it comes to sharing photos online, there are many ways[13] to share them without compromising the child's privacy (Autenrieth, 2018).
4. Be careful when sharing the **current physical location** of the child.

[12] http://ucpd.rs/dokumenti/sarenting-dodatak.pdf

5. Provide the child with the **right to ban** sharing his/her personal data (including drawings, quotations, various challenges and achievements); ask the child who he/she wants to share information with. At the age of 4, children are already aware of themselves, they are able to build friendships, think and compare themselves to others.
6. Think about **what kind of photos of children you share** (children without clothes, swimsuits, etc.). According to a report by an Australian officer on Internet safety, almost half of the photos published on paedophile websites were originally naively posted on parental profiles, blogs and websites.
7. Consider the **consequences of sharenting on the children's image of themselves and their general well-being** (now or in the future). Once we post the information online, we do not own it anymore, and therefore definitely lose control over those who may publish it at any time whether unwillingly or deliberately (Steinberg, 2017).

HOW TO PREVENT RISKS IN THE DIGITAL WORLD

Recommendations for PARENTS

- Spend time with children in mutual activities on digital devices/the Internet.
- Continuously work on improving your own and your child's digital skills.
- Define reasonable rules and time limits regarding the use of digital devices. Stick to them consistently!
- Get to know potential risks on the Internet. Keep talking to your child about good and bad sides of the Internet (the child will understand if you explain it in an appropriate way).
- Make sure that the child does not share any personal information online. Do not share the child's personal information in public either!
- Respect age restrictions on the use of platforms and services online.
- Choose age-appropriate digital content, apps and video games for your child (e.g. use child-friendly search engines).
- Be sensitive to changes in your child's behaviour that may indicate exposure to some of the online risks.
- Build a relationship of mutual trust, encourage the child to talk to you whenever something on the Internet scares, upsets or worries him/her...
- Use parental controls, privacy settings, and other technical protection measures for children online.

Recommendations for EXPERTS IN EDUCATION

- Learn about safety risks associated with video games, applications, and platforms for children.
- Improve your digital skills; learn about children's activities in the digital world and the out-of-school context.
- If children use digital devices/the Internet in a preschool institution or at school, make sure they are protected by appropriate programs and filters.
- Agree with children on the rules and ways of using digital devices (which websites they visit, when, what activities they are engaged in, how, etc.).
- Talk to children about potential risks, protection measures, safe and responsible behaviour online (so-called Internet etiquette).
- Pay attention to children who quickly turn off monitors, minimize screens when you get close, laugh, or gather around someone's computer or tablet.
- Instead of banning the use of digital devices, explore ways you can use them to enhance teaching and learning.

Recommendations for CHILDREN

- Do not share personal information (name and surname, phone number, address, email address, school name) or information about family members with people you do not know personally (people you met online).
- Not all information online is true! Unfortunately, there are people who use a false identity online; their aim is to abuse others, especially children.
- Chatting, receiving messages or photos from people you do not know or trust might cause problems for you (e.g. they may contain viruses or inappropriate content).
- Never accept the proposal of an unknown person to meet you in person. Be sure to inform your parents about this.
- If you are surprised, disturbed, scared or worried when you are online, share it with your parents, educators, teachers, or other adults in whom you trust.
- Maybe adults don't know much about a game or application you and your peers use, but they certainly have more life experience and can help you when it comes to the Internet.

Both adults and children should have adequate digital literacy skills; this is one of the main preconditions for safe use of the Internet.

IF YOU WANT TO LEARN MORE:

- **Digital violence – prevention and response**

http://www.unicef.rs/wp-content/uploads/2016/09/Digitalno_nasilje_-_Prevencija_i_reagovanje.pdf

- **Children in a Digital World**

https://www.unicef.org/serbia/reports/deca-u-digitalnom-svetu

- **Ten privacy tips for parents and carers**

https://www.oaic.gov.au/resources/individuals/privacy-fact-sheets/general/ten-privacy-tips-for-parents-and-carers.pdf

- **Kaleidoscope on the Internet of Toys**

http://publications.jrc.ec.europa.eu/repository/bitstream/JRC105061/jrc105061_final_online.pdf

- **Children's online safety in Serbia: Exposure without coordinated protection**

http://publicpolicy.rs/files/1policy%20brief%20bezbednost%20dece%20na%20internetu.pdf

6

MEDIATION OF ADULTS IN CHILDREN'S USE OF DIGITAL DEVICES

When it comes to the use of digital devices and the Internet by preschool and lower-primary school children, the experts recommend that adults (parents/guardians, teachers, educators, etc.) should **actively mediate** in the children's use of digital technology, i.e. be their **digital mentors.** There is no doubt that such recommendation induces a dilemma in many parents: what exactly does it mean to be a digital mentor to their child and how should they intervene in their children's online behaviour.

TYPES OF PARENTAL MEDIATION

The term parental mediation or parental intervention refers to the different ways in which parents influence the ways and purposes of their children's digital media use (Blum-Ross & Livingstone, 2016). Parental mediation is viewed as a 'new' or 'specific' type of parenting. The professional literature considers several types of parental mediation, depending on the age of children. In almost all studies on this topic, there are three types of mediation: **active** (parents are actively involved in children's activities while using digital technology), **restrictive** (parents restrict the use of digital technology in different ways) and **parental control** or **monitoring** (parents monitor and check the child's online activities). It should be noted that parents most often combine the mentioned types of mediation; however, one type of mediation usually prevails (depending on parenting style, child and parents' characteristics, but also some other contextual factors).

One could assume that parents of higher education have more advanced digital skills and hence foster more positive parental practices and beliefs, i.e. encourage children to use digital technology in more constructive ways and provide them with more support when using digital devices (especially when it comes to younger children). Actually, the results of foreign (e.g. Van Deursen & Van Dijk, 2013) as well as one domestic research (Kuzmanović, 2017) show the opposite: the level of parents' education negatively contributes to the use of digital technology by children. It is possible that parents of higher education have a better insight into the potential risks of using digital technology, and in this way (increased supervision) try to protect their children. Or, they encourage the children to take part in various activities that are not related to the use of technology, therefore it is necessary to limit the screen time. Regardless of the reason, we should keep in mind that strict limiting of the use is not an appropriate measure for today's

generations, i.e. in a time in which many aspects of daily life depend on digital technology.

Experts who have studied the types of parental mediation in the digital age have found that parents differ as to whether and in what way they establish a balance between the **social** and **technical forms** of mediation and whether their goal is primarily to **enable** the use of digital technology by the child or to **restrict** it (BlumRoss & Livingstone, 2016). Active participation in the child's online activities and setting rules of use are forms of social mediation, while supervision and monitoring, as well as parental controls, are forms of technical mediation.

The indicated types of parental mediation are summarized in Table 1.

Table 1 Types of parental mediation

	SOCIAL MEDIATION	TECHNICAL MEDIATION
	Active participation	**Supervising and monitoring**
ENABLING THE USE	• Talking to a child about digital devices and the Internet • Parental involvement in the child's activities (e.g. playing video games, downloading applications and watching cartoons together) • Creating the child's behaviour by giving example in parents' behaviour and habits of using digital devices (parents as 'positive models') • Creating family agreements on the use of digital devices	• Monitoring the child's use of digital media (e.g. tracking the history in a web browser, accessing profiles through the child's password, etc.) • Using digital tools for tracking the child in physical space, using geolocation applications or programs installed on mobile devices (e.g. tracking the child when returning from school with the help of a 'smart watch')
	Rules	**Parental control**
RESTRICTING THE USE	• How much time a day the child is allowed to use digital devices/the Internet • What the child is allowed to see, do... • When (at what time, in which situations) the use of digital devices is allowed • How and with whom the child is allowed to use digital devices/the Internet	• Use of technical protection measures: parental controls software, blocking or filtering access to specific websites or digital content • Time restriction of Wi-Fi access

In the text that follows, there are more details about the forms of parental mediation listed in the table above.

Adults are expected to be 'digital mentors' – to actively mediate in the use of digital devices – before, during and after mutual activities with the child.

Traditionally, the role of parents, but also their obligation, is to prevent children from having negative experiences in any situation, even online. In the context of using the Internet, it is important to develop awareness in parents of the importance of informing children in an adequate and timely way on potential risks related to the use of technology, as well as the ways of reacting in case of a negative experience. Parents, however, should **actively intervene** not only in the event of exposure of the child to **negative and potentially risky** content and activities in the digital environment, but also when it comes to **positive** experience during the use of digital technology.

WHEN AND HOW ADULTS CAN MEDIATE

- **Before a child accesses** some content or starts an activity on a digital device, parents should inform the child about what he or she will see or do (meaning that they themselves have already been informed). If parents want to disable access to some content or restrict some activity on a digital device/ the Internet, it is necessary to explain to the child the reasons for doing so, in a language the child understands, relying on his/her everyday experience.
- When **using** digital devices/the Internet **together**, parents should direct the child's attention to what is important, comment on what they do/view (after a certain segment or at the end of an activity, so that the child is not overloaded with information from multiple sources) to ask the child questions about the content in order to facilitate his/her understanding/learning, and to link current activities to the child's previous experience and activities (on the Internet or outside it). Negative online content that might suddenly 'pop up', e.g. while the child is playing a game or searching the Internet, is an opportunity for adults to: encourage the child to evaluate, think critically about the appropriateness of the content and to what extent it is in line with the values fostered in the family, and teach the child how to react in such situations.
- **After mutual activities**, parents are expected to look at what they did/viewed together, discuss it with the child in order to 'revise' the lessons learned, and also provide the child with the opportunity to apply gained knowledge in some other situations outside the Internet (e.g. the child recognizes the animals seen in the video game in the zoo) (Fisch, 2017).

You don't have to be a 'technology expert' to mediate actively in the child's use of digital technology; yet, it is necessary to know your child and his/her needs well.

The simplest and most effective way of active parental intervention is to **initiate conversation and open dialogue** with the child on digital technology and the Internet, in the broadest sense. It is desirable that parents, educators, teachers and other adults close to children talk to them about the Internet and the way it works. According to a survey (Chaudron, 2015), children have no awareness of what the Internet is, they are unable to realize that they were online or when they were.

It is important to talk to children about good and bad sides of digital technology (opportunities and risks), giving examples of age-appropriate content, but also about what they like or dislike doing online, what is interesting or boring to them, what makes them happy or fearful and disturbed.

It is very important to encourage the child to always look for help from adults (e.g. when the child does or 'clicks' something wrong). Digital technology provides numerous things that can be tried out, and errors should be seen as opportunities to learn. Also, it is very important to inform the child about the concrete steps (technical protection measures) that need to be taken in case of exposure to inappropriate content or other negative experience when using digital devices.

Setting up clear rules of conduct, in the adoption of which the child participated as well, is recommended, both in and outside the digital world. When formulating a rule, it is necessary to respect the child's individuality, his/her personal characteristics, needs, desires, as well as the broader context of family functioning. It is important that the rules are applied consistently and that the child understands them, as well as the consequences of disrespecting the rules. The rules apply equally to adults and children. Before defining a rule, adults should ask themselves if they are willing to stick to it consistently. The inconsistency in applying rules might do more harm than benefit to the child.

There are websites, apps and online platforms designed exclusively for children (e.g. YouTube Kids, Google for Kids). Children should not have access to 'adult content'!

Monitoring children's activities (especially if they use digital devices independently) and talking about them are more effective in reducing digital violence than limiting time or access to a specific content (Blum-Ross & Livingstone, 2016). Thus, non-restrictive forms of parental mediation are more effective in preventing exposure of children to risks and digital violence in relation to restrictive forms (limitation of use), regardless of whether it is social or technical mediation.

The term parental controls refers to technical protection measures (digital tools, applications or services) that allow adults to protect (monitor or track) children while using the Internet (Zaman & Nouwen, 2016).

WHAT CAN BE LIMITED BY PARENTAL CONTROLS

• Firstly, it is possible to limit the amount of time a child is spending online. Some applications allow parents to define time intervals in which children can access the Internet (e.g. weekdays and weekends).

• Secondly, it is possible to limit online content, as follows:

1. **the content that a child can access** by creating 'whitelists' (filtering content, the child may access only the content previously approved) and 'blacklists' (blocking the inappropriate content, previously defined);
1. **the content that a child can send** (e.g. by email) or **post online,** in order to prevent a child from sharing personal information on the Internet.

• Finally, child activities can be limited as well (e.g. chatting with strangers and making purchases inside an application or video game, etc.).

There is no technical protection that is completely effective in blocking access to inappropriate online content!

Technical protection is just a reason to talk to children about their activities on the Internet, even when it comes to the youngest!

Excessive control of children in any aspect of life, even when it comes to the use of digital tools, negatively affects their development, because it prevents children from building their capacities and mechanisms for controlling their own behaviour.

Studies show that parents, due to their concern about harmful consequences, strictly limit their children's use of technology. Risk avoidance is not the same as avoiding damage. Putting the focus on risk avoidance, parents accept a new one – it might happen that their child does not develop the appropriate skills that are necessary for life in the digital age.

Limiting access to digital technology also means limiting the possibilities and the rights of the child in the digital age.

LET'S SUMMARIZE!

How can adults mediate in the smart use of digital devices in preschool and lower-primary school children?

- How can adults mediate in the smart use of digital devices in preschool and lower-primary school children?
- Choosing high quality educational content, suited to the child's developmental needs
- Quality communication and active participation in the child's online activities
- Applying technical protection measures, together with other forms of parental intervention
- Using digital devices and the Internet properly (by setting clear, reasonable and solid boundaries, applying the rules consistently)
- Encouraging positive and meaningful use of technology (for learning, research, teamwork, creating content in digital format, etc.)
- Improving parents' own digital skills continuously

IF YOU WANT TO LEARN MORE:

• Parental controls: advice for parents, researchers and industry

http://eprints.lse.ac.uk/65388/1/__lse.ac.uk_storage_LIBRARY_Secondary_libfile_shared_repository_Content_EU%20Kids%20Online_EU_Kids_Online_Parental%20controls%20short%20report_2016.pdf

• How parents of young children manage digital devices at home: The role of income, education and parental style

http://www.lse.ac.uk/media@lse/research/EUKidsOnline/EUKidsIV/PDF/Parentalmediation.pdf

7

CHALLENGES OF PARENTING IN THE DIGITAL AGE

The digital age has changed the way of growing up, but also the way of raising children, bringing new challenges for parents and all adults who take part in children's upbringing and education. In the text that follows, we will try to address at least some of them.

SCREEN TIME – HOW MUCH IS TOO MUCH?

What is meant by **screen time?** At the very beginning, we are confronted with inconsistencies in the way different authors define this term.

- The broader meaning of this term includes the **total** time a child spends in front of the screens of all digital devices (including the TV screen), regardless of the type of activity.
- Sometimes, screen time implies only time spent in **fun activities**, which means that screen time **does not include the use of technology for learning and school activities**.

How much time a day can a child spend in front of the screen, without harming his/her psycho-physical development, health and general well-being? This question has been intriguing both lay people and the scientific-professional community over the last decade. On the other hand, if we assume that today's children are so immersed in digital technology (from their birth) and that it is practically impossible to accurately calculate how much time they spend in front of the screen, this question **loses its significance!** Accordingly, the term screen time is more often seen as an "outdated and meaningless concept".

The first guidelines for children's use of the screen were published by the American Academy of Pediatrics in 1999. According to their opinion (as well as the 2011 guidelines, which remained almost unchanged in relation to the first edition), children under the age of 2 should not be allowed to use screens at all, while children older than 2 and teenagers should spend two hours a day in front of a screen at most (the 2x2 rule).

According to the latest (revised) recommendations of the American Academy of Pediatrics published in 2016 (AAP Council on Communications and Media, 2016), **children under the age of 2 should not spend any time in front of the screen** (this applies to all types of screens – TV, mobile phone, tablet, computer). The only activity considered acceptable at this age is **participation of children in adult conversations via video chat**, whereby it is assumed that adults mediate during the conversation, explaining to children what they see and hear.

Children aged between **2 and 5 should NOT spend more than one hour a day in front of the screen**; such time should be well planned and thought-out (which implies educational and age-appropriate content and activities), with the active intervention of adults.

For children aged **6 and over, an individual plan for the use of digital devices and the Internet** needs to be made to ensure that screen time does NOT replace social, cognitive and physical activities that are important for a child's development (sleep, play, sports, communication with family members and friends).

Although the guidelines of the American Academy of Pediatrics are widely accepted (there is no similar document in Europe), it is important to note that they are not entirely based on scientific (empirical) findings (especially when it comes to the 2 to 5 age group and the restriction of screen time to one hour a day) (Livingstone, 2016).

Science does not have a simple and unambiguous answer to the question of how much time children can spend in front of the screen without harmful effects to their development!

The latest recommendations by experts advise parents to be **less concerned about the amount of time**, but rather about the **quality** of the child's screen time. More attention should be paid to the contents that children are exposed to and their activities in the digital environment (what they do and why, what is the point of their activities). It is necessary to take into account the whole context in which the child grows up: age, sex, personality of the child, his/her needs and interests, life situation, family, social and cultural environment, etc.

How much screen time is too much for a particular child depends on several factors – age, personal characteristics and interests, family and cultural context.

When it comes to school-age children, the following indicators of excessive use of the Internet are mentioned most frequently:[13]:

- The child is obsessed with certain websites and/or video games
- The child refuses to stop online activities or postpones it (e.g. when asked to get involved with other activities, learn or help)
- The child is upset and nervous when not in front of the screen
- The child spends more and more time in online activities
- The child has less contact with peers and is less interested in sports
- The child is often tired
- The child gets worse scores at school
- The child seems reserved
- The child ignores hygienic habits
- The child shows negative behavioural changes
- The child has headaches, problems with eyesight and/or sleep

[13] https://www.esafety.gov.au/education-resources/iparent/staying-safe/balancing-time-online/how-much-is-too-much

Studies show that moderate use of digital technology positively contributes to the child's development, while non-use and excessive use have negative impact.

REASONS WHY CHILDREN UNDER 2 SHOULD NOT SPEND TIME IN FRONT OF A SCREEN

The period from the child's birth to the age of 3 is a **sensitive period for learning and development in all domains** (physical, sensory, language, intellectual, social) (Pešikan & Antić, 2012). It is the period in which learning gives greatest developmental effects, or, in other words, when the child gains the greatest benefit from learning. This is why early aged children need to be provided with **optimal conditions for learning**: rich sensory and motor skills experience (to touch different objects, throw, roll, pull, run, jump, climb...), as well as direct contacts with physical objects and people.

For normal psycho-physical development, children under 2 need to be provided with **practical exploring opportunities and interaction with close people** who sensibly react to their needs.

Due to the specificity of early age (levels of development of thinking, attention, memory, observation), children learn better through interaction with adults than through digital media.

When they are 15 months old, children can learn new words through the screen (in the laboratory), but they are not able to learn how to apply what they learned in a real context (Zack et al., 2013). Note that this study used specially designed learning applications that are not in commercial use (AAP Council on Communications and Media, 2016). A large number of studies indicate a harmful effect of watching television on linguistic development, attention, and some other cognitive functions (short-term memory, cognitive control, flexibility) (Galpin & Taylor, 2018). In children under the age of 2, watching television is largely negatively linked to the development of language and executive functions. In preschool children, both positive and negative effects were identified, with most studies suggesting positive effect of educational television on cognitive development (Anderson & Subrahmanyam, 2017).

Therefore, when it comes to the youngest, scientific evidence confirming positive contribution of the media to development of children is still limited (AAP Council on Communications and Media, 2016).

On the other hand, scientific evidence of negative impact of television on children's development must be interpreted with caution due to the methodological limitations of the research itself. Actually, it matters whether the child watched a television programme intended for adults or

children, alone or with a parent, whether and how the parent intervened (talking to the child, explaining the content)...

Finally, it is important to draw your attention to the difference between **traditional media** (television), which refers to passive viewing of the content, and **modern mobile devices** (tablets, mobile phones, computers), which allow interactive use and creation of content by the child.

Digital technology is being developed at such rate that scientific research cannot follow the trends of technological development and the use of ever new devices. Most of the research conducted so far refers to watching television, so it is necessary to check the existing findings on the impact of technology on child's development in the light of new media that offer different opportunities.

PASSIVE VS ACTIVE SCREEN TIME

In the context of various types of media, it is possible to talk about different types of activity of children in front of the screen, that is, about the so-called **passive and active** use of technology (U.S. Department of Education, Office of Educational Technology, 2016).

We talk about passive screen time when children consume or 'swallow' content (e.g. watch programmes on TV or computer, watch video clips, cartoons) without thinking, imagination, personal involvement, interaction with the content. We often read that today's children are passive consumers rather than active online content creators.

Active use of technology implies that the child is engaged in a meaningful and mentally activating way (through interactive websites and applications). If a child does not learn from experience or process content at a deeper level by bringing it in conjunction with information stored in long-term memory, we cannot talk about active screen time. Active screen time implies creating content in digital format, drawing in different programs, coding, designing games, applications, writing...

As already stressed, children's active use of digital technology is subject to support and mediation provided by parents, educators and teachers.

USE OF DIGITAL DEVICES BY PARENTS IN THE PRESENCE OF CHILDREN

The quality of parent-child interaction plays a very important role in the child's cognitive, linguistic and social development. If this interaction during the use of media is of worse quality in relation to interaction without media, then the use of the media (indirectly) negatively influences the child's development.

Studies show that parents are less likely to talk to their children when using digital devices (e.g. a mobile phone), or when the TV is turned on in the background while engaged with a child in some other activity. It is therefore recommended to turn off the TV when the attention of parents and the child is not actively directed to it.

Let's not forget that parents shape their children's behaviour by giving their own example,

which can be seen very early in the so-called symbolic or 'As if' game in which children imitate the behaviour of adults, so one of the first 'toys' is definitely a mobile phone.

Life in the digital age somehow disguises the issue in the title of this section. The point is in the fact that parents should not forget that their habits related to the use of digital technology influence the way their children will use it.

WHEN IS THE RIGHT TIME FOR PARENTS TO ALLOW THE CHILD HAVE A MOBILE DEVICE (PHONE, TABLET)?

The decision on the age at which parents allow a child to use a mobile device (phone or tablet) does not depend on the very age of the child, but on his or her personal characteristics, maturity, responsibility and respect for the rules (at home and at school).

Before a child gets a mobile device, parents should ask themselves:

- Does the child act responsibly in everyday life?
- Does he/she comply with family rules (e.g. leaving home and is back at the agreed time)?
- Does the child often lose things (e.g. a rucksack or school things)?
- Is it necessary for the parent to be in contact with the child for safety reasons (e.g. the child stays at home alone)?
- Does the child understand the concept of safe behaviour when using a mobile device?
- Does the child know how to protect personal information and the device during its use?

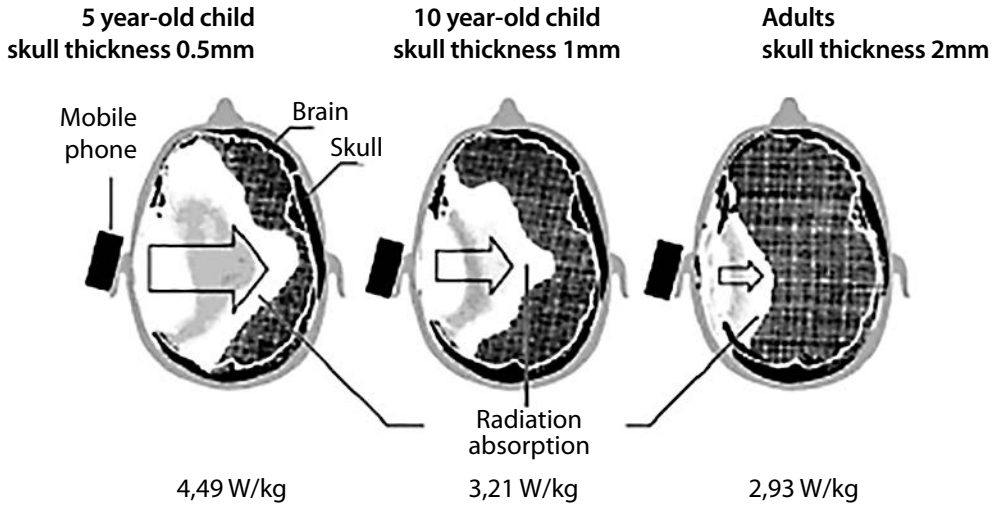
Before giving the child a mobile phone, parents should seriously consider whether the child is mature enough to use it responsibly and rationally. With a mobile phone, the child gets a powerful communication tool and his/her own media, which can become "a good servant, but a bad master".

Technical skills in the use of a mobile device, and even the fact that the child's peers already have devices, are not sufficient and justifiable reasons for the child to get his/her own digital device.

IS NON-IONIZING RADIATION EMITTED BY MOBILE PHONES HARMFUL TO THE CHILD'S HEALTH?

In recent decades, with the increasing availability of mobile phones (not just to adults, but also to children), there has been serious consideration to the question of the harmfulness of exposure to non-ionizing electromagnetic radiation emitted by mobile phones.

