Abstract: Marketing in the digital age is driven by software and algorithms, and is characterized by sociability, networking and personalization, which make children profitable targets for the advertising industry. Relying on a survey on UNICEF’s U-Report platform registering children and youth, we wanted to examine whether young internet users in Serbia are aware that their personal data are revealed for advertising purposes and if they understand the digital marketing techniques that they are exposed to. Given that more than half of the survey respondents opened their accounts on social media before the age limit, that most of them share their personal information online and are largely indifferent to cookies on the websites they visit, it does not come as a surprise that young internet users in Serbia become an active target of advertising, which is often unwanted or inappropriate for their age. Bearing in mind the multidisciplinary nature of the topic, the recommendations for a variety of stakeholders, from publishers to creative industries and parents are given in the concluding remarks.

Keywords: online advertising; social media; data privacy; children; Serbia.

Introduction

Children are of incredible interest to businesses. They are the largest and most powerful consumer group; they are more susceptible to advertising and marketing techniques; and their preferences and behaviors are more open to influence and manipulation. In many ways, they are the ideal audience for the new digital economic paradigm, in which companies possess tremendous amounts of information about individuals’ digital behavior that can be used to shape their online activities.¹

The expansion of the internet towards children is multi-layered. We have been witnessing user expansion because children are the fastest growing online audience (representing 40 percent of the total number of new internet users in 2018) and spending more time online (one-third of daily internet users).\(^2\) Subsequently, there has been a noticeable expansion of online content as 80 percent of children use, for example, YouTube regularly, making it the largest children’s internet platform. Finally, there is a proliferation of platforms in a form of children’s cable channels and carriers, video on demand (VOD), internet browsers and social networks. Throughout the internet expansion, children are mostly in the role of the recipient of the advertising content offered to them in various media forms whereas the parents are direct purchasers of goods advertised online, firstly viewed by the young audience without or with limited purchasing power. Therefore, digital marketing is strong in the field of acting upon children’s desires and needs, making this the topic of contemporary scientific discussion.\(^3\) The World Health Organization (WHO) defines digital marketing as “promotional activity, delivered through a digital medium, that seeks to maximize impact through creative and/or analytical methods, including:

- creative methods to activate implicit emotional persuasion, such as building engagement in social networks; using immersive narratives or social-entertainment-and humor-based approaches; using “influencers” popular with children, such as YouTube “vloggers” (video bloggers); augmented reality and online games;
- or analysis of emotions, responses, preferences, behavior and location to target specific groups, individuals and moments of vulnerability or to maximize the impact of creative methods.”\(^4\)

Since children have been identified as particularly vulnerable to online manipulation\(^5\), it is necessary to start our paper by mentioning the legal aspect of this topic. The digital welfare of children is a constant concern of many international organizations. The United Nations (UN) and the WHO are the two leading organizations researching and managing the relationship between marketing and children. The United Nations Children’s Fund (UNICEF) and professional sectors at the WHO actively monitor the activities of advertisers on the internet and continuously provide policy recommendations for advertisers, parents, teachers and other stakeholders that can influence the development of children. The UN Convention on the Rights of Children is the starting point for children’s rights in the digital world. Namely, “children’s rights and principles form the analytical framework for evaluating the existing

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\(^5\) Cf. UK House of Lords, *Growing up with the Internet*, Communications Committee report, 2017.
regulatory protections for children in the digital environment.” The topic of online children’s privacy in the online environment is one of the main questions for marketers as the regulation often lags behind the development and proliferation of digital channels. The collection and monetization of children's personal data has been regulated in the United States (USA) since 1998, when the Children's Online Privacy Protection Act (COPPA) was adopted, an upgraded version of which came into force in 2013. The European Union's General Data Protection Regulation (GDPR), which came into force in May 2018, focuses on data protection across all types of platforms and websites offered on the internet, and also contains strict rules designed to protect children from unlawful data collection, imposing sanctions on companies that do not respect them. With the introduction of the GDPR, every website in or affiliated with the EU is obliged to explain its cookie policy to the visitors. Cookies, or small text files that websites place on devices, can store a wealth of data, enough to identify the website visitor without their consent, and are the primary tool that advertisers use to track the online activity of users in order to target them with ads.