In 1996, Om Gandhi (Professor and Head of Electrical Engineering Department, University of Utah, USA) presented his findings (shown in the figure below) according to which the brains of children aged 5 and 10 absorb a higher amount of mobile phone radiation than the brain of an adult. The radiation absorption rate in the five-year-old is 4.49 W/kg; in a child aged 10 it is 3.21 W/kg, while the adult's brain absorbs 2.93 W/kg. Therefore, the reason is simple: children are exposed to higher levels of radiation because they have a thin skull (Gandhi et al., 1996). Note that Gandhi in his article entitled: Yes the Children Are More Exposed to Radiofrequency Energy from Mobile Telephones than Adults, published in 2015, confirmed his findings presented two decades earlier (Gandhi, 2015).



Source: Institute of Electrical and Electronics Engineers Transactions on Microwave Theory and Techniques

Figure 2 The level of absorption of non-ionizing mobile phone radiation in children 5 and 10 years of age and in adults

Gandhi's research, actual today, initiated numerous studies and divided the experts into two groups – those who agree and those who disagree with his findings. Thus, some authors (e.g. Foster & Chou, 2014) think that simple generalizations, found on the Internet, that children absorb more radiation than adults are not supported by the available dosimetric studies[14]. Others question the methodological correctness of the research conducted.

While science – due to the lack of reliable, empirically based findings (caused by rapid technological development or the lack of valid longitudinal studies in which long-term radiation effects are observed) – has no unified position, the pseudo-science continues

[14] Dosimetry: monitoring and measurement of radiation absorption

to 'boil'. Thus, all and everything can be read online, influenced by the agendas of various stakeholders – from assertations that mobile phones do not endanger the health of users at all, to statements that their use has catastrophic consequences for one's health (including cancer risk), especially when it comes to children.

In response to the research findings suggesting children's sensitivity to non-ionizing electromagnetic radiation emitted by mobile phones, some countries have taken concrete preventive measures, so the Belgian government declared it unlawful to give mobile phones to children aged 7 or younger, while similar measures are being considered in France, India, Israel and other high tech-developed countries (Morris et al., 2015). Even when exposed to the same amount of radiation, the effects on development of the brain of a fetus or a young child are greater than in adults. Young brains grow faster and therefore they might be more vulnerable to toxic agents, be they chemical or physical.

Although mobile phones should be designed to radiate within the limits of legally prescribed values that are considered safe, it is still desirable to abide by the advice for their proper use – for preventative reasons, as well as because of the effect of heating that can be harmful in prolonged exposure of the tissues to higher radiation levels (there is consensus among experts on this issue). Note also that most mobile phone manufacturers offer the possibility to check the specific absorption rate of electromagnetic radiation (SAR) from the phone (on the official website or in the instructions provided with the phone), and attention should be paid to this when buying a device.

WHAT ARE THE BENEFITS OF PLAYING VIDEO GAMES

Due to the huge video game market and the presence of an increasing number of games containing violence and other inappropriate content (e.g. explicit sexual content, gambling, drugs, stereotypes that incite hate and discrimination), there has been much talk lately about video games in negative context. Nevertheless, we should be aware of the fact that video games can be very useful for the child and contribute positively to his/her development.

The benefits of playing video games

1. **Cognitive benefit:**
   - development of eye–hand coordination and fine motor skills;
   - adopting logical skills, problem solving strategies, planning, etc;
   - ability to set goals and achieve them;
   - ability to work on multiple tasks at the same time (so-called multitasking);
   - planning and managing time.
2. **Emotional benefit:**
   - the child is positive and satisfied;

- feels more relaxed and is less exposed to stress, feels 'relieved' when playing;
- feels good when succeeds and overcomes challenges, which positively affects self-esteem;
- connects to others.

3. **Social benefit:**
   - children reinforce existing relationships with peers and build new ones;
   - learn to play in teams (if they play group games);
   - learn to respect the fair game rules and cope with defeat;
   - strengthen relationships with family members
4. **Educational benefit:**
   - children practise memory;
   - recognize and understand visual information;
   - better understand the concepts they learn at school and are more motivated to learn;
   - learn to think critically;
   - learn new words, enrich the vocabulary.

It should be noted that a child's development is a holistic process, and that all these aspects of development are interconnected.

WHICH APPLICATIONS AND VIDEO GAMES ARE NOT GOOD FOR CHILDREN

More than 170,000 educational applications were available in the Apple App Store in 2016 (Apple, 2016). Today's science, seen at global level, has no capacity to catch up with the ever-growing application market. Given the fact that researchers are not able to test each application and assess its educational value before it becomes available on the market, parents often do not know what to do when it comes to picking applications or video games for their child. Choosing a quality application or video game has become a real challenge, not only for parents who are not professionals, but also for those who are experienced in video game playing or experts in children's needs.

Not all applications and video games designed for children are age appropriate and suitable for their developmental needs. After all, most applications (but not all) were created by designers who are not experts in child development (Zosh et al., 2017).

The best applications and video games for children of preschool and lower-primary school age are those that have **educational potential**, promote **positive values** and make children **feel they are capable of doing something good.**

Which criteria should be applied to distinguish applications that are **educational and encourage children's play and creativity** from the 'bunch' of 'educational' ones?

Here we list the characteristics of those applications that are not good for children because they do not encourage their play and creativity:

- **The purpose of the application is not clear** or it has too many goals, so that children wander from one activity to another and eventually give up;
- **The application design is not tailored to the needs of the child** for several reasons:
    1. Entry into the application leads to a home page that is not understandable enough, which makes it difficult to move to the next step
    2. Adjustable elements leave little room for errors, thus creating frustration in the child
    3. Too many pop-ups create confusion, so children may give up
    4. The inconsistency in requirements that are placed before the child (when to drag, click, etc.) may cause confusion;
- **Presence of commercial content:**
    1. Ads inside the application in the form of "pop-up windows" can frustrate the child
    2. Too many obstacles during the game in the form of purchasing requests within the application also frustrate the child and lead to abandoning the application;
- **Do not provide adequate support to the child while playing:**
    1. Too much text (or text in applications for children who cannot read), without the possibility to transform it into speech
    2. Oral instructions are too fast or too slow, which hinders understanding
    3. The instructions are not formulated in a developmentally appropriate way
    4. There is no repetition of instructions if the child does not respond
    5. There is no break that gives the child the opportunity to think before answering
    6. There are no positive feedback and rewards that direct and motivate the child (e.g. smileys, applause);
- **Do not promote play and creativity:**
    1. They do not provide the opportunity to explore and try, but focus on concrete tasks with limited challenges
    2. They do not provide children with the opportunity to focus on the process, but only on the outcome
    3. They do not encourage children to think and to ask themselves
    4. There is no link between the digital and the child's non-digital environment
    5. Characters and activities are not meaningful and interesting for the child
    6. They contain elements of augmented reality, but only in terms of animated characters or objects, without using their potential (e.g. linking animated characters with further activities such as making a story, which can develop imagination and creativity) (Marsh et al., 2015).

If a child is a pre-schooler or lower-primary schooler, choose applications and games following these criteria:

- they help the child learn rules and strategies;
- they reward creativity and planning;
- they contain requirements of different levels of difficulty, so that the child can develop and progress through the game;
- they allow short-cycle playing, pausing (along with progression throughout the game);
- they promote positive values regarding gender equality and diversity [15]

WHERE CAN ADULTS FIND INFORMATION ABOUT VIDEO GAMES?

As has been emphasized so far, adults (parents/carers, educators and teachers) are expected to choose digital content for children (including video games) in accordance with children's personal needs and interests, especially when it comes to pre-schoolers.

In the most popular online store – Google Play Store – video **games** are sorted into categories according to the genre (e.g. action, adventure, arcade, role play, simulation, sports, strategic games). They are intended for players of all ages, but are not classified according to the age. In addition, there is a special category – Family – within which video games are classified in accordance with the age: 5 years and younger, 6 to 8 years, and 9 years and older.

Regardless of whether it is purchased (online or in the store) or downloaded for free, every game should have a description of its characteristics.

If you download or buy a game online, before installing it on your device, you will get information whether it is **free** or you have to **purchase** it (if you have to buy it, the amount to be paid in domestic or foreign currency is usually stated below the icon). It is also possible to check the general rating, the number of those who rated the game and the ratings by multiple parameters (game, graphics, controls); the reviews of the game's users can also be read. These reviews can be helpful, but they are not a reliable source of information for parents choosing a game for their child, precisely because they come from users expressing personal attitudes, preferences and interests, and not from experts in video game quality.

PEGI (Pan-European Game Information) is a pan-European system established in 2003 by the European Commission to evaluate the age-appropriateness of video games. Today it is used in nearly 40 European countries, including Serbia. The age appropriateness of video games is estimated based on their content. More information on the PEGI system can be found on the **official PEGI website**[16] (in English) or in the **Digital Guide**[17] (in Serbian).

Bear in mind that some video games are evaluated before they are published (e.g. Microsoft Xbox console games, Sony PlayStation console games, most PC games), while others are rated after they are posted (e.g. all games and apps on Google Play and Microsoft Windows Store for Windows PCs, smartphones and tablets).

[15] https://raisingchildren.net.au/preschoolers/play-learning/screen-time-healthy-screen-use/video-games-apps#best-video-games-online-games-and-gaming-apps-for-children-and-teenagers-nav-title

[16] https://pegi.info/

[17] https://digitalni-vodic.ucpd.rs/igranje-video-igara-gejming/

Before the video game is installed, the following features can also be found in its description: PEGI rating, the date of publishing, the amount of memory space it takes on a device, how many times it was downloaded, etc. If the video game has, for example, PEGI 7 rating, it means that it is intended for children who are **7 or older**, and if your child is younger than 7, this is already a good reason NOT to choose such game.

If a game is purchased, it may sometimes be a reason not to choose it. It happens that children abuse their parents' credit and debit cards for buying video games, which should be taken into account especially if the child uses a device independently. Access to some games is free, but there is the possibility to **spend money inside the game** (in-app purchases), which is written in a visible place, below the icon through which the game is accessed. As with any online shopping, it is important that parents control purchases within games on the platforms and devices that the child uses. **Here**[18] you can read how to prevent accidental or unwanted purchases on your device (e.g. you can request Google Play authentication for purchases).

If there are **advertisements** inside the video game, this information should be visibly displayed under the Contains Ads icon. Ads should match age rating for a particular game. If you are shown ads that are not age appropriate, you have the option to **report it**[19].

It is very important to emphasize that even among video games rated **PEGI 3** (which indicates that the game is intended for all ages), unfortunately, some can be found that are **not suitable for children due to their content**. If you find such games, you have the option to **report** them (as well as reviews you find inappropriate).

Comments and reviews of games, other than in the description of the game on the platform from which it is downloaded or through which it is purchased, can also be found **on special web pages** that serve that purpose. In addition to the previously mentioned PEGI website, for example, the website of the non-profit organization **Common Sense Media**[20] has detailed information about the game (whether it contains positive messages and behaviour patterns, how demanding the game is, whether a child can be exposed to inappropriate content and vulgar language, whether there is a possibility of spending money, etc.), advice for parents (good and bad games, what should be discussed with children, etc.), as well as comments of parents and children on their experience with the game.

The most important advice for adults is to **get informed** about the characteristics of a game on **reliable websites**, but also **to try the game themselves before the child accesses** it (alone or together with an adult).

[18] https://pegi.info/page/game-purchases
[19] https://support.google.com/googleplay/contact/rap_family
[20] https://www.commonsensemedia.org/game-reviews

DO VIOLENT VIDEO GAMES MAKE CHILDREN VIOLENT?

This is one of those questions that are constantly occupying the attention of both professionals and lay people. Numerous studies have examined the connection between playing video games and violent and aggressive behaviour in real life. The influence of violent video games on child behaviour was considered from different theoretical perspectives, using different research designs (correlation, experimental, meta-analysis). In spite of everything, the conclusions are still controversial. A large number of studies indicate that there is a positive correlation between exposure to violence in video games and aggressive behaviour (Jevtić & Savić, 2013). Some studies point to 'short-term' aggression and violent behaviour immediately after playing video games; others emphasize the 'discharge' effect these games have in children (Ferguson et al., 2010). In some studies, a significant but weak effect was obtained (Ferguson, 2007). The authors explain that exposure to violence in video games is not a key factor that contributes to violent behaviour, but that it is also caused by other factors such as domestic violence, stress and material status. Factors related to video game features, e.g. whether there are more players involved in the game, whether they cooperate with one another, also affect the results of the studies. The truth seems to be that we are still far from understanding the long-term effects of video games.

IF YOU WANT TO LEARN MORE:

- **How does the time children spend using digital technology impact their mental well-being, social relationships and physical activity?**

  https://www.unicef-irc.org/publications/pdf/Children-digital-technology-wellbeing.pdf

- **Young Children and Screen Time**

  https://www.childnet.com/ufiles/Young-children-and-screen-time---a-guide-for-parents-and-carers.pdf

- **Positive digital content for kids: experts reveal their secrets**

  https://www.kennisnet.nl/mijnkindonline/files/Positive_digital_content_for_kids.pdf

- **Mobile and Interactive Media Use by Young Children: The Good, the Bad, and the Unknown**

  https://pediatrics.aappublications.org/content/pediatrics/135/1/1.full.pdf

- **What's App with That? Selecting Educational Apps for Young Children with Disabilities**

  https://www.researchgate.net/publication/261634137_What's_App_With_That_Selecting_Educational_Apps_for_Young_Children_With_Disabilities

- **Exploring Play and Creativity in Pre-Schoolers' Use of Apps**

  http://techandplay.org/tap-media-pack.pdf

- **Online gaming: an introduction for parents and carers**

  https://www.childnet.com/ufiles/Online-gaming-an-introduction-for-parents-and-carers-2017.pdf

USEFUL LINKS

This section contains resources for meaningful, creative and safe use of digital technology and the Internet in working with children of different ages, websites, applications, video games, video tutorials and web-based tools for children and adults; applications for learning at an early age; applications for children with disabilities, lesson plans, encyclopaedias, etc.

RESOURCES FOR LEARNING USING TECHNOLOGY

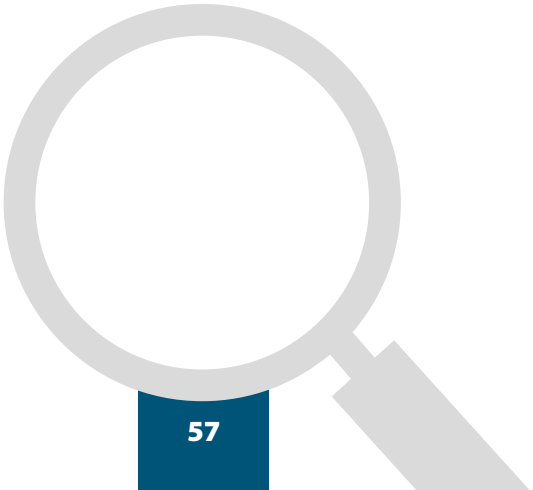
- **http://vebciklopedija.zajednicaucenja.edu.rs** (catalogue of web tools used in education, descriptions in Serbian)
- **https://www.commonsense.org/education/scope-and-sequence** (lesson plans for classes on safe use of technology for children of different ages)
- **https://www.mindomo.com/mindmap/ict-tools-and-resources-for-schools-teachers-and-educators-48511abbfb7e4145a33dbe6453d0f8af** (a very comprehensive overview of educational ICT resources for schools and teachers)
- **http://www.discoveryeducation.com/teachers/free-k-5-teacher-resources** (resources for teachers, lessons plans for multiple subjects classified by age)
- **https://www.ixl.com/?partner** (resources for teachers: teaching and adopting different skills in different ages, teacher assessment and experience in the use of the resources)
- **https://literacyapps.literacytrust.org.uk/how-to-choose-apps/** (expert guidelines for the selection of quality applications for early child literacy, 1 to 5 years of age)
- **https://www.naeyc.org/our-work/families/selecting-apps-support-children** (learning applications for children aged up to 8 years)
- **http://resourcesforearlylearning.org/** (resources for early learning for parents, educators and children)
- **https://www.commonsensemedia.org/learning-with-technology** (learning resources with the help of ICT)
- **https://www.thinglink.com/scene/690975262984110080?utm_content=buffer159ca&utm_medium=social&utm_source=twitter.com&utm_campaign=Buffer** (20 ways to learn with the help of ICT)
- **http://www.childrenslibrary.org** (a digital library for children, books available in Serbian)
- **https://kids.kiddle.co/** (children encyclopaedia)

RESOURCES FOR WORKING WITH CHILDREN WITH DIFFICULTIES IN DEVELOPMENT AND LEARNING:

- **https://www.understood.org/en** (resources to work with children with learning disabilities and attention problems)
- **https://www.understood.org/en/tools/tech-finder** (applications and games for children with various difficulties: reading, writing, math, attention, social, motor skills, etc.)
- **https://www.commonsensemedia.org/website-lists** (websites, applications, video games and films for children of different ages)
- **https://www.commonsensemedia.org/special-needs** (games, applications and devices for inclusion of children with learning disabilities, autism, vision and hearing impairment, and more)
- **https://www.commonsensemedia.org/special-needs/age/all** (experts' answers to questions related to the use of digital technology in working with children with learning disabilities)
- **http://gasi.rs/ucimoreci/** educational materials to help children with difficulties in adopting speech (Serbian)

GUIDELINES FOR ADULTS ON SAFE USE OF THE INTERNET:

- **https://www.esafety.gov.au/education-resources/iparent/multimedia-reviews/movies-and-games/choosing-movies-and-games** (recommendations for adults how to provide a child with safe and enjoyable online experience)
- **https://www.childnet.com/resources/a-parents-guide-to-technology** (resources for parents, education professionals and children for safe use of the Internet)
- **https://www.saferinternet.org.uk/advice-centre/parents-and-carers/parents-guide-technology** (recommendations and resources for the children's safe use of the Internet)
- **https://www.saferinternet.org.uk/blog/key-things-remember-when-helping-your-child-set-new-profile** (recommendations for parents who create their child's first profile on the Internet)
- **https://www.esafety.gov.au/education-resources/iparent/online-safeguards/parental-controls** (information on how to set up parental controls on computers, tablets, smartphones, video game consoles, web browsers, ISPs, etc.)
- **https://www.childnet.com/parents-and-carers/hot-topics/parental-controls**



INFORMATION ON VIDEO GAMES:

- **https://pegi.info/** (European system for assessing age-appropriateness of video games)
- **http://www.askaboutgames.com/** information and comments on video games and their good sides)
- **https://www.commonsensemedia.org/reviews** (age-appropriate films, books, applications, series, etc.)
- **https://www.commonsensemedia.org/game-lists** (the best video games for children, the recommendations of the American non-profit organization)
- **https://www.learninggamesforkids.com/** (educational video games for children, thematically classified)
- **https://www.esafety.gov.au/education-resources/iparent/staying-safe/online-gaming/what-are-the-risks** (recommendations for safe video game play)

PLATFORMS AND SEARCH ENGINES FOR CHILDREN:

- **https://www.youtube.com/kids** (YouTube for children)
- **https://www.kiddle.co/** (Google search engine for children)
- **https://swiggle.org.uk/** (Swiggle search engine for children)
- **https://www.safesearchkids.com/** (Safe Search Kids search engine for children)
- **https://www.kids-search.com/** (Kids Search search engine for children)

DIGITAL AGE DICTIONARY

A

- **Active digital footprints** – trails on the Internet users leave when sharing information (personal data) on websites or social networking sites (see **Passive digital footprints**)
- **Ad block** – software that blocks advertisements on websites, web pages or mobile applications, thus improving the user experience when browsing the Internet
- **Administrator** – a user of a digital device having administrator privileges (e.g. installing programs and applications, changing settings, adding new user accounts and managing them; **parental controls** are set from an administrator account that is password protected)
- **Advanced search** – enables obtaining specified search results according to the selected criteria (e.g. language, file type, domains, etc.) (see **Basic searching**)
- **Algorithm** – a set of rules or steps that need to be taken when solving a problem
- **App** or **mobile application** – a computer program specially designed to work on mobile devices such as smartphones, tablets, smart watches, the so-called wearable technology (see **Wearable technology**)
- **Artificial intelligence** – computer programs enabling computers to 'behave' in a way that could be characterized as intelligent (solving complex tasks, learning, concluding), performing non-routine tasks instead of humans
- **Assistive technology** – technology (instruments, devices, tools) adapted to the needs of persons with disabilities of different types, aimed at overcoming their functional restrictions and improving the quality of their life (see **Digital assistive technology**)
- **Augmented reality** – a real world extended with computer generated data and objects (text, image, sound); an example of augmented reality is the Pokemon Go video game that allows users to capture Pokemon in the real world using their smartphones (iOS and Android)
- **Automatic privacy settings** – privacy settings automatically set when buying a device, i.e. installation of programs, web browsers, social network profiles; in order to better protect user privacy, it is recommended to change the default privacy settings
- **Avatar** – a graphic representation of a user; an icon or figure representing a particular person in the digital environment (e.g. in a video game, Internet forum, personal profile, etc.)

B

- **Basic searching** – online search performed by entering a keyword, i.e. querying in the search box, without specifying the search criteria
- **Bit**, abbreviation of **Binary digit** – literal meaning: 'binary number'; the smallest amount of information
- **Bitcoin**, abbreviated **BTC** – the best known cryptocurrency, a type of

digital currency that was created in 2009; it is produced by members of the bitcoin network in the so-called process of 'mining'

- **Blog** – weblog; literal meaning: online journal; keeping a personal journal on a web page that is open to the public with the content edited chronologically; social exchange platform; more information about blogs is available on the web page: **http://vebciklopedija.zajednicaucenja.edu.rs/saradnja/blog** (see **Vlog, Microblog and Moblog**)
- **Bot** (Internet bot, web robot) – a short name for a software robot that is integrated on web pages, acting as a human; bots have artificial intelligence elements; they can be 'good-natured' (e.g. technical support for a particular website or product, bots in computer games that imitate opponents) or 'malicious' (e.g. advertising, creating automatic accounts on web pages, and leaving a large number of messages); **popular meaning of the term bot:** a member of a political party who leaves comments that support his party/leader on websites and/or social networking sites

- **CAPTCHA** – a security check to determine whether the device user is a human or machine (malicious virus, spam); the user is required to enter several characters that are displayed on a distorted image, which a computer is unable to do
- **Chatting** – a form of communication between two or more users via computer or other digital device (such as a smartphone, tablet), taking place in 'real time' (users are online at the same time); today there is a large number of chat applications (e.g. Viber, WhatsApp, Skype, Snapchat, etc.)
- **Clickbait** – a link to a website (click-through banner) designed to attract as many users as possible to visit a particular website or video in order to increase reading or viewing; clickbaits often contain words 'shocking' or 'you won't believe', although they actually contain some banal information or no information at all
- **Cloud computing** – storing personal data or applications in the so-called data cloud, so that they can be accessed via the Internet from any place or device
- **Coding** – writing a set of instructions (source codes written in programming languages) that enable the computer to perform various tasks, solve problems, interact with the user; the term is often used as a synonym for **computer programming**
- **Collaboration** – cooperation in a digital environment; using digital technology for collaborative processes, mutual creation of content in a digital format (e.g. Google Drive)
- **Competence** – a set of knowledge, skills, attitudes and responsibilities
- **Cookies** – pieces of text files that are stored in the user's web browser when viewing a website in order to collect user information and his/her preferences (see **Third-party cookies**)
- **Copyright** – the right of an author of some work (artistic, literary, scientific) to protect the work from unauthorized use; the symbol © indicates that the work is protected by copyright and that it is necessary to request the author's permission for its use (copying, downloading, sharing); most of the content on the Internet is protected by copyright (see **CC licence**)
- **Creative commons (CC) licences** – copyright licences enabling authors to retain some of

the rights, but also to allow other authors to copy, share or modify their work under certain conditions; there are several types of CC licences

- **Cryptocurrency** – a type of digital currency, developed on cryptography (encryption), which makes it difficult to counterfeit; in most countries, cryptocurrencies are **not legally regulated**, i.e. there is no regulatory authority nor law governing trade with virtual money (in some countries the use of Bitcoin is illegal and punishable under the law); Bitcoin is the first decentralized cryptocurrency
- **Cybercrime** –any unlawful behaviour in relation to the computer system and network, including illegal possession, supply and distribution of information through computer systems and networks (computer forgeries, theft, technical manipulation of devices or electronic components, misuse of the payment system); more information at: **https://sr.wikipedia.org/wiki/Сајберкриминал**

- **Dark web** – dark Internet, encrypted online content that is not indexed on conventional web browsers (e.g. Google, Yahoo, Bing); a tiny part of the so-called deep web, serving to promote illegal activities, e.g. anonymous forums, online drug trafficking, exchange of child abuse photos, etc. (see **Deep web**)
- **Deep web** – all content on the web requiring a certain type of authentication or identity confirmation (registration or payment) and is 'hidden' from conventional web browsers (does not appear in search results), e.g. for security reasons (private data) or for better user experience
- **Digital assistive technology** – digital technology functioning as assistive technology (e.g. customized keyboards, mice, monitors, voice recognition programs, monitor zoom in, text-to-voice conversion, etc.) (see **Assistive technology**)
- **Digital communication** – communication that takes place via digital devices and the Internet; it can be: **synchronous** – people who communicate are online 'at the same time' (e.g. chatting) and **asynchronous** – 'not at the same time' (e.g. email communication)
- **Digital competence** – one of the eight key competences for lifelong learning (European Framework of Key Competences, 2006), the most common meaning: reliable and critical use of digital technology in different contexts (the term 'digital literacy' is often used as a synonym)
- **Digital content** – any content in digital format (e.g. websites, databases, e-books, video games, computer programs, etc.)
- **Digital currency** – electronic currency that is not part of the national financial system and therefore not regulated by state authorities, e.g. central bank (there are two types of digital currency: virtual and crypto currency)
- **Digital device** – an electrical device that receives, stores, processes or sends information in digital format (e.g. smartphone, tablet, smart watch, etc.)
- **Digital divide** – in the original sense, the difference between those who have and those who do not have access to digital technology (**the first-level digital divide** – differences in access to digital technology, between those who have and those who do not have access; **the second-level digital divide** – differences in digital skills; **the third-level digital**

divide – differences in use of digital technology to solve real life problems)

- **Digital environment** – context or 'location' provided by technology and digital devices
- **Digital footprints** – the trails we leave behind when using the Internet; they form our digital reputation and the way other people perceive us (see **Active digital footprints** and **Passive digital footprints**)
- **Digital identity** – the identity of a person in a digital environment in which others create an image of us based on the content of our profiles on the social networks, texts, photos and videos we share, our comments, 'likes', 'statuses', 'friends', the groups we are included in, the websites we visit, the activities we follow and participate in (see **Online identity**)
- **Digital immigrants** – the term introduced by American technologist Marc Prensky (2001) who, under digital immigrants, implied generations born before the emergence of digital technology and the Internet (see **Digital natives**)
- **Digital literacy** – a set of knowledge, skills and attitudes necessary for critical, safe and creative use of digital technology; modern meaning of the term 'literacy' is far more complex than the traditional understanding of it as the skill of reading, writing, calculating; nowadays, literacy corresponds to the notion of competence
- **Digital money** – money that is available only in digital form; unlike traditional money (e.g. EUR, USD, RSD), digital currency is not part of the national financial system, and therefore not regulated by state authorities; there are two types of digital money: virtual and crypto currency; more information at: **https://www.diplomacy.edu/sites/default/files/AnIntroductiontoIG7 th%20edition.pdf**
- **Digital natives** – the term originally introduced by American technologist Marc Prensky (2001) who, under digital natives, implied generations born after the emergence of digital technology and the Internet; digital natives' mother tongue is 'digital technology language' (see **Digital immigrants**)
- **Digital reputation** – the reputation a person has in a digital environment, developed by his/her behaviour within it as well as the content that person posts or shares (about self or others) on the Internet
- **Digital resiliency** – resilience to potential challenges in digital environment; a digitally resilient child is more likely to remain safe in the digital environment because he/she is able to recognize risks and hazards and respond adequately to them (i.e. has appropriate strategies and mechanisms for overcoming digital challenges)
- **Digital rights** – the term is most often used in the context of describing child rights within the digital environment
- **Digital technology** – a comprehensive term including digital devices such as computers, mobile phones, tablets, as well as activities provided by digital devices (e.g. the use of the Internet, social networking websites, etc.)
- **Digital tools** – digital technology tools; Webcyclopedia is the largest catalogue of web-tools in the Serbian language: **http://vebciklopedija.zajednicaucenja.edu.rs/**
- **Digital violence** – the use of digital technology in order to disturb, hurt, humiliate or incur

a damage to another person

- **Disruptive technology** – technology that pushes out the existing technology by its appearance, a revolutionary product creating an entire new industry (e.g. the personal computer replaced the typewriter and completely changed the way we communicate and work; the mobile phone replaced the landline phone)
- **Distance learning** – gaining knowledge and skills through delivered information and instructions using different technologies and other forms of distance learning; one should bear in mind that distance learning dates back to the 17th century and is not related only to digital technology
- **Distractors** – obstructing factors; in a digital context they refer to unnecessary and undesirable content on a website (e.g. advertising content); web browsers contain tools that block such content

- **Emoticon** (derived from **emotion** and **icon**) – a graphic representation of a human face expressing different feelings (the best known is the so-called smiley ☺)
- **Encryption** – the process of converting data or information into a code, an unreadable form (for people who do not have the 'key'); in order to become usable and understandable, the encrypted data have to be decoded through the so-called decryption process; encryption provides protection of privacy, but is also used within illegal activities (criminal, terrorist)
- **Explicit content on the Internet** – unwanted content, e.g. explicit sexual and pornographic content, violent content on the Internet...

- **Fake news** – false, often sensational, information disseminated under the guise of news reporting (Collins Dictionary announced fake news the word of the year in 2017) (fake news vs. real news)
- **False identity on the Internet** – an image a person creates about himself/herself on the Internet that does not correspond to reality
- **Filtering** – disabling or restricting access to a part of the Internet, i.e. certain content or services; the term **block access** is also used
- **Flipped classroom** – a model of teaching where the process of lecturing does not take place in the classroom (which is typical for traditional teaching), but at home – teachers' lectures are presented and viewed via digital devices, while school lessons are used for exercising, discussing, researching, learning in cooperation with others...

- **GDPR (General Data Protection Regulation)** – general regulation on protection of personal data in the European Union, entered into force in May 2016; its implementation began on 25 May 2018; this Regulation stipulates new, stricter rules for those who handle and process other people's data; it also applies to the processing of EU citizens' data by companies outside the EU
- **Grooming** – contact with children via the Internet that includes a series of predatory motivated actions, i.e. preparatory actions aimed at establishing communication and gaining trust, with the ultimate goal of physical contact, i.e. committing sexual abuse of a child

- **Hacker** – a person who gains unauthorized access to someone else's data using vulnerabilities in a computer system or network
- **Hacking** – modifying computer programs, illegally entering other security and personal operating systems, unlawful use of the information of others
- **Hyperlink** – a link to another hypertext document or a specific place in the same document; a link to a picture, video or sound recording, an email address (one click on a hyperlink brings you to the desired position)
- **Hypertext** – the text containing a hyperlink

- **Identity on the Internet** – a person's identity formed upon photos, textual content, audio and video content posted on the Internet by that person (or someone else), e.g. on social network profiles, personal websites (see **True identity** and **False identity on the Internet**)
- **Identity theft** – illegal use of another person's private information (e.g. name and surname, username and password, photographs, bank account numbers, pin codes, etc.) for the purpose of commiting fraud (e.g. stealing money from the account)
- **Information literacy** – a set of integrated abilities necessary for finding, storing and organizing information, understanding of how information is produced and critically valued and the ethical use of information in applying and creating new knowledge
- **Interactive digital devices** – digital devices that 'respond' to user actions by presenting content such as text, images, animation, video, audio
- I**nteractivity** – a type of dialogue taking place between the user and a digital device or application
- **Internet** – a global system of interconnected computer networks that use Internet Protocol (TCP/IP) to connect billions of devices worldwide
- **Internet etiquette** – a code of conduct, a set of rules of conduct on the Internet that are similar to those that apply outside it, referring to the relationship with oneself (personal data) and others; way of communication, digital orthography, etc. (see **Netiquette**)
- **Internet of Things**, abbreviated **IoT** – a network (usually wireless) of physical devices or things with built-in electronics, software, sensors and network connectivity that allows data collection and exchange; it is applied in households (e.g. smart fridge, thermostat, smart washing machine, lock), healthcare (e.g. smart hospital beds, insulin pumps, watches), industry (e.g. machine fault identifying sensors, soil quality testing); today there is much talk about using the Internet of things to create the so-called **smart cities** adapted to the modern lifestyle conditions, making it possible through sensors that monitor a variety of parameters (e.g. air quality, traffic jams...)
- **Internet of Toys**, abbreviated **IoToys** – toys connected to the Internet (the use of the Internet of things on toys for children); wireless connecting of toys with other toys and devices that allow data transmission; a child can interact with the toy (e.g. Hello Barbie, the first interactive doll able to communicate with a child, appeared on the market in 2015)
- **Internet predator** – a person using the Internet (social networks, chat services, chat rooms)

in order to establish contact with children and youth with the ultimate goal to abuse or sexually exploit them

- **Internet protocol** address, abbreviated **IP address** – a unique numeric tag assigned to each device that is connected to the Internet; its function is to identify and recognize computers (e.g. 192.168.1.1)

- **Licence** – a software licence granting the right to use software; some licences are obtained upon purchase of a program; there is also an 'open source software licence' allowing the user to modify and distribute software
- **Live streaming** – transmitting live content (audio and video) from the provider to the end user, via the Internet

- **LMS** – Learning Management System (e.g. Moodle); a system that enables storage of educational content, monitoring progress of students (or course participants), interaction among students and between students and teachers, etc.

- **Malware** – software that is specifically designed to deliberately disrupt, damage or interfere with a computer system (collects data or gains unauthorized access to private files without knowledge or permission of the owner)
- **Microblog** – a blog comprised of short messages, pictures, videos; Twitter is a popular microblog service where messages (so-called tweets) were originally limited to 140 characters, and by the end of 2017, the number of characters was doubled for all languages, except for Japanese, Korean and Chinese

- **Moblog**, abbreviation of **Mo**bile **blog** – the type of blog or vlog on which the content is uploaded using mobile devices (e.g. mobile phones or other handheld devices) (see **Blog** and **Vlog**)

- **Net neutrality** – the principle by which Internet service providers (Internet providers) treat all data or content on the Internet equal or 'neutral', which means they are not able to block, slow down or charge access to specific web pages or content
- **Netiquette** – a set of rules of socially accepted and desirable behaviour on the Internet (see **Internet etiquette**)

- **One-to-one marketing** – a marketing strategy by which companies, on the basis of the analysis of personal data and using digital technology, offer and distribute products to current or prospective customers in accordance with their individual characteristics and needs
- **Online identity** – identity (image of a person) formed on the basis of photographs, textual content, audio and video content posted online by that person (or someone else), activities of a user on the Internet; it may differ from the so-called **offline identity** – the identity of a person in the real world

- **Open data** – data that are available to users free of charge and can be reused with respect to copyright
- **Open educational resources** – educational content available on the Internet free of charge, intended for people who want to learn independently

- **Parental consent** – the consent of the parent/guardian for the child's use of an Internet service; there is currently no consensus on the age under which parental consent is required (ranging from 13 to 16 years of age) among EU Member States (in which GDPR – General Data Protection Regulation – applies)

- **Parental control** – technical protection measures allowing adults to protect children during the use of the Internet by limiting the **time** they spend online or **content** they can access, post or share via the Internet, as well as **the activities of the child** on the Internet (disabling chatting with strangers, spending money on apps, etc.)

- **Passive digital footprints** – trails on the Internet users leave unintentionally and unconsciously, stored without their knowledge (e.g. the IP address of the device accessing the Internet)

- **Phishing** – fishing for passwords; one of the methods of identity theft used by hackers or cyber criminals who try to use fake but often very convincing email or chat messages and websites to make the victims leave valuable personal information (passwords, pin codes, credit card numbers) or install malicious virus on their devices; e.g. the user receives a phishing email that appears to be sent from a known institution, bank, or social network that contains a link to a fake website (e.g. National Bank of Serbia fake website: **http://www.nds.rs/** ; the real website: **http://www.nbs.rs/**)

- **Privacy** – the degree of control that a person has over access and use of his/her personal information on the Internet

- **Privacy policy** – rules that refer to handling personal information of users of a service, platform, social networking site (e.g. which information is collected, for what purposes, the ways users can manage their data); the terms users agree to when registering to an Internet service (users often give their consent without previously being informed of the terms they agree to, which is completely wrong)

- **Privacy settings** – the control users have over their personal data, limiting access and the amount of information available to others (e.g. personal profile settings on social networks)

- **Profiling** – any form of personal data automatic processing aimed at assessing and predicting the performance, material status, health, personal preferences, interests, behaviour, location or mobility of a person

- **Public domain** – all creative works to which no exclusive intellectual property rights apply (e.g. commonly known symbols, titles, names, calendars, etc.); they represent a public good and can be freely used; such works use a tag ℗

- **QR code**, abbreviation of Quick Response – a link that leads to a website or a social network page, e.g. Facebook or Twitter; it can be found on packages of various products, books, printed advertisements; it is necessary to install a free QR Code Reader application on a mobile device using Android operating system (such as mobile phone or tablet) in order to read this code; the QR Code Reader is also found within some applications (e.g. Viber)

- **Query** – a request sent to the web browser or entered into the search box (e.g. the keyword we use to search for some information)

- **Right to be forgotten** – the right of the users to require a web search engine to delete personal data from the Internet if they estimate their privacy is endangered; The European Court of Justice enabled EU citizens to exercise this right
- **Robotification of childhood** – the growing presence of the so-called social robots and toys connected to the Internet in a child's development (see **Internet of toys**)

- **Safe searching** – a type of search that provides the possibility to block explicit or inappropriate content on the Internet (using technical protection measures), i.e. filtering search results
- **Scam** – an attempt to deceive users inducing them to spend money
- **Sexting** – sending or uploading photos, messages or videos with explicit sexual content

- **Sharenting** – sharing personal information and photos of children on the Internet by their parents/guardians (most often on social networking sites, blogs)
- **Smartphone** – a mobile phone with Internet access; other so-called smart devices include: smart bulbs, smart fridges, washing machines, smart personal assistants (e.g. Amazon Echo), smart homes, etc.
- **Social robot** – a robot with the ability to independently participate in social interactions with people (e.g. social robots used to care for the elderly, participate in the treatment of children with autism, etc.)
- **Social technology** – the so-called web 2.0 technologies which enable communication and collaboration with other users on the Internet
- **Spam** – sending numerous unwanted or malicious messages to a large number of recipients; it is most commonly associated with email, but also applies to social networks, instant messaging, mobile phones; most email services use effective spam filters
- **Spinning** – literal meaning: to 'spin' a story or information aimed at gaining publicity; a form

of propaganda, manipulation and deception used to achieve the goal (e.g. to convince public opinion against or in favour of an organization or a public figure)

- **Strong password** – a password containing at least 8 characters without words that can be found in a dictionary or words that refer to personal life, username or a real name; a combination of uppercase and lowercase letters, numbers and symbols
- **Surface web** – online content that is easily found through conventional web browsers, i.e. content appearing in search results

- **Terms of use** – the conditions under which Internet services (e.g. search engines, social networks) offer their services to users; by using the services, users accept the terms and agree to abide by them (although they are often uninformed about the content of the terms)
- **Third-party cookies** – cookies placed on the web page a user visited by a website from a domain other than the one user is visiting (e.g. Facebook places its cookie on the user's device via the **Like Page** button that can be found on many websites, thus collecting data about the user who liked the page)
- **Tools for collaboration** – tools used for working together and creating digital content
- **Troll** – a person whose behaviour disrupts normal communication in an online community
- **Trolling** – a form of harassment on the Internet; posting provocative, inflammatory, unauthorized comments on the Internet forums, blogs, wikis or mailing lists in order to deliberately provoke emotional responses and create a breakdown among participants in communication, discrediting people who think differently, making a discussion unproductive...
- **True identity on the Internet** – contains accurate information about a person, reflecting the person as he/she is in the 'real' world (see **False identity on the Internet**)

- **Virtual currency** – a type of digital currency, virtual money that is not part of the national financial system and therefore not regulated by the state authorities (it is different from electronic money which is controlled by a central bank)
- **Virtual reality** – a computer-generated environment or reality designed to simulate the physical presence of a person in a particular environment, perceived as real
- **Visual programming languages** – programming languages that do not require typing commands (contrary to textual programming languages); it is enough to stack blocks of commands that are visually presented (similar to puzzles or cubes) and develop a program; **Scratch** is one of the best known programming languages for children (**https://scratch.mit.edu/**)
- **Vlog**, abbreviation of **vi**deo **blog** – unlike in a blog, posts are in video format; in the beginning, vlogs were popular on YouTube, now they can also be found on services such as Vine, Instagram, Facebook, Pinterest...

- **Wearable technology** – technology embedded in garments or accessories, modern wearable devices for monitoring user activities such as smart watches, fitness trackers (used to measure pulse, number of steps, number of calories burned, etc.)
- **Web 1.0 tools** – the first stage in web development characterized by static web pages (usually written in HTML), slow page loading, minimal interaction between owners and users, users can only read and view content on the web
- **Web 2.0 tools** – the second generation of web services (the so-called social web) that made significant changes in the way the Internet is used: users are enabled not only to read and browse content on the web, but also to create, publish and share content, interactivity, communication, and collaboration and networking. The most popular web 2.0 tools are social networking sites (such as Facebook, Twitter), Wiki, blog, communication tools, messaging (e.g. Google Hangouts) and photos (e.g. Flickr), etc.
- **Web 3.0 tools** – the term that is still being debated, without a clearly defined meaning; it is described as development and expansion of Web 2.0 and a new phase in web development (more info at: **https://rm.coe.int/internet-literacyhandbook/1680766c85** page 25)
- **Web browser** – web page reader, a piece of software used to view and interact with web pages (e.g. Firefox, Internet Explorer, Chrome)
- **Web search engine** – a web tool (service, website) enabling the search of information on the web (e.g. Google, Yahoo, Bing are web search engines that 'track' and record user activities or remember their previous searches; there are also web browsers that 'do not track' user activities, such as DuckDuckGo)
- **Webinar, web**-based semi**nar** – a lecture or workshop streamed online; it can be watched in real time or viewed/downloaded later from the Internet
- **World Wide Web** – one of most frequently used Internet services that allows viewing hypertext documents (documents containing text, images and multimedia content, interconnected by hyperlinks); web is often equated with the Internet, which is wrong, because web is just one of the Internet services

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2 WORKSHOPS

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WORKSHOPS TO BE IMPLEMENTED WITH PARENTS

WORKSHOPS TO BE IMPLEMENTED WITH PARENTS

A reminder to the workshop facilitators

- By participating in workshops, parents get the opportunity to build their knowledge, develop skills and form attitudes through interaction within a group, interaction with facilitators and the workshop content, and through experience and exchange.
- Keep in mind that good cooperation with colleagues from the institution (kindergarten or school) and parents, both during the preparation and the implementation of the workshops, is necessary for the successful realization of the workshops.
- If you feel that you do not have the appropriate technical knowledge and skills necessary for implementation of the workshops (especially the third one related to the application of technical protection measures), seek support from colleagues or perhaps older students (from school) who are familiar with the use of digital devices.

During the workshop PREPARATION:

- Read the theoretical part of this publication; get familiar with the content and the ways the workshops are implemented. Workshops thematically rely on the theoretical framework and they cannot be realized without knowledge of it.
- Pay attention to the desired outcomes and activities through which they are achieved. Keep in mind the time it takes to implement certain activities and a workshop as a whole, so that you can effectively manage the time during their realization.
- Create presentations for short lectures within the workshops (if you feel this will make your realization easier, and, of course, if you have the technical possibilities for that).
- Check regularly if the equipment works. Provide a clear wall for projecting, preferably of a light colour (if you do not have a screen), projector table stand and working material.
- Organize the working space for work in small groups (the optimal number of members per group is 3–4). Provide enough tables and chairs for all participants.
- If you remove the panel with rules (defined together by the participants in the first workshop) at the end of the workshop, put it back before the next one.
- Make sure you have all the necessary material for a specific workshop and enough copies for the participants.
- Think about the challenges you might encounter during the workshop and try to come up with solutions in advance. Ask your colleagues about their experiences and ways of overcoming those.
- When you have done this, you are ready to implement the workshop.

During the workshop IMPLEMENTATION:

- Make sure you remember the names of participants if you did not know them before. Provide cards for the participants to write their names; this will make it easier to get to know each other and communicate.
- Foster an atmosphere of mutual learning, without fear and (self) accusation. Keep in mind that technology is developing rapidly and even the professionals cannot keep up with all the changes. If you do not know the answer to a question, ask participants. It is possible that some of them have more knowledge on the topic than you. Invite them to share their knowledge with the group, as well as to engage in the realization of the activity. Encourage mutual exchange of knowledge, advice, experiences during workshops, but also between and after them.
- Encourage participants to take part in activities and discussions during the workshops.
- Monitor carefully and actively listen to participants.
- When needed, repeat in your own words what a participants has said. Ask this person if you have understood him/her correctly.
- Encourage and direct the discussion.
- Allow each participant to express their personal opinion. Ask if anyone else wants to add something or thinks differently.
- Take care that the participants do not go off the topic.
- Share responsibility with the participants about respecting jointly established rules.
- Take account of the time during the workshop implementation, in order to complete the planned activities.
- Start and finish the workshop at an agreed time.
- Be flexible; if necessary, make decisions 'on the fly', adapt to the current situation and context.

Parent meeting

Before the beginning of the workshop, the facilitator informs the parents about:

- the importance of the topic;
- the programme of workshops for parents and children – briefly present the planned topics;
- the Travelling Notebook Activity (attached in Appendix 6) to be implemented during workshops for children (and maybe to continue after their completion) and briefly explain what is expected of them;
- the workshop 'Creative use of tablets and smartphones' in which they will participate together with their children;
- schedule, duration, registering and other organizational issues related to participation in workshops for parents.

Overview of workshops for parents:

Equipment and material	• laptop, projector, extension cord; • the possibility to connect to the Internet (not necessary); • flipchart board or wall space where the sheets from the block can be stuck; • 15 sheets of flipchart block; • ½ a packet of A4 paper; • 1 black and 1 red marker for the facilitator; • 1 roll of masking tape (the kind used by painters); • 12 stickers in three colours (4 of each colour); • 5 packets of felt-tip pens for participants.	
Duration	The workshops last for 90 minutes, except for the third, which lasts for 120 minutes	
Workshop participants	Parents of children aged 4–8, up to 30 in the group	
WORKSHOP	**OUTCOMES**	**MATERIAL**
1. **PARENTHOOD IN A DIGITAL AGE**	The parents understand their role as digital mentors of their children. They know what digital literacy is and recognize its importance for parenthood in the digital age.	Cards to write names; A4 sized paper sheets; flipchart paper; colour stickers; marker; pens/ felt-tip pens
2. **SCREEN TIME**	The parents are familiar with the experts' recommendations regarding the optimum amount of time in front of the screen in children of an early age. They understand what quality screen time is. They are able to recognize excessive screen use.	Three-colour stickers; flipchart paper; marker; crepe tape; A4 sized paper sheets; problem situations

WORKSHOP	OUTCOMES	MATERIAL
3. **RISKS IN THE DIGITAL WORLD**	The parents understand the potential risks that children are exposed to when using digital technology/the Internet. They know the ways to protect children from risk, are able to apply some of the technical protection measures. They know who to contact in case the child's online safety is endangered.	Colour stickers; flipchart paper; marker; masking tape; A4 sized sheets of paper; Appendix 1: PEGI classification; Appendix 2: Who to contact
4. **FAMILY RULES FOR SAFE AND SMART USE OF THE INTERNET**	The parents can actively intervene in the child's use of digital devices/the Internet. They are able (together with the child) to formulate family rules for the safe and smart use of the Internet. By integrating the knowledge gained from previous workshops, they can assess benefits gained from training and their own digital skills.	Colour stickers; flipchart paper; marker; crepe tape; A4 sized sheets of paper; problem situations; Appendix 3: Family rules; Appendix 4: Parenting styles; Appendix 5: Ten pieces of advice for parents on using digital technology

WORKSHOP 1

PARENTHOOD IN A DIGITAL AGE

OUTCOMES	After completing the workshop, the parents will: • Understand the importance, objectives and content of the training they attended. • Understand the role of today's parents as digital mentors for their children. • Know what digital literacy is and what digital skills are necessary for parenting in a digital age.
DURATION	90 minutes

COURSE OF THE WORKSHOP

Activity 1: Introductions, presenting the training (importance, goals and content) and work methodology – about 20 min.

1.1. The workshop facilitator introduces himself/herself, welcomes the participants, and thanks them for having responded to the invitation to attend the training for parents.

Then, he/she briefly explains:

1. **The importance** of the training bearing in mind the context in which today's children, the so-called 'digital natives', are brought up; Theoretical Framework, Section 1 (Children in a Digital Age, page 11).
2. **The objective** of the training: improvement of parents' knowledge and awareness of opportunities and risks on the Internet, as well as their empowerment for active involvement in the education of children on digital safety.
3. **The content** of the training and the workshop topics: Parenthood in the digital age (the first workshop); Screen time (the second workshop); The risks in a digital world (the third workshop); Family rules for safe and smart use of the Internet (the fourth workshop). These four workshops are implemented only with parents, while the workshop Creative use of smartphones and tablets (the fifth workshop) is realized with both parents and children, and its description is in the section Workshops to be implemented with children.

The facilitator encourages the participants to ask questions about the training, the way it is implemented, and the like, and points out that through numerous project resources (online course, professional texts, quizzes, cartoons, glossary), they can be even more empowered in relation to the topic: **https://digitalni-vodic.ucpd.rs/**

1.2. The facilitator informs participants that during the training **they are expected** to: participate in all five workshops; work in groups, pairs and individually; be active, participate in the exchange of opinions and experiences, suggest ideas, think about their actions,

exercise and apply acquired knowledge in everyday life in interaction with children and report on their experiences.

1.3. The facilitator gives blank **cards** to the participants and asks them to write their names on them (these name cards should be visible to other participants for easier communication).

This is followed by **introductions**, where each participant, apart from telling his/her name, should also describe **his/her attitude towards the use of technology in the age of his child**, opting for one number on a scale from 1 to 5, where **1** means **'strong opponent'** and **5 'great supporter'**, and write this number on the back of their name card. At the end of the training, or in the last workshop, the facilitator will ask the participants to express their views on the use of technology again and compare them with the attitude they had at the beginning of the training.

1.4. The facilitator suggests some of the **working rules** that will make time during the workshops useful and pleasant for all participants. Each rule explains what is expected to happen in the workshops, how participants (including the facilitator) treat each other, and each rule is formulated affirmatively (do not talk about what shouldn't be done or how participants are not supposed to behave during the workshops).

Examples of the rules:

> *We listen to the person speaking. We respect others' opinions. We start and finish on time. We actively participate and cooperate with each other. During the workshop we put our mobile phones in silent mode.*

The facilitator **asks for the consent** of the participants for the proposed rules and offers them, if they wish, to suggest more rules, which, if the other participants agree, are added to the list of rules.

The rules should be **written on a large flipchart paper and clearly visible** during each workshop.

During the workshop's implementation, the facilitator makes sure the rules are applied. They are referred to when necessary, and the participants all agree on the consequences if violation of a rule is repeated—bearing in mind the atmosphere in the group (for example, the person who disobeys the rule has to sing a child's song, tell a joke, etc.).

The agreed rules apply to participants as well as to the workshop facilitator.

Activity 2: The role of parents in a digital age: short presentation by the facilitator, individual work on the task and discussion – 30 min.

2.1. The facilitator talks about the demanding nature of parenthood in a digital age, which induces complex feelings, requires of parents new roles and responsibilities, brings a lot of joy, but also new challenges.

Rapid technological development, the phenomenon of the Internet and its increasing availability to children (at younger ages) has brought a new area, i.e. the aspect of childhood, which parents should care about, and lead and support their children through it. The emergence of the Internet has changed our way of life and continues to change it. However, the essence of parenthood – the care for the well-being of the child – has remained the same! Digital devices and the Internet are children's present and future, and children need adults to teach them how to 'swim' in a digital environment. How do we teach children to swim? We do not throw them into water and let them cope with it, but provide them with measured support (e.g., floats, instructors, our presence) until we are fully convinced that they have mastered the skill of swimming. Even once they have learned to swim, you need to watch them for a while or at least every time they go into deeper water. We gradually make them independent...

The same applies to the Internet. Parents are expected to actively intervene in the child's use of digital technology, from his/her first steps in the digital world, until the parent estimates that the child is ready (intellectually, emotionally, socially) to use it independently (regardless of age). But what exactly does it mean?

2.2. Each participant gets a blank A4 piece of paper; the task is to list the ways in which parents should intervene in the activities of preschool/lower-primary school children during the use of digital devices/the Internet (e.g., they read a story or watch a movie together, talk to the child about what shouldn't be done online, browse the search history, limit the child's time in front of the screen).

Note for the facilitator:

Remind the workshop participants of the devices that are considered digital technology: tablet, computer, laptop, netbook, smartphone, smart TV, smart watch, devices for virtual and augmented reality, Internet things, Internet toys, gaming consoles...

2.3. Participants report on what they have written; the facilitator makes notes on the flip-chart. The participants should not repeat the answers, but state only what has not already been mentioned. The facilitator does not record the repeated answers.

After having written everything, the facilitator makes a table on the flipchart in the form of Table 1. Types of parental mediation, Theoretical Framework, Section 6 (Mediation of adults in children's use of digital devices, page 38).

The facilitator asks the participants to classify the written answers into four categories:

social and • technical mediation • enabling and • limiting the use of digital devices.

If necessary, the facilitator adds examples that the participants did not include (using the table in the Theoretical framework).

The facilitator summarizes the types of parental mediation, concludes which ones are most

used in parents' educational practice. He/she emphasizes the importance of social mediation and points out the weaknesses of setting limits, but very briefly. He/she announces that the participants will deal more with the mentioned forms of parental mediation in the workshops that follow.

Activity 3: Digital age skills: work in small groups, plenary discussion and facilitator's summary – 30 min.

3.1. The participants are divided into smaller groups (optimal number of members per group is 3–4). Each group has the task to think and write down what it **means when** it is said that someone is **digitally literate.** What **knowledge, skills and attitudes** does a digitally literate person have? Participants are encouraged to provide as many examples as possible, to express them in their own words; they are not expected to possess expert knowledge to respond to this request.

Each participant has the task to evaluate his/her current digital literacy skills on a scale of 1 to 10 and write down the score on the back of their name card (the assessment need not be commented – in the final workshop they will evaluate their digital skills again).

While the teams are working on the task, the facilitator draws a table with five columns on the flipchart, writes the names of five areas or domains of digital literacy in the header: 1. information and data; 2. communication and collaboration; 3. digital content creation; 4. security; and 5. problem solving; Figure 1. Domains and competences of digital literacy, Theoretical Framework, Section 3 (Digital literacy, page 20).

3.2. Groups, one by one, expose what they have written, and the facilitator immediately puts the answer in the table, in the appropriate column. Another possibility is that participants are asked to fill in the table with their answers. This could be used as an opportunity to point out the comprehensiveness and complexity of the term digital literacy, as it is often about technical skills.

3.3. The facilitator has a brief, informative presentation on digital literacy, defines it and lists its domains as well as competencies within each domain. Theoretical Framework, Section 3 (Digital Literacy, pp. 18-20)

3.4. The facilitator summarizes **the most important** information from today's workshop.

Adults (not only parents, but also educators and teachers) are expected to be digital mentors of children – to actively intervene in the use of digital devices – before, during and after mutual activities with the child. In order to actively mediate the child's use of digital technology, it is not necessary for parents to be experts in technology, but it is necessary to know their child and his/her needs well.

Parental mediation is needed not only in the case of the child's exposure to negative and potentially risky content and activities in the digital environment, but also when it comes to positive experiences while using digital technology.

Activity 4: Homework – 5 min.

The facilitator presents the content of the next workshop. He/she specifies its date, time and topic. Parents are given the task to record their child's activities on digital devices every day (What was the child doing, how long, at what time, where). The facilitator collects the participants' name cards and saves them for the following workshops.

Activity 5: Workshop evaluation – 5 min.

Participants use the stickers to write down their personal impression of the workshop and stick them on the door upon leaving the room (or any other convenient place designated by the workshop facilitator).

WORKSHOP 2

SCREEN TIME

OUTCOMES	After completing the workshop, the parents will: • Be familiar with the experts' recommendations regarding the optimum amount of time in front of the screen for children of an early age. • Understand what quality screen time is. • Be able to recognize excessive screen use.
DURATION	90 minutes

COURSE OF THE WORKSHOP

Activity 1: The facilitator reviews of the previous workshop, presents the contents of today's workshop – about 5 min.

1.1. The facilitator welcomes participants, distributes them their name cards (from the previous workshop). Then he/she reminds them that last time they talked about the ways in which parents/adults can mediate children's activities on digital devices, as well as about the digital literacy skills that are needed to intervene adequately and become good digital mentors to their children. Managing the time a child spends in front of the screen is one of the digital literacy skills.

The facilitator then tells participants that after today's workshop, parents will be able to manage their child's screen time, i.e. they will be informed on how much time a day, in the opinion of experts, a child can spend in front of the screen without negative effects on his/her psycho-physical development and well-being; what quality screen time is; as well as what is implied under excessive screen use.

The facilitator gives participants the opportunity to comment on the previous workshop and ask questions if anything remains unclear.

Activity 2: Optimal time in front of the screen: individual work on the task, exchange of opinions and a short presentation by the facilitator – about 20 min.

2.1. The facilitator gives each participant two stickers of different colour. He/she asks them to write on one of them how old their child was when they accessed digital devices/the Internet for the first time, and on the other one, how much time a day (on average) their child uses digital devices.

The stickers are put on the flipchart, sorted by colour. The facilitator reads the contents of the stickers and briefly sums up:

- At what age most children began to use digital devices
- The youngest and the oldest age at which they began to use them
- How many times a day most children use digital devices
- The smallest and the largest amount of time children spend in front of the screen a day.

hen he/she asks the participants to share their personal opinion with the group:

1. When is the **'right time' to start using** digital devices, and
2. **How much time a day** can a child spend in front of the screen, without harming health and general well-being?

2.2. The facilitator then presents the expert recommendations regarding the amount of time in front of the screen. Theoretical Framework, Section 7 (Challenges of Parenting in the Digital Age, page 44). Digital Guide – **https://digitalni-vodic.ucpd.rs/vreme-ispred-ekrana-da-i-kako/**

According to the guidelines of the American Academy of Pediatrics from 2016, children up to the age of 1.5–2 years should not spend time in front of the screen; children aged 2 to 5 years should not use digital devices for more than one hour a day (any type of screen, any device), a well-planned time (which implies educational and age-appropriate content and activities), with active adult mediation; for children aged 6 and over, it is necessary to create **an individual plan for the use of digital devices** (by adults in cooperation with the child), which will ensure that screen time does not replace social, cognitive and physical activities that are important for children's development (sleep, sports activities, hobbies, socializing with peers, communication with family members).

It is very important that the facilitator points out that today's science **does not have a clear answer based on valid research findings** on the issue of optimal screen time, it rather depends on the individual characteristics of a child (age, interests), the way it is used or the quality of screen time, and the context in which the child grows up (family and culture).

If, among parents, there are those who strongly oppose the use of digital technology in childhood, it is very important that the facilitator points out the **bad sides of prohibition of use**, strict control and limitation:

Children have **the right** to use digital devices and access content that is in line with their developmental and psychological needs; Theoretical Framework, section 2 (The Rights of the Child in a Digital Age, page 15);

It is very important for children to acquire the appropriate **skills** of using digital technology and the Internet, which is not possible if they do not use them;

Children will not be able to cope with **the risks** on the Internet, and they will surely come across those (at school, with friends), as digital technology has become an integral part of our everyday life;

We send children a message that the Internet is a **'dangerous place'** which they cannot cope with and thus shape their image of the world as well as their own abilities (especially if their peers use the Internet).

Activity 3: Quality screen time: individual and group work on the task, discussion and a brief presentation by the facilitator – about 25 min.

3.1. The facilitator asks the participants to write on a third colour of stickers what their child does on digital devices, or what he/she uses them for. They need to write only one activity on each sticker, specifying whether the child does it alone or with an adult or a peer. They use as many stickers as they need.

3.2. Participants are divided into smaller groups (3–5 members). They mix all the stickers, and then get the task of sorting them into two groups: quality (active) screen time and poor quality (passive) screen time.

3.3. Each group reports on the children's activities on digital devices; which activities are in one and which in the other group, explaining why it is quality or poor quality screen time.

Note for the facilitator:

Examples of the most common activities of preschool and lower-primary school children on digital devices: photographing, playing video games, watching videos, listening to music, stories or fairy tales, camera recording, chatting.

As can be concluded from the above examples, today's children use technology rather passively, as consumers of the content offered to them through digital media. Theoretical Framework, Section 7 (Challenges of Parenting in the Digital Age, page 44).

3.4. The facilitator briefly sums up what quality screen time is.

Note for the facilitator:

This presentation can precede the group task (3.2) if the workshop facilitator finds it more appropriate or if he/she estimates that the participants will have difficulty in sorting activities, or understanding what quality screen time is.

Quality, or active screen time means that: • The child uses digital devices together with parents/adults who direct his/her activities, help him/her understand what he/she does and integrate and apply it in everyday life, motivate him/her to pursue challenging activities, give feedback on the correctness of what they do • Activities are age appropriate • Adults take care of what the child does on digital devices and for what purpose: whether he/she can learn something from it, develop creativity, imagination, thinking, etc. • The child has no access to commercial content (ads) and links leading to inappropriate content • The child has no access to content that promotes aggression, violence, or any form of prejudice or discrimination.

Activity 4: Excessive use of the screen: group work on the task, a short presentation by the facilitator and discussion – about 30 min.

4.1. Each group receives a printed example (text in the box). Groups read and answer questions.

Parents of a seven-year-old boy read on the website of the American Academy of Pediatrics that for children aged 6 and over there is no recommended screen time (as in the case of younger children), but it is necessary to create an individual plan on the child's use of digital devices. The plan should be created together with the child. Since the boy owns a mobile phone and recently started to attend a programming school, he is very interested and does well in the programming language Scratch; it often happens that he spends two or three hours a day in front of the screen, sometimes even more.

- What would you answer to the parents of this seven-year-old: did they make the right decision when they enrolled their child in the programming school? Does their child spend too much time in front of the screen?
- What would you ask the parents to determine whether this is an excessive use of the screen?
- Is the use of technology meaningful in this boy's case? Explain the answer.

Groups provide their answers. The facilitator encourages exchange of opinions and discussion. While moderating discussion and summarizing the most important insights, it is important to point out the following:

First, working in Scratch programming language can be a meaningful and developmentally appropriate activity for a seven-year-old. It is a visual programming language, intended for adopting basic skills in programming. Children can create interactive games, animations, stories with it; they develop creativity, algorithmic thinking, problem solving skills and collaboration with others.

The facilitator indicates the importance of having a balance between online and offline time. Screen time, even when it is meaningful and quality, should not replace other activities that are important for a child's health and general well-being (about 10 hours a day of sleep for a child of this age, physical activity or sports, contacts with peers and family members, homework, housework, personal hygiene, meals, hobbies, free time...). Learn more about indicators of excessive screen usage: **https://digitalni-vodic.ucpd.rs/vreme-ispred-ekrana-koliko-i-kako/**

On the following link there is a useful tool, the so-called media time calculator, which can be helpful for parents (even with modest English language skills) when creating an individual plan for the child's use of digital devices:

https://www.healthychildren.org/English/media/Pages/default.aspx#calculator.

If the facilitator is unable to show the calculator (visit the specified web page), he/she can print the following QR code so that parents can access the link from their phone or tablet.

For indicators of excessive screen use, the facilitator can read the Theoretical Framework, Section 7 (Challenges of Parenting in the Digital Age, page 44).

If it is possible technically and there is time at the end of this workshop, the facilitator can show the participants a short video about how to sit properly in front of the screen (it takes about two minutes), which can be found on the following link:

https://www.youtube.com/watch?v=Whhf55No15U.

Another option is to print out the following QR code, so that parents can scan it with their mobile phone and access the page in the workshop or at home:

Activity 4: Homework – 5 min.

The facilitator announces the date, time and topic of the next workshop. He/she advises parents to discuss this topic with their family members and to create, together with their children (especially if they are 6 or older, bearing in mind experts' recommendations related to younger children), an **individual plan** for using digital devices with the screen time calculator. He/she instructs parents to visit the Digital Guide Theoretical Framework, where they can be further informed about the topic:

https://digitalni-vodic.ucpd.rs/vreme-ispred-ekrana-koliko-i-kako/

Given that the topic of the next workshop is Risks in the digital world, in which participants will learn how to apply some of the technical protection measures in the digital environment, the facilitator can ask them now if they have any experience or have used technical protection measures for their child on the Internet. Even if they have no experience, the facilitator may

seek the help of several more digitally competent parents who are willing to engage in the next workshop and consult them about the workshop preparation.

If there are no parents interested in helping with the next workshop, the facilitator may seek the assistance of a skilled colleague from the institution, or even an older student from the school and try out (before the workshop) what will be done on it (see the third workshop: Risks in the digital world).

Activity 5: Evaluation of the workshop – 5 min.

The participants evaluate the workshop on a scale of 1 (I do not like it) to 5 (I really like it) by writing the number on the sticker and putting it on the door upon leaving the room (or any other suitable place designated by the workshop facilitator). On the same sticker, using only one word, they summarize their impression of today's workshop.

WORKSHOP 3

RISKS IN THE DIGITAL WORLD

OUTCOMES	After completing the workshop, the parents will: • Understand the potential risks that children are exposed to when using digital technology / the Internet. • Know how to protect children against risks and be able to apply some of the technical protection measures. • Know who to contact in case the child's online safety is endangered.
DURATION	120 minutes

COURSE OF THE WORKSHOP

Activity 1: The facilitator reviews the previous workshop and presents the contents of today's workshop – 10 min.

1.1. The facilitator welcomes the participants, distributes their name cards (if he/she judges it necessary, i.e. they did not remember each other's names). He/she reminds them of what they did at the previous workshop. Then, the facilitator asks parents to comment on their experiences related to the development of **an individual plan for the use of digital devices** for their child (homework from the previous workshop), whether they made it, what the child's reactions were, what challenges they had...

Activity 2: Risks in the digital world: group work, exchange of opinions and a brief presentation by the facilitator – about 30 min.

2.1. Participants are divided into small groups. All groups have the same task:

- to list all the potential risks that children are exposed to when using digital devices/the Internet, and then
- to exchange their views within the group on whether their children were exposed to any of those risks while using digital devices and during which activities.

2.2. The groups' representatives present potential risks in a plenary session; the facilitator writes notes on the flipchart. When all groups complete reporting, the facilitator complements the list of risks with the ones the participants have not indicated and draws attention to three risk groups: **content**-related risks (what children view/watch and whether they access inappropriate content); **contact** (who they communicate with, strangers and persons who misrepresent themselves); and **behaviour** (child as an actor, perpetrator or victim). Theoretical Framework, Section 5 (Risks in the Digital World, page 30)
Particular attention is paid to the risks related to sharing a child's personal data on the Internet and endangering their privacy: sharenting and Internet things/toys.

The facilitator asks the participants if they know what **sharenting** is (if they do not, add this term to the list of risks); if they do not know, the facilitator explains. Then, he/she asks them about their personal attitude and experiences in relation to sharing photos of their child online (whether they do it, how often, where they post photos, who they share them with), and what are the negative consequences of sharenting for children. After discussion, the facilitator shows parents how to share photos of children on the Internet safely (referring them to the link: **http://ucpd.rs/dokumenti/sarenting-dodatak.pdf** or distributing printed copies to them).

How to post photos of children online, yet preserving their privacy: disguised children who are already wearing some kind of mask when photos are taken; photographing children from a distance so that their faces are unrecognizable; taking photos of children from behind, showing the child in a wider spatial context; digitally processed image of a child; taking photos of some parts of a body that are necessary to tell a specific story, such as a photo of a child's hand holding a grasshopper, and the like.

The facilitator also introduces parents to Internet-related risks such as the **Internet of Things** and **Internet of Toys**, as items and toys connected to the Internet are becoming available to children. Theoretical Framework, Section 5 (Risks in the digital world, page 30)

Potential risks on the Internet:

- Premature, excessive use and dependence on digital devices/the Internet
- Exposure to harmful and age-inappropriate content (e.g. explicit sexual and pornographic content, vulgar language, hate speech)
- Exposure to digital violence
- Exposure to commercial content (advertisements)
- Exposure to incorrect and unreliable information
- Access to services and platforms at an age younger than prescribed (failure to comply with the minimum age limit, which is usually 13)
- Contacts with malicious people aiming to abuse a child (so-called Internet predators)
- Sharing personal information on the Internet (including sharing by parents – sharenting)
- Misuse of personal data, identity theft, phishing, online fraud
- Spending money (e.g. when playing video games)
- Viruses, spam, hacking

2.3. The facilitator reminds the participants that one of the most frequent activities of children (preschool and lower-primary school age) on digital devices is **playing video games**.

Numerous video games of various genres are available on the Internet; there are those that support learning and child development, but also those that are not suitable for children. Some video games are full of risks: exposure to inappropriate language and harmful content, contacts with unknown and malicious people, spending money, etc. Therefore, video games are classified by age categories: the PEGI system is used to rate age-appropriate content of video games in Europe.

https://digitalni-vodic.ucpd.rs/igranje-video-igara-gejming/

The facilitator distributes the printed Appendix 1 (or refers them to the Digital Guide Theoretical Framework): PEGI Classification with the description of the age labels and images that indicate the contents of video games. After reading the text individually, each group gets the **task** to:

1. Choose categories of video games (video games with the appropriate PEGI label) that are suitable for children of different ages, e.g. 4, 5, 6, 7 or 8 (the facilitator can adjust the request to the target group, depending on whether the participants are parents of preschool or school-age children), as well as to explain why other categories of video games are not suitable for children of that age;
2. Answer the following questions and explain the answer:

- Are all video games labelled PEGI 7 suitable for children aged 7?

Should parents interfere in the choice of video games even when the child is **technically prevented** from using age-inappropriate video games (for example, if they use technical protection measures)?

a) For children aged **4, 5 and 6, only PEGI 3 video games** are appropriate, while **PEGI 3 and PEGI 7** video games are suitable for children aged **7 and 8.** Video games labelled PEGI 12, 16 and 18, due to their content, are not suitable for children aged **4 to 8.**

b) The video game labelled PEGI 7 is not always appropriate for a seven-year-old child for several reasons. First, the age label indicates the **content** of the video game, but not its **difficulty**, or cognitive complexity. Thus, a PEGI 7 video game can be too difficult or easy for a child aged 7 (depending on individual cognitive capacities of the particular child). An educational or strategic video game that is too easy or too difficult for a child will not encourage the development of his/her cognitive abilities or ability to solve problems. Secondly, games labelled PEGI 7 can include sounds and scenes, as well as violence, which, although not realistic and without detailed display of violent scenes, can still scare and upset some children, and adults should be aware of that.

It is very important that parents mediate when choosing video games for their child, even when the child is restricted access to unsuitable video games. Although the game is highly suited to the child in terms of content, this does not mean that he/she cannot be exposed to some risks. A large number of games, even with the PEGI 3 rating, contain **ads and there is a possibility to spend money inside the game** (to level-up, or to get additional game features).

Activity 3: Measures of risk protection: individual and group work, discussion and brief presentation by the facilitator – about 50 min.

3.1. In the previous activity, the participants learned which video games are suitable for children of different ages. Now they will learn what parental controls are and how they can **restrict children's access to unsuitable video games** on devices with the Android operating system (mobile phone and tablet), which children of this age often use.

The facilitator reminds participants that in the first workshop, when talking about types of parental intervention (mediation), he/she mentioned technical protection measures, and now explains in detail what the parental controls and privacy settings are and what they are for. For the preparation of this activity, he/she uses digital Theoretical Framework:

https://digitalni-vodic.ucpd.rs/kako-unaprediti-digitalni-uredjaj/

Parental controls provide programs and tools that allow parents to control and monitor child activities on the Internet. Free parental controls applications, as well as those for purchase, are available online. When it comes to young children (preschoolers), technical protection measures can improve the digital device and contribute to its safer use.

Parental controls **can limit**: children's access to age-inappropriate websites, applications and video games; the amount of time the child spends using a digital device; the time interval in which a child uses a digital device; purchase and spending money inside apps.

With the help of parental controls, it is possible to **monitor the child's activities** on the Internet (the website browsing history, applications and games the child uses, time spent in front of the screen) and **locate the child in a physical space.**

Privacy settings are a technical measure of protection that allow digital users to restrict access to **personal data** (who can access these and what can be seen). You can configure the privacy settings in the **web browser**, which is installed on a digital device. It is important that the parent adjusts the privacy settings (changes the default settings) on all digital devices the child uses (smartphones, computers, tablets, game consoles, etc.).

3.2. If not self-confident or feeling insufficiently competent for the implementation of this activity, **the facilitator can realize it with the help of participants – digitally skilled parents** (who volunteered during the previous workshop to prepare and agree on the methods of work), but also the older students, if a workshop is being implemented at school, as well as **colleagues from the school** (e.g. IT teachers).

The recommendation for the facilitator is to try out everything that will be done in the workshop

before the workshop. We assume that most of the participants have a mobile phone with Internet access, but since they work in groups, one mobile device per group (mobile phone or tablet) is enough, and this should be taken into account when forming groups; as well as that in each group (if possible) there should be a participant who is more skilled with the use of digital devices or who prepared for this workshop in advance. If the training is conducted at school, this workshop can also be implemented in the computer room.

- The first task for the groups is **to find** (in the Google Play Store) **and install parental controls** on the mobile phone, in order to prevent children from accessing video games and music that is not intended for a particular age (e.g. the age of their child).
- The second task is to find the **Google Family Link** app (it can be downloaded from **Google Play Store** and **App Store**), which has two options: for parents and children/teens. Parents can install it on their own device and monitor the child's activities from it, and it can also be installed on the device that the child uses. This application provides parents with more options: to open a Google account for a child under the age of 13, add control to an existing child account, limit screen time, enable or block, etc.
- The third task is to install the **You Tube for Kids** application and demonstrate the opportunities it provides. Although it is specially designed for children, it should be remembered that even this platform could contain content that is inappropriate for children, but also that such content can be blocked or reported, and this is what participants should learn.
- Finally, the facilitator shows participants the web search engines that are exclusively designed for children (e.g. Kiddle: **https://www.kiddle.co/**, Swiggle: **https://swiggle.org.uk/** Safe Search Kids: **https://www.safesearchkids.com/**, Kids Search: **https://www.kids-search.com/**) and points out their benefits (they do not collect personal user data, do not include ads, they filter content, there is the possibility to block certain content and even words that appear in search results, etc.)

Note for the facilitator: The purpose of this activity is to show parents the good aspects of technical protection measures, as well as online content, platforms and search engines solely intended for children, to encourage them to apply them on devices that the child uses and to use them together with their children.

Do not feel unhappy or unsuccessful if you encounter resistance from parents (if they do not want to apply technical protection measures, consider them meaningless or complicated), or if you fail to do something at the first try or fail to do everything that is foreseen in this segment of the workshop.

If you spend more time than planned on one of the above tasks, pass to the next activity, but inform the participants about the remaining protection measures so that they can try them out at home and possibly seek help in the next workshop. Due to the changes that take place in the digital environment – the emergence of new applications, changes within existing ones – the possession of appropriate digital skills implies continuous and independent research: even if the participants completely master the workshop, they will have to update their knowledge once in a while.

If one of the participants has experience in applying technical protection measures or proposes

a technical measure that is more up-to-date or more appropriate, more suitable to their current needs, you do not have to stick to the proposed list.

Technical measures can be the first step in your efforts to contribute to the child's safer use of the Internet, especially in the younger age group, but not the main method of protecting the child on the Internet.

In addition to technical measures, it is also necessary to take **additional protection measures**, so-called **social mediation** (active participation in the child's activities and setting the rules). From the earliest age you should talk to the child about potential risks and the ways in which these can be prevented, teach the child to think critically and solve problems in the digital environment (especially if he/she uses the Internet independently), to behave responsibly during the use of the Internet, encourage the child to address the adult person he/she trusts if something disturbs or scares him/her on the Internet (apply social mediation). Note that it is necessary for parents to participate in the online activities of their preschool children.

When it comes to video games, risk protection measures include:

- Read the content of video games, reviews, comments and ratings from other users, parents, experts before your child starts playing.
- Try the video game together with the child, talk to the child about what he/she likes and dislikes about the particular game.
- Explain to the child why some video games are not suitable for his/her age. Children will understand if you use language they are familiar with.
- Explain to the child what personal information is (name, surname, address, photograph...) and why it is important not to share this with others, even with video game players (if a child plays a group game).
- Encourage the child to address an adult person he/she trusts if anything scares or upsets him/her when playing.
- Agree with the child about how much time a week he/she can spend playing video games, or in front of the screen.
- Define time when a child can play video games (establish rules and abide by them consistently).
- Apply parental controls and other technical protection measures, especially when it comes to younger children.

Activity 4: A child is not safe on the Internet: group work on a task, short presentation by the facilitator and discussion – about 20 min.

4.1. Another serious risk on the Internet is establishing contacts with malicious people, so-called Internet predators.

https://digitalni-vodic.ucpd.rs/internet-predatori/

When it comes to preschool children, it is recommended that they do not use the Internet independently, so the potential exposure to this type of risk is lower than in older children. However, the reality is that parents fail to notice all the child's online activities, even when it comes to younger children. As soon as parents give the child a digital device, they should, in a suitable and age-appropriate way, draw the child's attention to potential risks and what to do if they are scared or upset while online. This does not mean that you should intimidate the child in advance with potential risks, but certainly, you should explain that there are some things on the Internet that children do not like and are not intended for them.

Task for participants: formulate advice or tips for your children in case someone hurts or harasses them online (for example, through a chat service or in a group). Groups provide their answers. The facilitator encourages exchange of views and discussion.

1. Do not respond to bad messages and never send any back.
2. Stop communicating immediately with a person who insults, harasses or threatens you.
3. Make sure you share what happened with an adult person you trust (parents, educator, teacher, psychologist or tutor...).
4. Do not delete the message that has disturbed or frightened you.
5. Do not share information about yourself and your family with strangers (e.g. where you live, where your parents are, what you like to do, what school you go to…).
6. Never receive or send photos or videos to people you do not know personally.
7. Never agree to see someone you've met online.
8. Do not accept gifts from strangers.
9. 9. ...

When moderating discussion and summarizing the most important insights, it is important that the facilitator informs the participants about whom they can contact if their child is seriously threatened by someone/something online. The facilitator can refer them to the link or print Appendix 2.

Activity 5: Homework – 5 min.

The facilitator announces to the participants the date, time and topic of the next workshop. He/she advises them to try out technical protection measures at home on the devices that their children use. He/she refers parents to the Digital Guide Theoretical Framework link, where they can find further information about other technical protection measures:

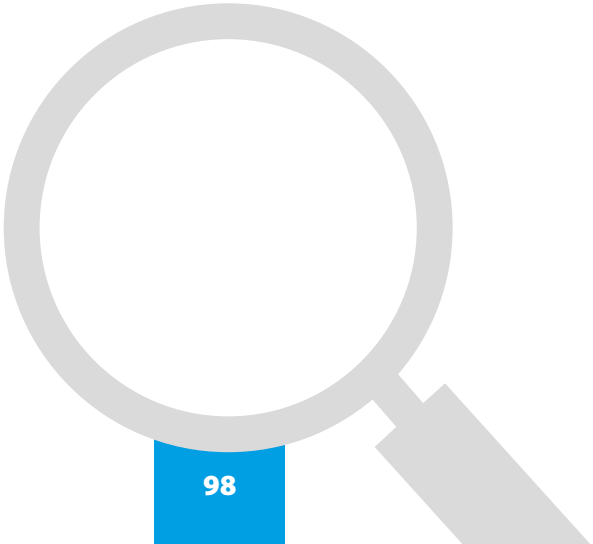
https://digitalni-vodic.ucpd.rs/kako-unaprediti-digitalni-uredjaj/

The facilitator also suggests that parents watch cartoons with their children and discuss those. The cartoons' themes include: *Personal data protection and privacy on the Internet, Protecting children from unwanted content and Internet predators:*

https://digitalni-vodic.ucpd.rs/crtani-filmovi/

Activity 6: Workshop evaluation – 5 min.

The participants evaluate the workshop on a scale ranging from 1 (I do not like it) to 5 (I really like it) by writing the number on the sticker and putting it on the door upon leaving the room (or any other suitable place designated by the workshop facilitator). On the same sticker, they summarize in one word their impression of today's workshop.



APPENDIX 1

PEGI classification

The PEGI rating system is designed to help parents select video and other content for children and thus protect them from inappropriate content. The age label signifies that the game/content is suitable for players above the specified age, so, for example, a PEGI 7 game is designed for children aged 7 and over, while PEGI 18 is suitable only for adults.

What do the specific labels mean?

LABEL	DESCRIPTION
	The content of a game with this rating is considered suitable for **all age groups**. The game should not contain any sounds or pictures that are likely to frighten young children. No bad language should be heard. A very mild form of violence in a comical context is acceptable.
	Game content with scenes or sounds that can possibly frighten younger children should fall in this category. Very mild forms of violence (implied, non-detailed, or non-realistic violence) are acceptable for a game with this rating.
	Video games that show violence of a slightly more graphic nature towards fantasy characters or non-realistic violence towards human-like characters would fall in this age category. Sexual innuendo or sexual posturing can be present, while any bad language in this category must be mild. Gambling as it is normally carried out in real life in casinos or gambling halls can also be present (e.g. card games that in real life would be played for money).
	This rating is applied once the depiction of violence (or sexual activity) reaches a stage that looks the same as would be expected in real life. The use of bad language in games can be more extreme, while games of chance and the use of tobacco, alcohol or illegal drugs can also be present.
	The adult classification is applied because the level of violence reaches a stage where it becomes a depiction of gross violence, apparently motiveless killing, or violence towards defenceless characters. The glamorization of the use of illegal drugs and explicit sexual activity should also fall into this age category.

LABEL	VIDEO GAME CONTENT DESCRIPTION
	The game contains bad language (e.g. sexual expletives or blasphemy). This descriptor can be found on games with PEGI rating 12, 16 and 18.
	The game contains depictions of ethnic, religious, nationalistic or other stereotypes likely to encourage hate and discrimination. This descriptor can be found on games with PEGI 18 rating (and is likely to infringe national criminal laws).
	The image depicts the use of illegal drugs, alcohol or tobacco. Games with this content descriptor are always PEGI 16 or PEGI 18.
	This descriptor may appear on games with a PEGI 7 if it contains sounds that may be frightening or scary to young children, or on PEGI 12 games with horrific sounds or horror effects (but without any violent content).
	The game contains elements that encourage or teach gambling. Games with this sort of content are PEGI 12, PEGI 16 or PEGI 18.
	This content descriptor can accompany a PEGI 12 rating if the game includes sexual posturing or innuendo, a PEGI 16 rating if there is erotic nudity or sexual intercourse without visible genitals or a PEGI 18 rating if there is explicit sexual activity in the game.
	The game contains elements of violence. In games rated PEGI 7 this can only be non-realistic or non-detailed violence. Games rated PEGI 12 can include violence in a fantasy environment or non-realistic violence towards human-like characters, whereas games rated PEGI 16 or 18 have increasingly more realistic-looking violence.

APPENDIX 2

COMPETENT INSTITUTIONS TO CONTACT

If you find out that your child is the victim of an Internet predator or any form of violence, contact and inform the **police** or the **prosecutor's office** (you do not need to report to both the police and the public prosecutor, because in the case of a criminal offense, the police inform the public prosecutor and vice versa) or the **National Contact Centre** (reports sent to the Contact Centre are forwarded to the relevant institutions, if the allegations from the report indicate the need for their involvement).

You should also inform the **educational institution** that the child is attending, as well as your **Internet service provider.**

Contacts of competent institutions:

- **Technology Crime Department, Ministry of Interior of the Republic of Serbia,** email address: **vtk@mup.gov.rs** and **prijipedofiliju@mup.gov.rs ,** telephone (headquarters): **+ 381 11 306 2000**
- **Municipal public prosecutor's office,** the report is filed in the area of the public prosecutor's office where the violence occurred; the list of the addresses of the municipal public prosecutor's offices is on the website **Free legal aid.**
- **National Contact Centre for Child Safety on the Internet: http://www.pametnoibezbedno.gov.rs** or telephone: 19833

WORKSHOP 4

FAMILY RULES FOR SAFE AND SMART USE OF THE INTERNET

OUTCOMES	After completing the workshop, the parents will: • Be able to actively intervene in the child's use of digital devices/the Internet. • Be able to formulate family rules for the safe and smart use of the Internet together with the child. • Be able to evaluate personal benefits and digital skills that should be improved to make the Internet a safer place for their child.
DURATION	90 minutes

COURSE OF THE WORKSHOP

Activity 1: The facilitator reviews the previous workshop, presents the contents of today's workshop – 5 min.

1.1. The facilitator welcomes the participants. He/she asks them if they have applied the technical protection measures discussed in the previous workshop and what their experience is. Did they learn or discover something new they would like to share with the group; did they encounter any difficulties they succeeded or failed to overcome?

Activity 2: Family rules for safe and smart use of the Internet: group work on a task and discussion – about 30 min.

2.1. The facilitator tells participants that they will integrate and apply the knowledge they gained at previous workshops at today's (final) one. In particular, they will work on the everyday problems or challenges that today's parents are facing, all related to children's use of digital technology.

The facilitator can suggest to the participants that they present real-life problems (related to children's use of digital devices) which they or someone from their immediate environment face, or any situations they are not sure how to cope with, and to work on those. Another possibility is to print out and distribute the problem situations to each group (the first situation is suitable for parents of school-aged children, and the second for parents of preschoolers).

Example of a problem situation for parents of school children:

Dušan is in the second grade of primary school. He showed interest in digital devices at a very early age and he learned to use them easily. While he was younger, his parents successfully managed his time in front of the screen, but since he started to go to school and began playing online video games, Dušan has spent more time in front of the screen. Lately, he chooses to play video games rather than to go out with his peers; he goes to bed late, and he has become less interested in school activities. His parents have a huge dilemma... They do not want to punish him, believing that in his case it could be counterproductive, but, as they say, "He has no measure – he doesn't play at all, or plays for hours."

An example of a problem situation for parents of preschool children:

Mina is 4 years old. She already has her own tablet, uses her parents' mobile phones on a daily basis, and her older sister occasionally allows her to play games on her computer. Mina often bothers her sister while she is doing her homework (she wants to see what her sister is doing, takes her books, wants to draw, colour, etc.), and parents solve this by giving her a mobile device. In fact, whenever something has to be done or they need to calm her down (when driving, at the doctor's, when at friends' place), they give her a phone or tablet, as this has proven to be very effective. Mina goes to sleep in the evening and gets up in the morning only after she watches her favourite cartoon. Her parents say they had not been aware of their behaviour and that they found themselves in a hopeless situation 'overnight' because they realized Mina was using digital devices too much for her age.

Task for the participants: in groups, **formulate family rules** that will help parents establish effective boundaries (important in all aspects of life, especially when it comes to the child's use of digital devices) and contribute to more healthy use of digital devices among all family members, but primarily by children.

When formulating the rules, the participants are guided by the following **questions**:

1. Where (in which places) should children not be allowed to use digital devices?
2. When (at what time) should children be allowed to use digital devices?
3. In which situations should children not be allowed to use digital devices?
4. In what ways can parents balance the time spent on digital devices/the Internet and the time without them? What activities (without using digital devices) are useful and incentive for the child of a particular age?
5. Which activities should children do with digital devices?
6. What does it mean to be polite and decent when using digital devices?
7. What does it mean to use digital devices safely?

2.2. When they answer the questions, groups share their views in plenary. First, all groups respond to the first question, and then continue to the last one. When moderating the discussion, the facilitator reminds the participants of the contents of the previous workshops and relies on family rules (Appendix 3: *Family Rules*). At the end of this activity, a printed copy of the Appendix is distributed to the participants.

Activity 3: Parenting styles: short presentation by the facilitator – about 10 min.

3.1. The facilitator emphasizes that the formulation of family rules (which apply equally to all family members), and especially their consistent implementation, is not as simple or easy as it might seem, and that it is one of the main challenges of parenthood.

According to experts, there are several parental styles:

Authoritative – an ideal parental style, a great balance between setting boundaries and leaving the child freedom and space for personal development.

Authoritarian – emphasis is on rules, strict supervision and control, punishment, without providing enough warmth and support for the child.

Permissive – the focus is on support and warmth, lack of control and boundaries.

Uninvolved (indifferent) – poor control with emotional coldness and lack of interest in the child's activities.

3.2. Parents have a task to think at home which style of parenting (of the four mentioned) is closest to their style and what changes they should make in their relationship with their child when it comes to the use of digital technology. This can be helped by Appendix 4: *Parenting Styles*, which the facilitator prints and distributes at the end of the workshop.

Activity 4: Ten tips for parents: group work, exchange of opinions – about 20 min.

4.1. Each group receives Appendix 5: *Ten tips for parents on the use of digital technology*, printed on A4 paper. Groups have the task to read the tips carefully and to arrange them in order of importance for the safe and smart use of technology (to write number 1 on the line in front of the tip they consider the most important, and so on to number 10, which they write in front of the tip that is, in their opinion, the least important). They first exchange opinions within small groups. Each group should agree on at least three tips from the top (the most important) and three from the bottom of the list (the least important).

4.2. The facilitator summarizes what is, in the opinion of the participants, the most important and what they gave priority to: whether it is the protection of the child in terms of careful use, i.e. limiting screen time and emphasizing the importance of activities done without the use of technology or the constructive use of digital technology with emphasis on the quality of the screen time and mutual use of devices... It is expected that participants, based on everything

[1] Downloaded and modified:
https://www.naeyc.org/our-work/families/technology-tips-for-preschool-parents

they did in the workshops, realize the importance of constructive use of digital devices/the Internet with the active mediation of adults.

The facilitator concludes this activity by informing participants that actually **all the tips are important** and that above all, parents should take care of the **quality** of the time the child spends both in front of the screen and on other activities that do not require its use.

Activity 5: Homework – 5 min.

Watch cartoons with children and discuss them. The cartoons: *Nice online behaviour, and Parent and child cooperation when using the Internet*:

https://digitalni-vodic.ucpd.rs/crtani-filmovi/

Activity 6: Final evaluation of the whole training – 10 min.

The facilitator writes the following on the flipchart:

- 3 new facts I learned in the workshops
- 2 interesting ideas
- 1 activity I will use to make the digital environment meaningful and safer for my child.

Participants write answers (anonymously) on a sheet of A4 paper and put it in the place designated by the facilitator (e.g. box, end of a table, a particular chair).

The facilitator then asks the participants to assess their digital skills on a scale of 1 to 10, as well as to express their attitude towards the use of technology in relation to the age of their child, on a scale of 1 to 5, where 1 means 'strong opponent' and 5: 'great supporter'. He/she distributes their name cards to them to compare responses they gave at the beginning with the ones they provided at the end of the training.

At the end, parents greet each other by saying what each of them has taken from the workshops. This could be: information, new insight, feeling, event, new dilemma or worry. The facilitator takes part in the exchange.

Activity 7: Awarding certificates – 10 min.

The facilitator awards certificates of completed training to the participants and says goodbye to them. He/she suggests that, if they are interested, they can create a group or a mailing list through which they could exchange future information, resources and experiences related to the use of digital technology with children. He/she also informs and invites them to participate in the workshop on creative use of mobile phones and tablets, which will be implemented with children and parents together (provided that this workshop has not already been held, which depends on the dynamics of workshops with children and parents).

APPENDIX 3

FAMILY RULES

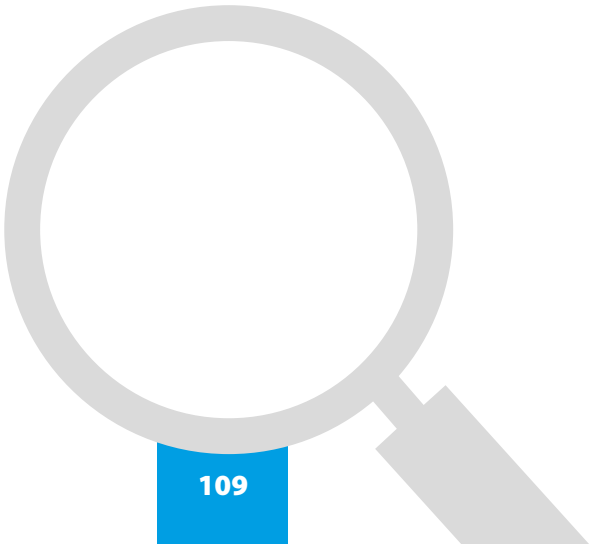
This checklist serves to help you think and agree with family members on how and when to use digital devices/the Internet in your family. It will help you set clear boundaries, talk about using digital technology, define and agree upon the rules with children and other people involved in using digital devices.

THIS IS WHERE WE DON'T USE DIGITAL DEVICES Set boundaries and show clear expectations	**2–5 years old**	**6–12 years old**
Bedroom	✓	✓
Kitchen or dining room	✓	✓
A place where digital devices are left overnight	✓	✓
SITUATIONS IN WHICH WE DON'T USE DIGITAL DEVICES Set boundaries and show clear expectations		
When travelling by car, unless it is a very long trip	✓	✓
During family gatherings and other situations where family members are together, e.g. various celebrations, on the way to kindergarten or school	✓	✓
During meals	✓	✓
One hour before bedtime	✓	✓
When a child is in a stroller or a baby walker	✓	
When crossing the street		✓
When doing homework or another school task		✓
At school (both children and adults)		✓

ENTERTAINMENT AND TIME SPENT TOGETHER Set boundaries and show clear expectations	2–5 years old	6–12 years old
DO NOT play video games if this is contrary to family rules, either at home or at someone else's place.	✓	✓
DO NOT download apps, movies, games without permission of your parents, or before asking whether this is appropriate for your age.	✓	✓
DO NOT visit websites without the prior approval of adults.	✓	✓
Use apps or games in which you can create something.	✓	
Avoid watching movies with rapidly changing images or applications with lots of bells and whistles.	✓	
Use video chat with relatives and friends.	✓	✓
Use learning apps.		✓
Choose applications that are creative, educational, promote health and care for others (advise the child about the categories he/she can choose the applications from).		✓
Watch age-appropriate shows which can teach you something.		✓
Play games, watch shows and other content together with adults and talk about them.		✓
THE ONLINE–OFFLINE BALANCE **If a child is younger, try to reduce the time spent online so that you can:**		
Look for books, go to the library.	✓	
Play outside.	✓	
Play disguise and spy games.	✓	
Play with peers.	✓	
Play with blocks and puzzles.	✓	
Spend time together.	✓	
Something else that the child finds fun and interesting.	✓	

THE ONLINE–OFFLINE BALANCE If a child is older, try to reduce the time spent online so that a child can be occupied with:	2–5 years old	6–12 years old
Reading.		✓
Socializing with friends.		✓
Hobbies.		✓
Playing outside.		✓
Playing various board games with friends or with you (e.g. Ludo, Monopoly).		✓
Creativity – making objects of the child's choice and interest.		✓
Playing team sports or joining a folk dance group.		✓
Something else, depending on the child's interests.		✓
DECENT BEHAVIOUR Set boundaries and show clear expectations		
While talking to someone or during a meal, we put off the smartphone. We don't look at the phone, nor send messages	✓	✓
If we need to answer the phone, we say "Excuse me" to the person/people we are with before we use the phone.	✓	✓
We don't put our phones on the table during a meal	✓	✓
INTERNET CITIZENS Teach the child to protect self and others from rude and violent behaviour on the Internet		
Always tell parents or some other adult of trust whenever you receive messages or photos that make you feel uneasy.	✓	✓
Never forward someone's message or photo without the consent of that person.		✓
When online, behave decently and don't hurt anyone intentionally.		✓
Tell parents or some other adult if you or some of your friends receive messages or photos over the Internet sent with intention to maltreat, humiliate, threaten, or otherwise behave in a bad manner.		✓

SAFE BEHAVIOUR Set boundaries and show clear expectations	2–5 years old	6–12 years old
DO NOT share personal information over the Internet.	✓	✓
DO NOT share your photos online.	✓	✓
DO NOT accept friendship requests, don't chat or play online games without your parents' permission.	✓	✓
Together with the child, review the privacy settings on all sites the child uses.	✓	✓
Do not use the phone in traffic; teach the child to be careful when crossing the street and not to use the phone then.		✓



APPENDIX 4

PARENTING STYLES

AUTHORITATIVE PARENTS:

- enable their child to become digitally resilient or resistant (capable of dealing with risks in the digital world)
- support the child by letting him/her know that they are there for him/her, they help the child cope with problems that he/she might face in the digital world
- are ready to listen to the child's views as well as his/her feelings, desires, needs...
- provide the child with a sense of security that allows him/her to overcome the risks in the digital world
- give the child freedom in the digital world by taking appropriate protection measures

AUTHORITARIAN PARENTS SHOULD:

- spend more time listening to the child
- give confirmation of what the child is doing, accept the child, thus establishing the relationship of closeness and mutual trust that is necessary for obeying the rules
- allow the child to make decisions independently within the boundaries set by the parents

PERMISSIVE PARENTS SHOULD:

- practise setting boundaries, applying and obeying rules
- talk openly to their child about their expectations regarding behaviour when using digital devices/the Internet and the purpose of the rules
- not be worried that children would not like them because they set rules, or that children would not like that (children do need rules); accept parental responsibility for ensuring a safe and child-friendly digital environment

UNINVOLVED (INDIFFERENT) PARENTS SHOULD:

- find time for their child and his/her life on the Internet
- actively engage in the child's online activities
- talk to the child regularly
- seek assistance from an expert if they have difficulties in their parental duty

APPENDIX 5

TEN TIPS FOR PARENTS RELATED TO THE USE OF DIGITAL TECHNOLOGY

USE TECHNOLOGY FOR COMMUNICATION

1

Connect and talk to your relatives via video chat. If you are away on a trip, read the bedtime story to your child on your phone or tablet. Together with the child, send emails to your relatives and friends you rarely see (e.g. those who live abroad).

USE TECHNOLOGY AS A TOOL

2

Record interesting situations or important events with your smartphone or tablet and make a slide show with the child using a digital tool. Watch together what the child is interested in (for example, a short video about the eruption of a volcano or instructions on how to make something). Use a calculator to sum how much money you need to buy several toys. Use a magnifying application (magnifier) to examine nature. Listen to music for kids on your smartphone. Use an online dictionary to find the meaning of an unknown word or a foreign language word.

BE INVOLVED...

3

Resist the temptation to routinely use technology as a 'babysitter'. Instead, use it as a way to connect with your child.

Visit websites and web search engines designed for children, digital libraries... Read or listen to a digital book together; talk to the child about what you read/listened to; ask the child to compare characters from a story to people in your life; think of different story endings... Play video games together, ask your child what his/her favourite game is and why. Watch science videos together. Make an experiment following instructions from the Internet.

MAKE SURE YOUR CHILD IS GETTING HANDS-ON PLAY EXPERIENCE EVERY DAY

Before you buy a tablet or other digital device for a child, make sure that he/she enjoys the games that do not include digital devices: building blocks or other constructive games, creating art, reading picture books and books, role-play games and board games. Do not forget that learning through play with peers (in the park, playground, playroom, etc.) is one of the most important drivers of intellectual, emotional, social and physical development.

4

SET THE BOUNDARIES AND STICK TO THEM

As previous generations were limited in watching television, today's parents set boundaries on the amount of a child's screen time (including TV, computer, tablet or mobile phone screens), content, ways and context in which they use digital devices. How much time a day? When? Is it when you need some time to focus, e.g. to pay bills? Or when a child is occupied with some creative activity? Establish your family rules on using technology and stick to them.

5

BE A CRITIC FOR YOUR CHILD'S SAKE

Pay attention to the digital content ratings (e.g. PEGI video game labels), but remember that the people who set ratings do not have any insight into the specific needs and interests of your child! If you decide to spend time in front of the screen, preview what the child views and watch together to help your child understand what he/she sees. Consider the value of the apps you choose: are they interactive and do they encourage creativity, innovation and problem solving? Use apps together so you can make a good decision. Make intentional choices.

6

DON'T LET TECHNOLOGY GET IN THE WAY

Family meals are a great time for conversation, catching up on the day and developing relationships. Car rides are a great time for talking, singing and playing games, to the extent that the driver is not disturbed. Cooking together not only supports relationships but also engages your child in using maths and actively developing linguistic skills. Think carefully and choose: technology or precious time when the family is together?

7

BE A MODEL FOR HEALTHY BEHAVIOUR

Do you make long phone calls or watch TV or films for hours? Is the TV turned on in the background, even when no one is watching? Do you have your mobile phone on the dinner table? Do you play online games until midnight?

Think about what kind of model you are for your child when it comes to using technology. Children learn much better by observing adult behaviour than when you teach them (tell them what to do).

8

IT'S OK TO SAY NO

Judge what is best for your family and remember: technology companies are targeting you as a consumer, so be smart. Be intentional about your decision whether or how to add technology to your child's day.

9

BE SMART, BE SAFE

Pay attention to the privacy settings on the digital devices your child uses. Observe the rules regarding the minimum age limit for using and posting photographs of children publicly (sharenting). Share with your friends and family your rules on posting children's information on social media. Make sure that the kindergarten or school asks for your permission before posting photos of your child on social networks or websites.

10

WORKSHOPS TO BE IMPLEMENTED WITH CHILDREN AGED 4–6

WORKSHOPS TO BE IMPLEMENTED WITH CHILDREN AGED 4–6

The workshop methodology is based on the fact that children learn during mutual activities and through interactions established between adults and children, as well as the activities performed and interactions established among children themselves.

Learning about online safety of children aged 4–6 connects the children's image of the world, their knowledge about the Internet and the way it functions, with activities during which children think, solve problems, make decisions, explain… The workshops are planned so that they include family members and they aim to be fun.

The programme consists of seven workshops for children aged 4–6.

Table: Workshop topics

Workshop number	WORKSHOP TITLE
1.	Means of communication
2.	What do we know about the Internet?
3.	The time children spend using digital devices
4.	Unwanted content
5.	Unknown people on the Internet
6.	Creative use of tablets/smartphones
7.	The final workshop

Table: Equipment and material for the workshops

Equipment and material needed for the whole series of workshops	• Flip chart board (FC) or a space on the wall where the flip chart block sheets of paper can be stuck • 10 sheets of flip chart block paper, 1 piece of thick paper • 10 sheets of A4 paper • 1 black and 1 red marker for workshop facilitators • 1 Scotch tape	
Duration	Each workshop lasts for 60 minutes	
Workshop participants	Preschool children aged 4–6 and their parents	
WORKSHOP	**OUTCOMES**	**MATERIAL**
1. **MEANS OF COMMUNICATION**	Children understand that the Internet is a network of mutually connected devices made by people in order to communicate, exchange messages, work together, learn, explore, have fun and socialize.	A jigsaw puzzle for each group (drawings on A4 paper: book, newspaper, letter, telephone, laptop, tablet, smartphone)
2. **WHAT DO WE KNOW ABOUT THE INTERNET?**	Children know that the Internet is a network made by connecting computers and other devices. They are encouraged to explore and learn about it.	A nice toy animal or a toy of some other creature, an A4 notebook without lines, a box or a paper bag, notes with the names of children from the group, thick paper
3. **THE TIME CHILDREN SPEND USING DIGITAL DEVICES**	Children understand the side effects of excessive use of digital devices. They play games in which they do not use digital devices and the Internet.	Drawing tools

WORKSHOP	OUTCOMES	MATERIAL
4. UNWANTED CONTENT	Children know that they should tell adults (from their families or kindergartens) if any inappropriate content appears during the use of a digital device.	
5. UNKNOWN PEOPLE ON THE INTERNET	Children know that the Internet is used by many people and some of them can be malicious. They know and apply the important rules of behaviour related to communication with unknown people on the Internet.	
6. CREATIVE USE OF SMARTPHONES AND TABLETS	Children and parents have exchanged experiences and tried a few applications which they will use in mutual creative activities.	Smartphones and tablets with Internet access, Viber installed and some free memory space on the phones (which parents bring), pieces of paper, felt-tip pens, wooden crayons and crayons, mutual board, paper stickers
7. FINAL WORKSHOP	Children know and apply the basic rules of safe online behaviour. Children get an insight into 'KWH' table – questions about the Internet to which they got or did not get answers.	

WORKSHOP 1

MEANS OF COMMUNICATION

OUTCOME	Children understand that the Internet is a network of mutually connected devices made by people in order to communicate, exchange messages, work together, learn, explore, have fun and socialize.
DURATION	Up to 60 minutes or as long as the children are still interested in it

THE COURSE OF THE WORKSHOP

Activity 1: Introduction – up to 5 min.

The facilitator informs the children that they are going to start learning about the Internet. They will find out how to use a smartphone, a tablet or a computer in a safe way. They will participate in several different workshops. In the first one, they will explore the ways people send messages to each other.

Activity 2: Conversation with children – up to 5 min.

The facilitator asks the following questions, and several children answer them:

- Have you heard about the Internet?
- What is it used for?
- Have you ever used a tablet, a smartphone or some other device that can be connected to the Internet?
- How?

Activity 3: A jigsaw puzzle – 20 min.

The facilitator prepares as many jigsaw puzzles as there are groups of children. Use A4 sheets of paper to print drawings/pictures of a book, newspaper, letter, telephone, laptop, tablet, smartphone.

Cut each drawing/picture into four pieces to get a jigsaw puzzle.

The drawings can be downloaded from one of the websites offering free photos and drawings, e.g. https://pixabay.com/en/. The facilitator can also draw them on his own or with the help of children.

Dividing into groups – Each child gets a cut piece of drawing (a piece of jigsaw). They look for other children with the parts of the same drawing and try to make the whole. This is how the groups are formed.

Group work – Each group names the object they have put together.

Conversation with children

- What are these objects used for?
- Why do people read newspapers and books?
- Have you ever seen anyone receiving a letter?
- Have you ever seen anyone talking or exchanging messages using such an object or a device?
- Has any one of you ever used such a device?

Children give their opinions and talk about experiences they had. The facilitator listens to them.

Facilitator's brief presentation:

These are objects/devices that people use for communication, when they want to tell something to each other. We like to talk to... (ask children who they like to talk to). We want to ask other people if we don't know something or to tell them what we have found out, come up with, made.

When people who we like to talk to are not with us, we write down our thoughts and ideas using letters and other symbols. We can write letters to them, write a book, or draw something on a piece of paper or in a notebook.

To make the exchange faster, people invented a printing press. Then, a telephone, a smartphone and a computer were made. They found the ways to take photos and make films and to send pictures, photos and drawings to other people.

People created the Internet, the network that enables us to have conversation with other people or send messages and photos. We can have fun, play and learn online. We will talk more about this in the next workshop.

Activity 4: What should we do to send a message?

The activity is done as long as children are interested in it or as long as there is time for it.

Facilitator's question:

What should be done to make your device receive and send messages? You can tell us, show or sing.

There are no right or wrong answers. Any idea, any answer is welcome.

Activity 5: Evaluation

Children stand up. The facilitator asks them to crouch and stand up twice if they had fun during the workshop.

WORKSHOP 2

WHAT DO WE KNOW ABOUT THE INTERNET?

OUTCOME	Children know that the Internet is a network made by connecting computers and other devices. They are encouraged to explore and learn about it.
DURATION	60 minutes

THE COURSE OF THE WORKSHOP

In this workshop, two cooperative learning techniques are applied: 'Travelling notebook', an outline of all succeeding workshops and the table 'We know – want to find out – have learned' (KWH table), which is the main activity of this workshop.

There are descriptions of these techniques in Appendix 6: The techniques applied in the workshops for children.

To prepare this workshop, the facilitator needs to: a) write the instruction for parents related to the travelling notebook activity and stick it to the inner side of the notebook cover, and b) prepare the KWH table (see the description below).

Preparatory activity with children – introduction of 'the unusual guest' and travelling notebook, a day before implementing the workshop

- Show the children a toy – a nice animal or some other character (see Appendix 6: The techniques applied in the workshops for children)
- Tell a short story about the toy: it has a family – mum, dad, older sister and a brother. It is very curious, interested in everything; it likes to play on the tablet and cannot wait to get its smartphone. It likes to spend time with its friends a lot, as well as to visit them.
- The children name the toy; they are trying to agree about the name. Otherwise, they have to vote.
- Tell the children that, starting from the next day, [the toy's name] will 'visit' one of them every day. The child that [the toy's name] visits gets a notebook in which he/she draws or writes about what happened to the toy at his/her place. Together with a family member, a child should draw or write in the notebook about how the toy felt during the visit. The next day, the child will show the drawing or read from the notebook, with the help of the facilitator, about the adventures of [the toy's name]; what it did, whether it had fun and what it learned during the visit. That can be something related to the use of digital devices.
- Ask the children whether they like the idea of the toy and the travelling notebook staying with someone else every day. Check if they understood what they should do when they are 'hosts'.

- The child whose name is taken out from the small box/paper bag will get [the toy's name] and the notebook and every day another child will be chosen to host [the toy's name]. Children propose the place where [the toy's name] and the notebook will be until the 'host' is chosen. It has to be visible. Establish the rule that the toy and the notebook are left there every time they arrive, and taken when going home.

Activity 1: Facilitator's presentation – 5 min.

Our guest [the toy's name] knows that last time we talked about how people send messages to each other. It has heard that we also mentioned the Internet and it wants to learn together with us about the ways it is used.

The Internet is a kind of network. People found the way to connect computers, tablets, smartphones and other devices to send messages to each other. We can have Internet access at home, but also in the kindergarten or at school if we have a computer, a tablet or a smartphone that can be connected to the Internet.

With the help of the Internet, people can talk to each other wherever they are, they can send photos, read books and news, watch films, play, find out, learn, cooperate, work together. For example, they can create a mutual drawing or a story even though they are in different cities and countries, or see someone they are talking to, although that person is far away.

Activity 2: Discussion – 10 min.

The facilitator asks the children:

- Which devices can we use to connect to the Internet?
- Have you got any of them?
- Has anyone of you connected to the Internet? How did you do that?
- How did you know you were connected to the Internet?
- What did you do online?

Observe the children and, if needed, do some movement activity or a warm-up game.

Activity 3: Creating the KWH table – 30 min.

Prepare a board with the title 'THE INTERNET' and the drawing of the networked planet Earth, and below the title draw a table with four columns; in the column headers, write the following: a) What do we know about the Internet? b) What would we like to find out? c) How will we do that? d) We have learned about the Internet

Show the table to the children and explain them that it will help us learn together about the Internet. Their answers will be written in these columns.

Ask the children and write down their answers in the appropriate columns of the KWH table, whatever they say:

- What do we know about the Internet?
- What would we like to find out about it?
- How will we find out about it? (Who can we ask? Where should we look for the answers to our questions?)

Tell the children that you will copy their answers in the travelling notebook and that, once they have the notebook, they can look for the answer to some question together with their parents or other family members, if they want to. Also, if they remember anything else they are interested in, they can write that down in the travelling notebook. Point out that you all learn and look for the answers together. Explain that they will also fill in the column *We have learned about the Internet* once they complete all the workshops.

The board with the KWH table is in the classroom all the time during the workshops.

If some new questions come up during the workshops, write them on the board and in the notebook and ask the children where they can look for the answers.

The facilitator copies all the questions on the first page of the travelling notebook. Make sure to write the date.

Activity 4: Selection of the 'host' – the child who will keep the travelling notebook and the toy – up to 5 min.

Put the notes with the names of all children from the group in a small box or a paper bag that you prepared. Take out one name. That child is the 'host' and the next day he/she will show a drawing and tell about [the toy's name]'s experience to the other children.

The child is selected in this way only the first time; later, he/she is chosen at the end of every day, regardless of whether there is a workshop on that day or not. It would be a good idea to give the notebook and the toy to one of the children whose parents applied to be among the first 'hosts'.

Activity 5: Evaluation – up to 5 min.

One after another, the children finish the sentence: *At today's workshop, I really liked…*

WORKSHOP 3

THE TIME CHILDREN SPEND USING DIGITAL DEVICES

OUTCOME	Children understand the side effects of excessive use of digital devices. They play games in which they do not use digital devices and the Internet.
DURATION	60 minutes

THE COURSE OF THE WORKSHOP

In this workshop, the technique 'Reading with anticipating' is applied. First, you read a small part of a story, and after that, you ask the children the question: "What do you think happened then?" It is enough that two or three children give their opinion. Encourage different assumptions by asking additional questions, e.g. "Has anyone else got any idea? Is there a different opinion?" There are no right or wrong answers. This technique enables keeping auditory attention, stimulates active participation and following the course of the story, encourages creativity.

Activity 1: Reading a story with anticipating – up to 30 min.

- The facilitator tells children that he/she will read them the story from the life of [the toy's name]. He/she reads expressively and applies the technique 'reading with anticipating'.

Once upon a time, [the toy's name] got its first tablet. It liked very much what it could do on it: listen to music, watch cartoons on YouTube, play different games, draw and colour, view photos of animals and distant planets, watch how to make a flower and a paper plane, how to draw a cat... it could even, with its mum's help, hear and see its grandma who lived far away.

The facilitator asks the question: *What do you think happened then?*

If necessary, ask the children: Are there any more ideas? Has anyone got a different opinion? After you hear two or three children, continue reading the story. The instruction is always the same – every time you ask children these questions.

- The facilitator continues reading:

[The toy's name] liked the tablet so much, and didn't notice that it was using it more and more. It was spending less time playing with its friends outside. [The toy's name] had a headache

every day. It was feeling sleepy, but didn't want to go to bed because there was a game to be played. It almost stopped talking with its mum and dad. And that was not all: [the toy's name] didn't even notice that it started to get angry often and constantly argued with everyone. It was particularly angry when it had to leave the tablet to eat and get ready for bed. [The toy's name] was very nervous!

The facilitator asks the question: *What do you think happened then?*

- The facilitator continues reading:

One day, [the toy's name]'s parents had a long conversation. They were very worried. They wanted [the toy's name] to feel well, to do everything children do: play outside, run, explore, talk to other children, laugh, talk to its family members, be in a good mood, have no headache, eat and get enough sleep. They decided to change something.

The facilitator asks the question: *What do you think happened then?*

- The facilitator continues reading:

Mum and dad asked [the toy's name] and other family members to agree together about the rules of how much and when the TV, the mobile phone, the laptop and the desktop computer are used.

The facilitator asks the question: *What do you think happened then?*

- The facilitator is reading:

Together, they agreed:

- To talk about what happened during the day at breakfast time, lunch time and dinner time. Nobody will watch TV, use the tablet or the smartphone during meals;
- To ask their mum and dad to read them nice stories and sometimes to play a game, watch a cartoon, or listen to music before going to bed. They won't play any scary games, nor watch any frightening films;
- To play with their friends outside every day;
- Not to spend too much time using the tablet, computer, smartphone and TV;
- These rules are to be obeyed at home and outside;
- The rules apply to everyone.

The facilitator asks the question: *What do you think happened then?*

- The facilitator continues reading:

[The toy's name] didn't have headaches anymore, it was rested, laughed and played with its friends, it wasn't nervous nor angry. It had time to look for interesting picture books and books for children with its mum and dad, and they even went to the library! It played in the park, in the children's playground, in the yard with its friends. They played hide-and-seek, games with the ball and together they made up new games. It even played Ludo, with Lego blocks and solved puzzles. It spent more time with its friends and played more with family members.

Activity 2: Discussion – up to 15 min.

Ask the children:

- What did you like about the story?
- What do you think: why did the toy have headaches, why was it angry and nervous?
- Which rules did you remember?
- Which one did you like the best?

Activity 3: Drawing and presenting the rules

(Depending on the time left or the children's interest)

- Suggest that everyone draws the rule they liked best
- Present all children's drawings, both completed and uncompleted ones. Put a happy face next to the drawings which show what should be done, and a sad face next to those which show what shouldn't be done.

Activity 4: Evaluation – up to 5 min.

The children tell which important things they have learned today.

WORKSHOP 4

UNWANTED CONTENT

OUTCOME	Children know that they should tell the adults (from their families or kindergartens) if any inappropriate content appears during the use of a digital device.
DURATION	60 minutes

THE COURSE OF THE WORKSHOP

Activity 1: The introductory story, learning about the problem – up to 10 min

- The facilitator starts the workshop with the story:

Our friend [the toy's name] has some problems and it doesn't know how to solve them.

The first problem: when it plays a game online or watches cartoons on YouTube, advertisements and messages show up. Some of them are on the side, and some cover the whole screen. Some show pictures that are inappropriate for children.

- The facilitator asks the children if anything similar has happened to them. After a few of them answer, he/she continues with the story.

The second problem: [The toy's name] watched its older brother playing a very scary game. Now, it has bad dreams: some monsters 'jump out' of the game. Its brother installed the game on the tablet and he constantly calls it to play together.

- The facilitator asks the children if anything similar has happened to them. After a few answers, he/she continues with the story.

[The toy's name] doesn't know what to do. We should think about the ways we could help it.

Activity 2: Discussion 1 – up to 15 min.

The facilitator gives the instruction and asks questions:

- Let's think together about what [the toy's name] should do when advertisements and some messages which are inappropriate for children show up when playing. What ideas do you have?
- Does anyone know what should be done when advertisements 'pop up' while you play a game or watch a film? What should we tell [the toy's name] to do?

The facilitator pays attention to the children's answers, he/she reacts non-verbally: miming, using body language; paraphrases additionally; they summarize together what the appropriate behaviour is, and what is not.

Summarizing (depends on the results of the previous activity):

We should tell our friend [the toy's name] that:

- An adult person should always be near when it uses the Internet, they can play together, do and watch different things online;
- When it is doing something on the tablet or the smartphone, if an advertisement or some other message inappropriate for children shows up, it is necessary to show that to its mum, dad or another adult;
- Whenever something upsets or scares it while using the Internet, it should tell its parents or another adult.

Activity 3: Discussion 2 – up to 15 min.

The question for the children:

- What should [the toy's name] do if someone asks it to watch or play an exciting game that makes it scared and after which it might have bad dreams?

The children give their ideas and advice. They explain them.

The facilitator summarizes: Our [the toy's name] should:

- Say it won't play a scary game that causes bad dreams—instead it can play something else;
- Watch only one cartoon on TV before going to bed or ask someone to read a nice story for it.

Activity 4: Evaluation – up to 5 min.

The facilitator asks the children to tell and show how they feel at the moment or what they think.

WORKSHOP 5

UNKNOWN PEOPLE ON THE INTERNET

OUTCOMES	• Children know that the Internet is used by many people, and some of them can be malicious. • They know and apply important rules of behaviour related to communication with unknown people on the Internet.
DURATION	Up to 60 minutes

THE COURSE OF THE WORKSHOP

This workshop is based on the Transformative Dialogue Technique, which is used to encourage critical thinking development, planning and taking appropriate actions related to the topic. The children will think about their experience and discuss it – why some things happen; they will propose and plan appropriate actions. You should have a conversation with the whole group. Allow children to come up with their assumptions, encourage them by listening to them carefully.

Activity 1: Introduction to the topic – 10 min.

The facilitator asks the children:

- Do you know how many people live on our planet? What do you think, how many people in the world use the Internet?

The facilitator presents: The Internet is used by many people. We know some of them, for example, our mum, dad, brother or sister, our friends, cousins or friends that live in other cities and countries. But, most of them we don't know.

Activity 2: The story of [the toy's name]'s adventure – 5 min.

The facilitator continues: I will tell you about another of [the toy's name]'s adventures. One day, our [the toy's name] heard its older sister complaining that someone unknown called her on the phone. She started getting messages asking her to answer the phone. She also received friend requests from that person. She asked her mum and dad to take a look at those messages and advise what to do. [The toy's name] wondered why its sister complained, well, it's nice to have friends! It decided to talk to us about that.

Activity 3: What is our experience? – 10 min.

Conversation with children; they talk about their reflections and experiences:

- What do you think, why doesn't [the toy's name]'s older sister want to receive messages from unknown people?
- Why doesn't she want to make friends with them online?

Activity 4: Understanding the phenomenon – 25 min.

Conversation with children:

- What did your parents tell you, what should you do if unknown people ring your doorbell or ask you for something?
- What did they tell you to do if unknown people phone you?
- How should we behave with unknown people on the Internet?

The facilitator presents: [The toy's name]'s sister knows that the children and the adults who use the Internet are the same as the people she meets in the street. Some of them are nice and polite, but there are also those who are not. She knows that she has to be careful when meeting someone new, especially when she does that online.

Activity 5: What should we do? – 10 min.

Conversation with children:

- What should we do if someone we don't know contacts us online asking to become friends?
- What should we do if someone wants to talk to us online, asks us to give him our address or a phone number?

The facilitator presents: When someone you don't know wants to talk to you online, you should tell that to your mum, dad or some other adult because they know what to do. They will advise you about what you can or can't do.

Activity 6: Evaluation – up to 5 min.

Children evaluate how much they liked this workshop: if they liked it a lot they will spread their hands wide; if not, they will show a small gap between their fingers.

WORKSHOP 6

CREATIVE USE OF SMARTPHONES AND TABLETS

OUTCOME	The children and the parents have exchanged experiences and tried a few applications which they will use in mutual creative activities.
DURATION	90 minutes

THE COURSE OF THE WORKSHOP

The preparation for the workshop:

Talk to parents:

- Inform them about the upcoming workshop for children and parents (Appendix 8: Notice for parents);
- Talk individually to parents who are able and willing to help with conducting the workshop;
- Make a list of registered parents.

All parents who took part in the previous workshops should participate in this one as well.

- Install and learn how to use:
  1. Viber QR scanner;
  2. Web 2.0 tool – Padlet; and
  3. Application 'My Picture Books'.
- Make:
  1. Three boards for interactive work in Padlet: the first 'The applications that stimulate creativity and learning' (which should have the option to assess the posts by giving stars from 1 to 5); the second and the third (in reserve) 'Children's oral and art creativity';
  2. QR codes as links to created Padlet boards; or
  3. 4–5 copies of printed QR codes (depending on the number of participating parents) with the names of the corresponding Padlet boards underneath them.

Note: This workshop 'Creative use of smartphones and tablets' consists of several activities designed to help educators/teachers and parents gain an insight into some of the possibilities of digital technology in education and upbringing. The workshop points out the need for constant development of one's own digital competence. This is why it is important for us to make an effort to carry out this workshop relying on good preparation and the parents who can and want to help.

Activity 1: Mutual experience – 20 min.

- The facilitator gives the children a task: Make a drawing to help you tell your favourite story.
- The facilitator gives the parents a task: Think of an educational application (program) or another way your child used digital technology (a smartphone, tablet, computer...) for the purpose of creating, learning, finding out, communicating or getting informed (e.g. an application/program which he/she used to make a jigsaw puzzle, draw, solve a kind of problem, learn about animals, watch something on YouTube, and the like).
- Open Viber application (if you don't have it, install it) and in the upper left corner open the drop-down menu. Scroll down, find QR code and click on it. Scan QR code: 'The applications that stimulate creativity and learning' which is in front of you (give parents the prepared material with QR codes).
- When the board 'The applications that stimulate creativity and learning' opens in the Padlet, click on the button +, write the name of the application your child used and post it.
- Talk to your child about what he/she thinks about that application, what he/she likes the most? Why? Has he/she learned anything by using it? What?
- Write the child's answers in the same post on the board 'The applications that stimulate creativity and learning' or on paper (if the answer is long).
- Rating each post on the first Padlet board using stars from 1 to 5 (1: doesn't help, 5: maximally helps child's learning and creativity), evaluate the application you described and the applications other parents described. Think about whether the child can be creative, make something new or useful, find out and learn while using that application.

Activity 2: Reporting – 5 min.

Together with parents, look at the completed Padlet board and move the pointer across the text 'Rate'. Notice and discuss with parents the average ratings they gave to applications and the ways of using digital technology.

Restrain yourself from making comments, interpreting and evaluating parents' answers. Inform them only about the voting results.

Activity 3: How to use the possibilities of digital technology constructively – 40 min.

The facilitator gives the parents a task:

- Open the board in Padlet 'Children's oral and art creativity' by scanning another prepared QR code (using the options of Viber).
- Click on the sign + in the lower right corner. Name the post after the story the child drew.
- Add child's photographed drawing (click on the camera icon and take a photo).
- Make one more post by clicking the button +. This time click on the three dots and select 'Voice'. Record the child while he/she is telling a short story based on the drawing (a few sentences).

The facilitator gives the children and parents a task:

- Together with your child, look at your posts and posts of other people.
- Choose a child's drawing on the Padlet board 'Children's oral and art creativity' which is not or is the least commented, discuss with your child how to praise that drawing.
- Write down the compliment as the comment for the chosen drawing.
- Read to your child other people's comments on his/her drawing.
- Прочитајте детету коментаре других за његов рад.

You can make a mutual story in a similar way. One child starts the story, and the others continue it with a new drawing and telling, all being recorded by an adult.

At the end of the workshop, the facilitator explains that he/she will make an exhibition of the children's drawings on the board in front of the room with a QR code next to each drawing, enabling every exhibition visitor to hear stories made by children, using Viber and the QR code.

The facilitator conducts the workshop again with all other children in the educational group/class and prepares a multimedia exhibition of their drawings on the board in front of the room, so that the parents who did not attend the workshop can learn about the advantages of using digital technology.

Activity 4: Creating a digital book – 30 min.

The facilitator gathers the children and together with them he/she demonstrates and explains to parents how the application My Picture Books can be used with children.

The facilitator gives the parents a task:

- Install the application My Picture Books: **http://bit.ly/2MDG0U9**
- Together with the child, create a few pages of the digital book, which you will finish at home. The book may deal with various topics: e.g. 'My favourite game and toys', 'A cookery book',

'Riddles', 'A fictional story', 'The letter game', 'Guess what this is'.

- When you finish the book, show it to the educator/teacher and other children.

Activity 5: Evaluation

- Each parent presents his impression of the workshop by writing a key word on a sticker.
- The children evaluate their experience by drawing or colouring 'smileys' showing how they felt: sad, indifferent or happy.
- Stick the key words and the children's drawings on the board in front of the classroom.

Note: If, for different reasons, the educator/teacher is not able to conduct the workshop planned in this way, he/she can choose to carry out Activity 4 'Creating a digital book', and then, together with parents and children, try out and explore a few applications for children. When searching and installing the applications, be aware that many applications have the same or similar name. Also, when choosing the application, you should make sure it has a PEGI 3 label and is well rated by users. Some of the possible applications are: KidsDoodle; Stop Motion; Tangram Master; Chess for Kids – Play & Learn; Pottery; Drawing Cartoons; LEGO® Juniors Create & Cruise; Jigsaw Puzzles; Animal Sound; Video Story Maker; Voice Changer; Brain IT on!; LiveBoard; Drawing; Kids Paint Free – Drawing Fun; Draw Your Game; Math Kids – Add Subtract, Count, and Learn; Brain Games for Kids –Free Memory & Logic Puzzles; Little Panda's Jewel Quest; Pixel Art; Algorithm City; Happy Glass; Lightbot Code Hour; Rube Goldberg Machine Tricks; Azbuka Learn Serbian Cyrillic; ICT-AAC Koliko je sati (What's the Time?); ICT-AAC Matematički vrtuljak (Mathematical Carousel); and many others, which can be found by searching the app Play Store on the Android operating system mobile phone. For example, you can search by typing: 'PEGI 3 science kids'.

At the end of the workshop, it is important that all participants tell and exchange their impressions of the tested applications.

WORKSHOP 7

THE FINAL WORKSHOP

OUTCOMES	• Children know and apply the basic rules of safe online behaviour. • Children get an insight into the KWH table – questions about the Internet to which they got or did not get answers.
DURATION	Up to 60 minutes

THE COURSE OF THE WORKSHOP

Activity 1: What we have learned about the Internet: yes/no quiz

The facilitator announces that today they will do a quiz in an unusual way: they will answer the questions like they do in the game *Day and night*. When the facilitator asks a question, those who think the answer is **YES – keep standing**, and those who think the answer is **NO – crouch**.

After a few questions, or those to which more children answered incorrectly, the facilitator stops and discusses them with children. Then, he/she continues reading the questions.

The questions:

- Children can learn many things on the Internet, e.g. how to make or draw something. YES – they are standing
- You can find your favourite music, cartoon and other interesting things on the Internet. YES
- There are many dangerous things on the Internet. YES
- Children can use the Internet on their own. NO – they crouch
- When something upsets you on the Internet, you should not tell that to anyone. NO
- During breakfast, lunch and dinner you should play on the tablet/smartphone. NO
- You should tell your mum and dad or some other adult when something scares you while you are online. YES
- If you play scary games that upset you, and you have bad dreams because of them, you should tell someone to uninstall them. YES
- While doing something on the Internet, if a window 'pops up' and wants something from you, you should click on it. NO
- When some advertisement 'pops up' while you are playing on the Internet, you should ask someone to remove it. YES
- You use the Internet only in the presence of an adult person. YES

Activity 2: The KWH table column 'We have learned'

The facilitator puts the KWH table in a visible place. He/she reads the questions from the first column, which the children asked at the beginning of the series of workshops. For each question, decide together whether the children got the answer to it or not. The facilitator ticks the answered ones.

The facilitator reminds the children of the travelling notebook, which they, together with their families and with [the toy's name] can use to continue their search for answers to the questions that remained unanswered during these workshops or to some new ones they might be interested in.

WORKSHOPS TO BE IMPLEMENTED WITH CHILDREN AGED 7–8

WORKSHOPS TO BE IMPLEMENTED WITH CHILDREN AGED 7–8

The workshop methodology is based on the fact that children learn during mutual activities and through interactions established between adults and children, as well as the activities performed and interactions established among children themselves.

The workshops on Internet safety will link necessary knowledge to children's understanding of the world around them, the Internet, and the way it works. We need to connect the learning of children aged 7–8 about Internet safety with activities in which they think, solve problems, make decisions and explain.

The workshops are planned so that they include family members and they aim to be fun.

The programme consists of nine workshops for children aged 7–8.

Table: Workshop topics

Workshop number	WORKSHOP TITLE
1.	Means of communication
2.	What do we know about the Internet?
3.	The time children spend using digital devices
4.	Unwanted content on the Internet
5.	Unknown people on the Internet
6.	Privacy protection on the Internet
7.	How to be a good friend on the Internet
8.	Creative use of tablets/smartphones
9.	The final workshop

Table: The structure of the workshops for children aged 7–8 (1st and 2nd grade of primary school)

Equipment and material necessary for the whole series of workshops	• Flip chart board (FC) or a space on the wall where the flip chart block sheets of paper can be stuck • 10 sheets of flip chart block paper, 1 piece of thick paper • 10 sheets of A4 paper • 1 black and 1 red marker for workshop facilitators • 1 Scotch tape	
Duration	Each workshop lasts for 60 minutes, except the fifth and the eighth workshops, which last for 90 minutes.	
Workshop participants	Children aged 7–8 (the first and the second grade of primary school) and their parents	
WORKSHOP	**OUTCOMES**	**MATERIAL**
1. **MEANS OF COMMUNICATION**	Children understand that the Internet is a network of mutually connected devices made by people in order to communicate, exchange messages, work together, learn, explore, have fun and socialize.	A jigsaw puzzle for each group (drawings on A4 paper: book, newspaper, letter, telephone, laptop, tablet, smartphone)
2. **WHAT DO WE KNOW ABOUT THE INTERNET?**	Children know that the Internet is a network made by connecting computers and other devices. They are encouraged to explore and learn about it.	A nice toy animal or a toy of some other creature, an A4 notebook without lines, a box or a paper bag, notes with the names of children from the group, thick paper
3. **THE TIME CHILDREN SPEND USING DIGITAL DEVICES**	Children understand the side effects of excessive use of digital devices. They play games in which they do not use digital devices and the Internet.	Behaviour and feelings cards
4. **INAPPROPRIATE CONTENT ON THE INTERNET**	Children know that they should tell adults (from their families or schools) if any inappropriate content appears during their use of a digital device.	

WORKSHOP	OUTCOMES	MATERIAL
5. **UNKNOWN PEOPLE ON THE INTERNET**	Children know that they should tell adults (from their families or schools) if any inappropriate content appears during their use of a digital device.	
6. **PRIVACY PROTECTION ON THE INTERNET**	Children apply basic rules of privacy protection online.	Cards with particular situations described and written on them; write each problem situation on two cards
7. **HOW TO BE A GOOD FRIEND ON THE INTERNET**	Children know that being a good friend on the Internet is equally important as being a good friend at school or outside while playing games and they apply that knowledge.	
8. **CREATIVE USE OF SMARTPHONES AND TABLETS**	Children and parents have exchanged experiences and tried a few applications they will use in mutual creative activities.	Smartphones and tablets with Internet access, Viber installed and some free memory space on the phones (which parents bring), pieces of paper, felt-tip pens, wooden crayons and crayons, mutual board, paper stickers
9. **THE FINAL WORKSHOP**	Children apply the basic rules of safe online behaviour. Children get an insight into the KWH table – questions about the Internet to which they got or did not get answers.	

WORKSHOP 1

MEANS OF COMMUNICATION

OUTCOME	Children understand that the Internet is a network of mutually connected devices made by people in order to communicate, exchange messages, work together, learn, explore, have fun and socialize.
DURATION	Up to 60 minutes or as long as the children are still interested in it

THE COURSE OF THE WORKSHOP

Activity 1: Introduction – up to 5 min.

The facilitator informs the children about the series of workshops they will participate in. They will learn how to use a smartphone, a tablet or a computer in a safe way. There will be several different workshops. In the first one, they will explore the ways people send messages to each other.

Activity 2: Conversation with children– up to 5 min.

The facilitator asks the following questions, and several children answer them:

- Have you heard about the Internet?
- What is it used for?
- Have you ever used a tablet, a smartphone or some other device that can be connected to the Internet?
- How?

Activity 3: A jigsaw puzzle – 20 min.

The facilitator prepares as many jigsaw puzzles as there are groups of children. Use A4 sheets of paper to print drawings/pictures of a book, newspaper, letter, telephone, laptop, tablet, smartphone.

Cut each drawing/picture into four pieces to get a jigsaw puzzle.

The drawings can be downloaded from one of the websites offering free photos and drawings, e.g. **https://pixabay.com/en/**. The facilitator can also draw them on his own or with the help of children.

Dividing into groups – Each child gets a cut piece of drawing (a piece of jigsaw). They look for other children with the parts of the same drawing and try to make the whole. This is how the groups are formed.

Group work – Each group names the object that has been put together.

Conversation with children

- What are these objects used for?
- Why do people read newspapers and books?
- Have you ever seen anyone receiving a letter?
- Have you ever seen anyone talking or exchanging messages using such an object or a device?
- Has anyone of you ever used such a device?

Children give their opinions and talk about experiences they had. The facilitator does not correct the answers, he/she listens to the children.

Facilitator's brief presentation:

These are objects/devices that people use for communication, when they want to tell something to each other. We like to talk to... (ask children who they like to talk to). We want to ask other people if we don't know something or to tell them what we have found out, come up with, made.

When people who we like to talk to are not with us, we write down our thoughts and ideas using letters and other symbols. We can write letters to them, write a book, or draw something on a piece of paper or in a notebook.

To make the exchange faster, people invented a printing press. Then, a telephone, a smartphone and a computer were made. They found the ways to take photos and make films and to send pictures, photos and drawings to other people.

People created the Internet, the network that enables us to have conversation with other people or send messages and photos. We can have fun, play and learn online. We will talk more about this in the next workshop.

Activity 4: What should we do in order to send a message?

The activity is done as long as children are interested in it or as long as there is time for it.

Facilitator's question:

What should be done to make your device receive and send messages? You can tell us, show or sing.

There are no right or wrong answers. Any idea, any answer is welcome.

Activity 5: Evaluation

The children stand up. The facilitator asks them to crouch and stand up twice if they had fun during the workshop.

WORKSHOP 2

WHAT DO WE KNOW ABOUT THE INTERNET?

OUTCOME	Children know that the Internet is a network made by connecting computers and other devices. They are encouraged to explore and learn about it.
DURATION	60 minutes

THE COURSE OF THE WORKSHOP

In this workshop, two cooperative learning techniques are applied: 'Travelling notebook', an outline of all succeeding workshops and the table 'We know – want to find out – have learned' (KWH table), which is the main activity of this workshop.

There are descriptions of these techniques in Appendix 6: The techniques applied in the workshops for children.

In order to prepare this workshop, the facilitator needs to: a) write the instruction for parents related to the travelling notebook activity and stick it to the inner side of the notebook cover; and b) prepare the KWH table (see the description below).

Preparatory activity with children – introduction of 'the unusual guest' and travelling notebook, a day before implementing the workshop

- Show the children a toy—a nice animal or some other character (see Appendix 6: The techniques applied in the workshops for children)
- Tell a short story about the toy: It has a family: mum, dad, older sister and a brother. It is very curious, interested in everything; it likes to play on the tablet and cannot wait to get its smartphone. It likes to spend time with its friends a lot, as well as to visit them.
- Th children name the toy; they are trying to agree about the name. Otherwise, they have to vote.
- Tell the children that starting from the next day [the toy's name] will 'visit' one of them every day. The child that [the toy's name] visits gets a notebook in which he/she draws or writes about what happened to the toy at his/her place. Together with a family member, a child should draw or write in the notebook about how the toy felt during the visit. The next day, the child will show the drawing or read from the notebook, with the help of the facilitator, about the adventures of [the toy's name]; what it did, whether it had fun and what it learned during the visit.

- Ask the children whether they like the idea of the toy and the travelling notebook staying with someone else every day. Check if they understood what they should do when they are 'hosts'.
- The child whose name is taken out from the small box/paper bag will get [the toy's name] and the notebook and every day another child will be chosen to host [the toy's name]. Children propose the place where [the toy's name] and the notebook will be until the 'host' is chosen. It has to be visible. Establish the rule that the toy and the notebook are left there every time they arrive, and taken when going home.

Activity 1: Facilitator's presentation – 5 min.

Our guest [the toy's name] knows that last time we talked about how people send messages to each other. It has heard that we also mentioned the Internet and it wants to learn together with us about the ways it is used.

The Internet is a kind of network. People found the way to connect computers, tablets, smartphones and other devices to send messages to each other. We can have Internet access at home, but also in the kindergarten or at school if we have a computer, a tablet or a smartphone that can be connected to the Internet.

With the help of the Internet, people can talk to each other wherever they are, they can send photos, read books and news, watch films, play, find out, learn, cooperate, work together. For example, they can create a mutual drawing or a story even though they are in different cities and countries, or see someone they are talking to, although that person is far away.

Activity 2: Discussion – 10 min.

The facilitator asks the children:

- Which devices can we use to connect to the Internet?
- Have you got any of them?
- Has anyone of you connected to the Internet? How did you do that?
- How did you know you were connected to the Internet?
- What did you do online?

Observe the children and, if needed, do some movement activity or a warm-up game.

Activity 3: Creating the KWH table – 30 min.

Prepare a board with the title 'THE INTERNET' and a drawing of the networked planet Earth, and below the title draw a table with four columns; in the column headers, write the following: a) What do we know about the internet? b) What would we like to find out? c) How will we do that? d) We have learned about the Internet

Show the table to the children and explain that it will help us learn together about the Internet. Their answers will be written in these columns.

Ask the children and write down their answers in the appropriate columns of the KWH table, whatever they say:

- What do we know about the Internet?
- What would we like to find out about it?
- How will we find out about it? (Who can we ask? Where should we look for the answers to our questions?)

Tell the children that you will copy their answers in the travelling notebook and that, once they have the notebook, they can look for the answer to some question together with their parents or other family members, if they want to. Also, if they remember anything else they are interested in, they can write that in the travelling notebook. Point out that you all learn and look for the answers together. Explain that they will also fill in the column *We have learned about the Internet* once they complete all the workshops.

The board with the KWH table is in the classroom all the time during the workshops.

If some new questions come up during the workshops, write them on the board and in the notebook and ask the children where they can look for the answers.

The facilitator copies all the questions on the first page of the travelling notebook. Make sure to write the date.

Activity 4: Selection of the 'host' – the child who will keep the travelling notebook and the toy – up to 5 min.

Put the notes with the names of all children from the group in a small box or a paper bag that you prepared. Take out one name. That child is the 'host' and the next day he/she will show a drawing and tell about [the toy's name]'s experience to the other children.

The child is selected in this way only the first time; later, he/she is chosen at the end of every day, regardless of whether there is a workshop on that day or not. It would be a good idea to give the notebook and the toy to one of the children whose parents applied to be among the first 'hosts'.

Activity 5: Evaluation – up to 5 min.

One after another, the children finish the sentence: *At today's workshop, I really liked...*

WORKSHOP 3

THE TIME CHILDREN SPEND USING DIGITAL DEVICES

OUTCOME	Children understand the side effects of excessive use of digital devices. They play games in which they do not use digital devices and the Internet.
DURATION	60 minutes

THE COURSE OF THE WORKSHOP

In this workshop, the technique 'Reading with anticipating' is applied. First, you read a small part of a story, and after that, you ask the children the question: "What do you think happened then?" It is enough that two or three children give their opinion. Encourage different assumptions by asking additional questions, e.g. "Has anyone else got any idea? Is there a different opinion?" There are no right or wrong answers. During the story reading, no comments on the children's answers are made. This technique enables keeping auditory attention, stimulates active participation and following the course of the story, encourages creativity.

Activity 1: Reading a story with anticipating – up to 30 min.

- The facilitator tells the children that he/she will read them a story from the life of [the toy's name]. He/she reads expressively and applies the technique 'reading with anticipating'.

Once upon a time, [the toy's name] got its first tablet. It liked very much what it could do on it: listen to music, watch cartoons on YouTube, play different games, draw and colour, view photos of animals and distant planets, watch how to make a flower and a paper plane, how to draw a cat..., it could even, with its mum's help, hear and see its grandma who lived far away. It liked that very much.

The facilitator asks the question: *What do you think happened then?*

If necessary, ask the children: "Are there any more ideas? Has anyone got a different opinion?" After you hear two or three children, continue reading the story. The instruction is always the same – every time you ask the children these questions.

- The facilitator continues reading:

[The toy's name] spent whole days playing games, watching movies, listening to music and texting its friends. It got so carried away and didn't notice that it spent more and more time doing only that. It spent less and less time outside playing with friends. Instead of studying or

doing homework, it was playing games and watching movies. When it needed to eat, it brought the tablet, when it was supposed to do homework or go to bed, it used to say: "Just a little bit, just one more game, just another cartoon to watch…"

The facilitator asks the question: *What do you think happened then?*

- The facilitator continues reading:

It had a headache every day. It was feeling sleepy, but didn't want to go to bed because there was a game to be played. It started to be careless – it even crossed the street without looking left and right! And that was not all – [the toy's name] didn't even notice that it started to get angry often and constantly argued with everyone. It was very nervous! The only thing it was thinking about was its tablet.

The facilitator asks the question: *What do you think happened then?*

- The facilitator continues reading:

One day, [the toy's name]'s parents had a very long, conversation. They were very worried. They wanted [the toy's name] to feel well, to do everything children do: play outside, run, explore, talk to other children, laugh, talk to its family members, be in a good mood, have no headache, eat and get enough sleep. They decided to change something.

The facilitator asks the question: *What do you think happened then?*

- The facilitator continues reading:

Mum and dad asked [the toy's name] and other family members to agree together about the rules of how much and when the tablet, mobile phone, laptop and the desktop computer are used.

The facilitator asks the question: *What do you think happened then?*

- The facilitator is reading:

Together, they agreed:

- To talk about what happened during the day at breakfast time, lunch time and dinner time. Nobody will watch TV, use the tablet or the smartphone during meals;
- To ask their mum and dad to read them nice stories and sometimes to watch a cartoon together before going to bed. They won't play any scary games, nor watch any frightening films;
- To play with their friends outside every day;
- To use the tablet, computer, smartphone and watch TV for a short time;
- That these rules are to be obeyed at home and outside;
- The rules apply to everyone.

The facilitator asks the question: *What do you think happened then?*

- The facilitator continues reading:

[The toy's name] didn't have headaches anymore, it was rested. It was able to study and did its homework regularly. It laughed and played with its friends, it wasn't nervous or angry. It had time to visit interesting places with its mum and dad. It played in the park, in the children's

playground, in the yard with its friends. They played hide-and-seek, hiding, games with the ball and together they made up new games. It even played Ludo, built a robot, castle and a dinosaur with Lego bricks. They solved 100 piece puzzles and played many other games.

Activity 2: Discussion – up to 5 min.

Ask the children:

- How did [the toy's name] realize that it was spending too much time using its tablet?
- What were the others saying to it then?
- What kind of problems did it have? What could it feel in its body?

Activity 3: Sorting cards

Divide children into groups. Each group receives a set of cards.

The task:

1. Select everything [the toy's name] felt
2. 2. How could you help it?

Groups give their answers.

If children still haven't mastered reading and writing, the facilitator reads card by card and children say whether it is about: a) feeling, b) behaviour or c) what other people told it.

Activity 4: Evaluation – up to 5 min.

The children talk about the important things they have learned that day.

CARDS TO BE SORTED

Its neck hurts.	It only thinks about a game.	It got a headache.
It is arguing all the time.	It constantly rubs its eyes because they ache.	It sees blurry.
It feels angry.	It needs to go to the toilet but it doesn't want to stop the game.	It is always silent and doesn't laugh.
It is sleepy.	It keeps being thirsty because it doesn't want to stop the game.	Tablet is overheated.
It gets angry because the battery quickly discharges.	It has no time for homework and studying.	It has only started playing on the tablet and it's already getting dark.
They ask it why it is sitting alone in the classroom while other children are playing.	They remind it to stop playing on the tablet while having lunch.	Its friends tell it: "Leave the game, let's play hide-and-seek".

WORKSHOP 4

UNWANTED CONTENT

OUTCOME	Children know that they should tell the adults (from their families or schools) if some inappropriate content appears during the use of a digital device.
DURATION	60 minutes

THE COURSE OF THE WORKSHOP

Activity 1: The introductory story, learning about the problem – up to 10 min.

- The facilitator starts the workshop with a story:

Our friend [the toy's name] has some problems and it doesn't know how to solve them.

The first problem: when it plays some game online or watches cartoons on YouTube, advertisements and messages show up. Some of them are on the side, and some cover the whole screen. Some show pictures that are inappropriate for children.

- The facilitator asks the children if anything similar has happened to them. After a few of them answer, he/she continues with the story.

The second problem: [The toy's name] watched its older brother playing a very scary game. Now, it has bad dreams: some monsters 'jump out' of the game. Its brother installed the game on the tablet and he constantly calls it to play together.

- The facilitator asks the children if anything similar has happened to them. After a few answers, he/she continues with the story.

[The toy's name] doesn't know what to do. We should think about the ways we could help it.

Activity 2: Discussion 1 – up to 15 min.

The facilitator gives the instruction and asks questions:

- Let's think together about what [the toy's name] should do when advertisements and some messages that are inappropriate for children show up when playing. What ideas do you have?
- Does anyone know what should be done when advertisements 'pop up' while you play a game or watch a film? What should we tell [the toy's name] to do?

The facilitator pays attention to the children's answers, he/she reacts non-verbally: miming, using body language; paraphrases additionally; they summarize together what the appropriate behaviour is, and what is not.

Summarizing (depends on the results of the previous activity):

We should tell our friend [the toy's name] that:

- An adult person should always be near when it uses the Internet, they can play together, do and watch different things online;
- When it is doing something on the tablet or on the smartphone, if an advertisement or some other message inappropriate for children shows up, it is necessary to show that to its mum, dad or another adult;
- Whenever something upsets or scares it while using the Internet, it should tell its parents or some adult.

Activity 3: Discussion 2 – up to 15 min.

The question for the children:

- What should [the toy's name] do if someone asks it to watch or play some exciting game that makes it scared and after which it might have bad dreams?

The children give their ideas and advice. They explain them.

The facilitator summarizes: Our [the toy's name] should:

- Say it WON'T play a scary game that causes bad dreams—instead it can play some other game;
- Watch only one cartoon on TV before going to bed or ask someone to read a nice story for it.

If there is enough time, children role-play the following situation in groups:

They tell their friend they don't want to play scary games and suggest playing another game.

Activity 4: Evaluation – up to 5 min.

The facilitator asks the children to tell and show how they feel at the moment or what they think.

WORKSHOP 5

UNKNOWN PEOPLE ON THE INTERNET

OUTCOMES	• Children know that the Internet is used by many people, and some of them can be malicious. • They know and apply important rules of behaviour related to communication with unknown people on the Internet.
DURATION	The workshop is being realized in two classes – 90 minutes

THE COURSE OF THE WORKSHOP

This workshop is based on the Transformative Dialogue Technique, which is used to encourage critical thinking development, planning and taking appropriate actions related to the topic. The children will think about their experience and discuss it; they will propose and plan appropriate actions. You should have a conversation with the whole group. The children should think about some people's reasons for their actions and steps they can take to prevent such situations.

Activity 1: Introduction of the topic – 10 min.

The facilitator asks the children:

- Do you know how many people live on our planet?
- In your opinion, how many people in the world use the Internet?

The facilitator presents:

The Internet is used by many people. We know some of them, for example, our mum, dad, brother or sister, our friends, cousins or friends that live in other cities and countries. However, most of them we don't know. A lot of them are using the Internet right now. Many of them behave properly but there are people who use the Internet to trick others; they can pretend to be our friends though they are not. We should be cautious with people we don't know online, as we are in the real world.

Activity 2: Story: [the toy's name]'s experience – 5 min.

I will tell you about another experience [the toy's name] had:

Last night, while having dinner together and talking about the day, [the toy's name] heard something about the Internet that made it confused.

Dad complained that he was constantly receiving emails from people he did not know. He deleted them because he was afraid the data on the computer might be destroyed if he opened these messages. Then mum said that she always deleted friend requests from unknown people on the Internet, as well. Someone sent her a message with ugly words, and she got angry.

"What is this all about?", [the toy's name] asked itself. It was wondering how someone you didn't see and know could send a friend request? How could they send letters and messages? Why did people send messages with ugly words?

The worst was yet to come. After dinner, it heard its older sister talking to her friend that some unknown people were texting her on a smartphone. They kept asking her to be friends, wished to talk to her and they wanted her photos, so they could get to know each other.

"It's so weird, why would an unknown person want photos of my sister?" [The toy's name] was completely confused, worried and a little scared. It did not know what to do.

Activity 3: What is our experience – 15 min.

Conversation with children:

- Why is [the toy's name] confused, worried and scared?
- Have you ever heard that someone wanted to be a friend with another person on the Internet although they had never met before?
- Have you experienced any similar things?

The facilitator notes the children's statements on the flip chart table.

Children express and share their experiences about what parents told them regarding behaviour towards unknown people in the street, park, on the Internet.

Activity 4: Understanding the phenomenon – 20 min.

Conversation with children:

- Why do some people use the Internet to hurt others, make them sad or angry?
- Why do they send messages to trick us and maybe damage our tablet or computer?

The facilitator presents: These issues make adults concerned, as well. We still do not understand the reasons why some people behave well, and some do not. However, we can protect ourselves as well as others if we act carefully and respect some rules when using the Internet.

Activity 5: Actions to be taken, working in groups – 15 min.

Form groups of four children.

The task for group work:

- What should we do if someone asks for our phone number, address or the name of our school while playing a game on the Internet?

Reporting: Each group representative says what they were talking about and what they concluded. The facilitator takes notes on the flip chart board.

Activity 6: Facilitator's brief presentation – 10 min.

The facilitator presents: There are some important rules to be obeyed while playing online:

- You should tell your mum, dad or another adult from your family if an unknown person wants to talk to you or be friends with you; if they want your telephone number, to send you photos or messages or ask for yours; if they want to meet you in person.
- While playing a game on the Internet, ask your parents or another adult to show you where to click and ban access or report the person who is bothering you or is rude.
- Do not open messages sent by unknown people. Show them to your parents or someone you trust first.

Activity 7: Advice for [the toy's name] – 15 min.

The task for the group work:

- Think about what [the toy's name] should tell its sister to do because an unknown person sends her messages on the smartphone and asks for her photos.

Groups report. Take notes of children's tips on the flip chart board. Point out that it is necessary to talk to their parents or other adults they trust in such situations.

Activity 8: Evaluation – 5 min.

Children evaluate how much they liked this workshop: if they liked it a lot they will spread their hands wide; if not, they will show a small gap between their fingers.

WORKSHOP 6

PRIVACY PROTECTION

OUTCOME	Children apply basic rules of privacy protection online.
DURATION	60 minutes

THE COURSE OF THE WORKSHOP

Activity 1: Dividing into groups and working on problem situations – 20 min.

Each group pulls out a card with a problem situation that [the toy's name]'s older sister or brother came across while using the Internet. Some groups will have the same situation.

The task is the same for each group:

- Read the problem situation, choose and agree on the correct procedure. Discuss your answers.

If children haven't mastered reading skills or working in small groups, the facilitator reads problem situations one after another, as well as the suggested solutions. Children give their opinion on the best possible solution and explain their answers.

Activity 2: Reporting – 20 min.

The facilitator reads the problem situation and then children who discussed it say what they came up with. If two groups were working on the same problem, they report one after the other.

If children give different solutions for the same problem, they provide an explanation for that. The facilitator does not assess correctness of the answers.

Activity 3: Facilitator's presentation – up to 5 min.

Depending on what children said, using their words and comments, the facilitator points out what is important for them to know:

- Do not share personal information over the Internet: phone number, address, the name of

your school, details of your physical appearance.

- Always tell your parents when disturbed and scared by something online.

Activity 4: Evaluation – up to 5 min.

Children report on how much they liked this activity.

CARDS WITH PROBLEM SITUATIONS AND TASKS

The suggested solutions below the situation description can be either deleted or left if it is estimated that children need support in the discussion.

Situation 1: [The toy's name]'s older brother has been playing a video game on the Internet for a while. He knows his two friends, but he does not know the other players. All of them make a team. They play against other team's players. They are competing. After a while, one of the unknown teammates asked him for his phone number in order to agree on how to defeat the other team.

What is [the toy's name]'s older brother supposed to do? Choose one of the offered options. Explain your choice.

- Inform an adult person about it.
- Give his phone number, talk about the game and figure out how to win.
- Stop playing the game.
- Say: "I'm not going to give you my phone number. Stop asking for it."
- Report the player to the game owner.

Situation 2: [The toy's name] hasn't turned 13 yet and its parents haven't created its Facebook account. Facebook attracts it very much because its mum and older sister are constantly doing something on that network. One day, it came across its mum's Facebook password. What should [the toy's name] do? Why do you think it should do that? Choose one of the offered options. Explain your choice.

- Don't tell anyone anything and when mum is absent, enter her account and play games.
- Tell its mum that it found her password.
- Have fun and write a comment on mum's account and make everyone laugh.
- Don't tell anyone anything, do nothing.

Situation 3: Imagine this happened to you: You watched TV and played on the tablet for a while (in accordance with the rules you agreed on with your parents). You did your homework and finished learning for that day. It was raining and you couldn't go out. You were bored. Your friend invited you to come to his place and play games on the computer. What would you do and why?

Choose one of these options. Think and explain why that is the best idea.

- Invite your friend to come to your place and play something else.
- Go to your friend's and play games on the computer for two hours.
- Tell your friend that you can't come because you can no longer play computer games.
- Go to your friend's place and suggest playing something else.

Situation 4: [The toy's name] and its sister were sitting in a park and eating ice cream. It happened that they heard some children talking about the Internet. One child said: "People don't know who you are on the Internet. They don't see you. We can do whatever we want." The other child said: "It doesn't matter which photos I send and what I write. I can also say bad words. No one knows it's me."

[The toy's name] and her sister were thinking. They were talking a lot about what they heard. They knew it was not right to behave like that.

They were trying to figure out what they would say in that conversation. What do you think they eventually decided to tell those children?

WORKSHOP 7

HOW TO BE A GOOD FRIEND ON THE INTERNET

OUTCOME	Children know that being a good friend on the Internet is equally important as being a good friend at school or outside while playing games and they apply that knowledge.
DURATION	60 minutes

THE COURSE OF THE WORKSHOP

Activity 1: Proverbs – 10 min.

The facilitator wants children to explain the meaning of a proverb and the way in which it can be connected to online behaviour:

Choose one or two appropriate for the children's age.

- Think twice before you cut.
- Think before you speak.
- Respect others and don't worry about yourself.
- Don't treat others in a way you wouldn't like to be treated.

A few children give their answers.

Activity 2: Story – 10 min.

The facilitator tells a story:

This is how our [the toy's name] learned about friendship on the Internet.

One day the schoolmates were mocking [the toy's name] about the top it was wearing. They said that the top was ugly and funny. They did not even want to hang out with it during the break; they were laughing and whispering all the time.

[The toy's name] was very sad and then got so angry that it wanted revenge. It got an idea how to do it.

It had the phone numbers of some of the classmates. It decided to find their silly photos from some trip and send a few messages about how silly they all were – just to make them have a look at the photos.

It came home and immediately went to its hiding place to think of revenge in peace. Then it fell asleep.

When [the toy's name] woke up, it changed its mind; it realized that the decision it made was not the right one. It did not send photos or messages. Instead, it decided to show something interesting to its friends at school the next day..

Activity 3: Why [the toy's name] changed its mind – 30 min.

Divide children into groups of four.

Task (10–15 minutes for work):

- Each group considers why [the toy's name] changed its mind. Why wouldn't such revenge be a good idea?

The groups report: each group presents their ideas; the facilitator takes notes on the flip chart board.

Facilitator's comment: Good friends are those whom we like to talk to, we can share our secrets with them, play nicely and make arrangements. When we disagree, we know how to settle things among us. There are several important rules on how to be a good friend on the Internet:

- When we use the Internet and talk about or to someone, the rules of good behaviour apply, i.e. the same ones we obey in the real world.
- We should behave/be decent on the Internet and try not to hurt anyone.
- Never forward someone's messages or photos without asking.
- Don't send messages or photos you wouldn't like to be read/seen if they were yours.

Our [the toy's name] realized that being a good friend means that you should agree and solve any problem without further arguing and insulting. The same goes for the Internet – it is very important to think thoroughly before doing something online.

Activity 4: Completing the sentence – 10 min.

Children complete the sentence*: Both online and at school, a good friend is the one who...*

WORKSHOP 8

CREATIVE USE OF SMARTPHONES AND TABLETS

OUTCOME	The children and the parents have exchanged experiences and tried a few applications which they will use in mutual creative activities.
DURATION	90 minutes

THE COURSE OF THE WORKSHOP

The preparation for the workshop:

Talk to parents:

- Inform them about the upcoming workshop for children and parents (Appendix 8: Notice for parents);
- Talk individually to parents who are able and willing to help with conducting the workshop;
- Make a list of registered parents.

All parents who took part in the previous workshops should participate in this one as well.

- Install and learn how to use:
  1. Viber QR scanner;
  2. Web 2.0 tool – Padlet; and
  3. The application My Picture Books.
- Make:
  1. Three boards for interactive work in Padlet: the first – The applications that stimulate creativity and learning (which should have the option to assess the posts by giving stars from 1 to 5); the second and the third (in reserve) – Children's oral and art creativity;
  2. QR codes as links to created Padlet boards;
  3. 4–5 copies of printed QR codes (depending on the number of participating parents) with the names of the corresponding Padlet boards underneath them.

Note: The workshop 'Creative use of smartphones and tablets' consists of several activities designed to help the educators/teachers and parents gain an insight into some of the possibilities of digital technology in education and upbringing. The workshop points out the need for constant development of one's own digital competence. That is why it is important for us to make an effort to carry out this workshop relying on good preparation and the parents who can and want to help.

Activity 1: Mutual experience – 20 min.

- The facilitator gives the children a task: Make a drawing to help you tell your favourite story.
- The facilitator gives the parents a task: Think of an educational application (program) or another way your child used digital technology (a smartphone, tablet, computer...) for the purpose of creating, learning, finding out, communicating or getting informed (e.g. an application/program that he/she used to make a jigsaw puzzle, draw, solve a kind of problem, learn about animals, watch something on YouTube, and the like).
- Open Viber application (if you don't have it, install it) and in the upper left corner open the drop-down menu. Scroll down, find the QR code and click on it. Scan the QR code: 'The applications that stimulate creativity and learning' which is in front of you (give parents the prepared material with QR codes).
- When the board 'The applications that stimulate creativity and learning' opens in the Padlet, click on the button + , write the name of the application your child used and post it.
- Talk to your child about what he/she thinks about that application, what he/she likes the most? Why? Has he/she learned anything by using it? What?
- Write the child's answers in the same post on the board 'The applications that stimulate creativity and learning' or on paper (if the answer is long).
- Rating each post on the first Padlet board using stars from 1 to 5 (1: doesn't help, 5: maximally helps child's learning and creativity), evaluate the application that you described and the applications other parents described. Think about whether the child can be creative, make something new or useful, find out and learn while using that application.

Activity 2: Reporting – 5 min.

Together with the parents, look at the completed Padlet board and move the pointer across the text 'Rate'. Notice and discuss with parents the average ratings they gave to applications and the ways of using digital technology.

Restrain yourself from making comments, interpreting and evaluating parents' answers. Inform them only about the voting results.

Activity 3: How to use the possibilities of digital technology constructively – 40 min.

The facilitator gives a task to parents:

- Open the board in Padlet: 'Children's oral and art creativity' by scanning another prepared QR code (using the options of Viber).
- Click on the sign + in the lower right corner. Name the post after the story the child drew.
- Add a photograph of the child's drawing (click on the camera icon and take a photo).
- Make one more post by clicking the button +. This time click on the three dots and select 'Voice'. Record the child while he/she is telling a short story based on the drawing (a few sentences).

The facilitator gives the children and parents a task:

- Together with your child, look at your posts and the posts of other people.
- Choose a child's drawing on the Padlet board: 'Children's oral and art creativity' which is not or is the least commented; discuss with your child how to praise that drawing.
- Write down the compliment as the comment for the chosen drawing.
- Read to your child other people's comments on his/her drawing.

You can make a mutual story in a similar way. One child starts the story, and the others continue it with a new drawing and telling, all being recorded by an adult.

At the end of the workshop, the facilitator explains that he/she will make an exhibition of the children's drawings on the board in front of the room with a QR code next to each drawing, enabling every exhibition visitor to hear stories made by the children, using Viber and the QR code.

The facilitator conducts the workshop again with all other children in the educational group/class and prepares a multimedia exhibition of their drawings on the board in front of the room, so that the parents who did not attend the workshop can learn about the advantages of using digital technology.

Activity 4: Creating a digital book – 30 min.

The facilitator gathers the children and together with them he/she demonstrates and explains to parents how the application My Picture Books can be used with children.

The facilitator gives the parents a task:

- Install the application My Picture Books: **http://bit.ly/2MDG0U9**
- Together with the child, create a few pages of the digital book, which you will finish at home. The book may deal with various topics: e.g. 'My favourite game and toys', 'A cookery book',

'Riddles', 'A fictional story', 'The letter game', 'Guess what this is', etc.

- When you finish the book, show it to the educator/teacher and other children.

Activity 5: Evaluation

- Each parent presents his impression of the workshop by writing a key word on a sticker.
- The children evaluate their experience of the workshop by drawing or colouring 'smileys' which show how they felt – sad, indifferent or happy.
- Stick the key words and children's drawings on the board in front of the classroom.

Note: If, for various reasons, the educator/teacher is not able to conduct the workshop planned in this way, he/she can choose to carry out Activity 4: 'Creating a digital book', and then, together with the parents and the children, try out and explore a few applications for children. Some of the possible applications are: KidsDoodle; Sketch; Stop Motion; Tangram; Chess for Kids – Play & Learn; Pottery; Drawing Cartoons; LEGO® Juniors; Jigsaw Puzzles; Animal Sound; Hippo Dentist; Photo Story; Voice Changer; Brain IT on!; LiveBoard; Drawing; Kids Paint Free; Draw Your Game;

Numbers and Math for Kids; Shybi; Brain Games for Kids; Think!Think!; Jewel Quest; Pixel Art;

Algorithm City; Brain Dots; Coding Games for Kids with Animals; Coding for Kids;

Lightbot Code Hour; Rube Goldberg Machine Tricks; Azbuka Learn Serbian Cyrillic; ICT-AAC Koiko je sati (What's the Time?); ICT-AAC Matematički vrtuljak (Mathematical Carousel); and many others, which can be found by searching the app Play Store on the Android operating system mobile phone. For example, you can search by typing: 'PEGI 3 science kids'.

At the end of the workshop, it is important that all participants tell and exchange their impressions of the applications they tested.

WORKSHOP 9

THE FINAL WORKSHOP

OUTCOMES	• Children apply the basic rules of safe online behaviour. • Children get an insight into the questions from the KWH table: questions about the Internet to which they got or did not get answers.
DURATION	60 minutes

THE COURSE OF THE WORKSHOP

Activity 1: What we have learned about the Internet: yes/no quiz

The facilitator announces that today they will do a quiz in an unusual way: they will answer the questions like they do in the game Fly, Fly. When the facilitator asks a question, those who think the answer is **YES – raise their fingers**, and those who think the answer is **NO – keep their fingers on the desks.**

After a few questions, or those which more children answered incorrectly, the facilitator stops and discusses them with children. Then, he/she continues reading the questions.

The questions:

- You can meet only your friends and mates online. NO – fingers down
- You can meet unknown people on the Internet, like in a big city. YES – fingers up
- You can meet both known and unknown people online if they have connected their tablet or a smartphone to the Internet. YES
- Children should search the Internet together with their parents or other adults. YES
- Children can learn a lot online, for example, how to make or draw something. YES
- On the Internet, you can find: your favourite music, cartoons and other interesting things. YES
- You should be online whenever you have Wi-Fi access. NO
- You go online only when you are alone, hiding from your mum and dad. NO
- When something online frightens or upsets you, you should tell your parents or other adults. YES
- You should use the Internet when your parents allow it. YES
- Children should play on a tablet or a smartphone before bedtime. NO

- You should play on a tablet or a smartphone together with an adult during meals. NO
- You should play on a tablet or a smartphone for two or three hours. NO
- You are a good friend on the Internet when you behave decently to other children and adults. YES
- You are a good friend on the Internet when you write offensive messages. NO
- You are a good friend on the Internet when you do not forward offensive messages or photos. YES
- When someone on the Internet asks you for your phone number or the name of your school, will you give it? NO

Activity 2: The KWH table column 'We have learned'

The facilitator puts the KWH table in a visible place. He/she reads the questions from the first column, which the children asked at the beginning of the series of workshops. For each question, decide together whether the children got the answer to it or not. The facilitator ticks the answered ones.

The facilitator reminds the children of the travelling notebook, which they, together with their families and with [the toy's name] can use to continue their search for answers to the questions that remained unanswered during these workshops or to any new ones they are interested in.

APPENDICES FOR WORKSHOPS WITH CHILDREN

APPENDIX 6

THE TECHNIQUES APPLIED IN WORKSHOPS FOR CHILDREN

1. The travelling notebook

The objectives of this technique comprise the following: making children's interests an integral part of their daily work in kindergarten or at school; connecting children and parents around the mutual task and developing a community within a group/class; children and parents performing collaborative activities; enabling children to apply the acquired knowledge and learn new things together with their family members.

The material you need: a toy and a notebook.

The toy should be a kind of a cute animal or a pretty fictional being (not a doll of a human). This toy becomes an imaginary friend, guest, etc. of the group/class. Children name it and write and draw about its experiences in their common notebook that will be travelling from one family to another.

Every day, another child takes the toy and the notebook home. Parents or other family members help the child draw or write in the notebook about that day's events and the experience the toy had in his/her family. The child is free to choose any topic to illustrate or write about.

The next day, in kindergarten/at school, the child with the toy and the notebook shows his/her drawing or reads and tells something about the toy's experience in the host family (the child might need help with reading). After that, another child takes the toy and the notebook and so on, day after day, until all the children from the group/class get the opportunity to 'host' the guest.

This activity takes place independently of the workshops' implementation, though it serves as a connector between a family and an institution trying to provide children with basic knowledge on the safe use of the Internet. Actually, the toy is a fictional character whose experience will be used to talk to children about safety on the Internet.

Informing parents about the 'travelling notebook': before the concept of the travelling notebook is introduced, it is necessary to explain to parents the purpose of this activity – we want to develop a related and caring community within the group/class, to connect learning to the interests of a child. The notebook will represent children's views and no one should be worried about the content and the way it is arranged. There are no correct or false answers; it is important that children draw or write something (if they can write). The stories may include imaginary events or real, interesting ones. Parents or other adults, such as older brothers and sisters, can help the child write something, but no force should be applied. This is not must-do homework.

The toy's experiences will be used to talk to children about the safe use of the Internet. We expect that the notebook will contain things related to the workshops, but also those related to other children's interests. Every day one child takes the toy and the notebook home and brings them back the next day, so that another child can take them. The activity is repeated daily, regardless of whether the workshop is implemented on that day or not. Occasionally, the facilitator may also use the

notebook to write something in it.

Make arrangements with parents about who wants to host the toy first.

The place where the toy and the notebook are kept while in kindergarten/at school: Define with children the place where the toy and the notebook are to be kept while the children are in kindergarten or at school. Together with the children, make a board with all their names. Place the board at a child-friendly height so that they are able to put a label by the name of a child who keeps the notebook and the toy. Over the weekend, the toy and the notebook stay in kindergarten/at school, and on Monday the activity is continued. When children are in senior classes, usually after the second or the third grade of primary school, the toy is excluded; it is enough to have just the notebook.

2. The table: We know – we want to find out – we have learned (KWH table)

The aim of this technique is to plan learning about a certain field or topic together with children and in accordance with their interests.

Draw a table on thick paper (or a sheet of packing paper) with four columns. Fill in the column headers like this:

- 'What we know about ... (insert a subject of interest, in this case it is the Internet)';
- 'What we want to find out about the Internet';
- 'How to find out about that?'Write down the sources of knowledge here: Talk to children about where they can learn something and who/what could teach them;
- 'What we have learned' You fill it in upon completion of the learning process on the chosen topic or interest, i.e. during the last workshop. You can check together whether children found the answers to their questions from the second column and write down what else they learned.

This technique is in line with children's interests; it fosters active attitude towards one's own learning and plans it. It can be a starting point for developing projects with children or learning through research.

It is important to allow children's authentic curiosity in asking questions and together with children search for as many sources of knowledge as possible. Sources of knowledge (the third column) could include other children and adults from the family, institution, surroundings... various institutions, books, encyclopaedias, the Internet.

APPENDIX 7

THE CARTOONS PRESENTATION

Four short cartoons for children were produced within the project Safe Family Net. The suggestion is to present them to children (they don't have to watch all of them at once), watch cartoons together and discuss them.

The first three cartoons are intended for children aged 7–8, while the fourth is suitable for children aged 4–6. All four videos have a common idea: a parent or a peer-educator is a person of trust who can protect children and help them learn about the digital world, understand its rules, advantages as well as potential hazards, just as they do in the real world. Children need to know that adults are there to help them grow up safely and encourage them to use many opportunities for learning, playing and development provided by the Internet, but also to be careful and react to unpredictable situations in the appropriate way.

The cartoons are designed to show the problem in virtual space, and then teach children how to solve it with the help and guidance from parents or educators.

Each cartoon begins with a scene from real life that flows into the virtual world. The merging of the virtual and real worlds is clearly shown, and by establishing a parallel between them, it is emphasized that similar rules apply to them.

Themes and titles of cartoons:

1) Theme: Personal information and protection *of privacy on the Internet. Title: You can always tell everything to adults from your family.*

2) Theme: Nice behaviour on the Internet. Title: *It's nice to laugh with someone, but it is awful to laugh at someone.*

3) Theme: Protecting children from unwanted content and Internet predators. Title: *Not everyone playing with you is your friend.*

4) Theme: Cooperation of parents and children while using the Internet. Title: *Play safe. Learn safe. Ask how.*

The cartoons are available on the link:

https://digitalni-vodic.ucpd.rs/crtani-filmovi/

APPENDIX 8

NOTICE FOR PARENTS

Dear Parents,

COME AND JOIN YOUR CHILDREN EXPLORING AND LEARNING WITH THE HELP OF DIGITAL TECHNOLOGY!

Our goal is to exchange experiences and help children learn about constructive, creative and meaningful ways to use digital technology.

You don't need to have any background knowledge or experience in digital environment. If you already use a smartphone and have access to the Internet, it will be more than enough. Prepare your phone by installing Viber and leaving some free memory space in order to install two more apps. Bring a charged smartphone/tablet or join someone who will bring it and get ready for a small digital adventure!

The workshop

'CREATIVE USE OF DIGITAL TECHNOLOGY'

will be held

on _____ in _____.

The workshop was created during the project *Safe Family Net*, launched by UNICEF and Telenor Company, and implemented by the Ministry of Education, Science and Technological Development and Užice Child Rights Centre.

Register at your educator/teacher: _____.

For parents who are able and willing to help:
If you are skilled in using digital technology, your help will be welcome. Contact the educator/teacher for further details on cooperating in the workshop preparation.

NOTES

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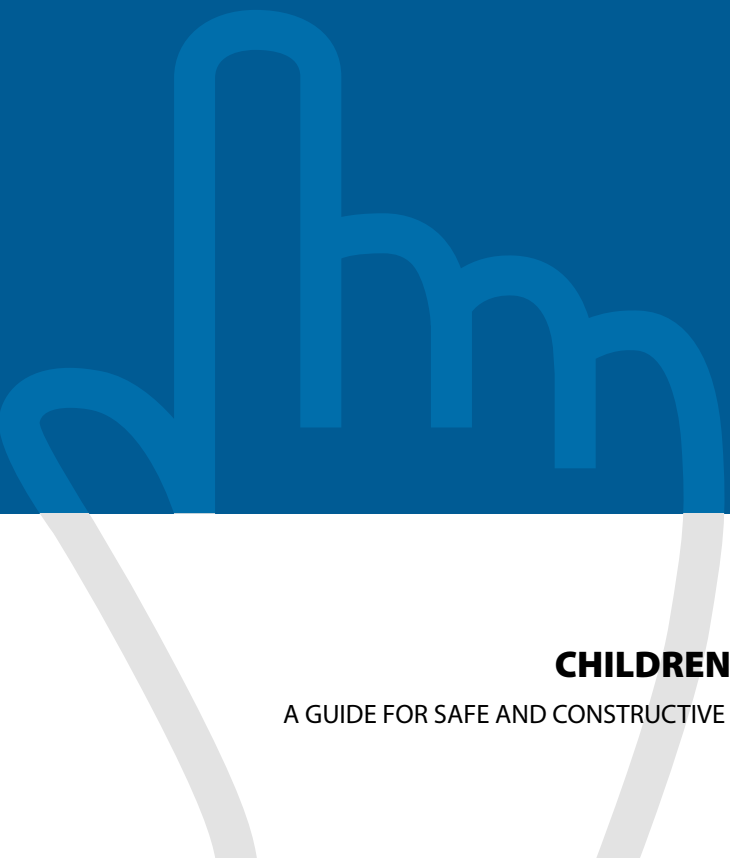

CHILDREN IN A DIGITAL AGE

A GUIDE FOR SAFE AND CONSTRUCTIVE USE OF DIGITAL TECHNOLOGIES AND THE INTERNET