Due to perceived weaknesses, GDPR is particularly strict when it comes to children; it requires that cookie policy, as part of the website Privacy Policy must be clear and legible for children: age-adjusted in simple words, containing accurate explanations and no legalese. These laws are “consistently focused on tracking, anonymity and parent-focused verification”, which leads us to the question of the parenting role. Parents could be required by law to take specific measures to organize the effective and safe “digital life” of their children.

Online advertising is completely different in comparison with traditional adverts: “it is interactive, as the child actively engages with the brand; it is also often ‘immersive,’ meaning that the child or adolescent is in a fully branded “environment” for an extended period of time; and most importantly, it is essentially different from other media because it can be built on the data about a child that allows it to be targeted to them based on their interests, locations, and demographic characteristics.” Consequently, digital marketing can be viewed as a combination of four main pillars.

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Firstly, today’s marketing is rapidly turning mobile, with the everyday migration of users from the traditional media to smartphones. Guided by this change, “advertisers are shifting from investment in traditional forms of advertising towards digital”\textsuperscript{13} as a result of which, since 2017 digital advertising has been outperforming traditional advertising on major markets.\textsuperscript{14} The other pillar is the change in “person-to-person” communication. Connected devices are constantly helping advertisers to know more about consumers. Using online data to find out more about the individuals is booming as the third pillar of the digital economy. The aim of this specific process is “the creation of a single view of the customer across platforms and media in order to serve advertising that is far more personalized, targeted, relevant and effective than ever before”\textsuperscript{15}. The last pillar is related to online tracking of customers in the context of data. Namely, data collection enables advertisers to find out “which segments view which ads, for how long, and what percentage of ad exposure is translated into purchase”\textsuperscript{16}. This way of using algorithms is becoming a topic for human rights activists and academic researchers\textsuperscript{17}, because it allows advertisers to take complete control of our digital activities. This pillar of digital marketing is particularly important for understanding the impact that digital ads have on children. Although some of the representatives of Generation Z, born from the late 1990s onwards, do have knowledge in the field of digital media literacy, most, and especially younger kids, are usually unaware of their rights in the digital environment.\textsuperscript{18} For example, various studies confirm that children aged 6 to 8 cannot differentiate advertising from editorial content\textsuperscript{19}.

As we mentioned in the review of the legal framework, many researchers have identified children as a vulnerable group of Internet users, but their “focus on the vulnerability of children online [mostly] has been [set] on safeguarding children against online sexual predators rather than marketers”\textsuperscript{20}. Marketers can also become a threat for kids in the digital environment, as they have spent $4.2 billion on children in 2019, of which digital advertising accounts for more than 25 percent\textsuperscript{21}. Furthermore, the gaming market is growing by 15 percent annually, thereby projected to reach $264 billion by 2023 while the global toy industry will generate revenues of $120 billion by


\textsuperscript{14} Cf. PWC & Super Awesome, \textit{Kids digital media report}.

\textsuperscript{15} Nyst, ed., \textit{Children and Digital Marketing: Rights, risks and opportunities}, 8.

\textsuperscript{16} Ibid.

\textsuperscript{17} Ibid.


2023, recording growth of 4 percent annually.\textsuperscript{22} And these are merely the costs of the visibly paid digital ads; it seems likely that there is a big influence of numerous ways of storytelling and product placement in digital contents, also known as embedded advertising. [The term embedded advertising is defined as incorporating the branded product into the media content\textsuperscript{23} (for example: dialogue between characters); this form of digital marketing is widespread\textsuperscript{24} and usually organized on the principle of sponsorship.] Embedded ads are present in various media content (e.g. video games, sitcoms, cartoons, movies, music videos) and children are more susceptible to this way of advertising than adults\textsuperscript{25}.

All the mentioned features of digital marketing are the specific alert for academics to continue research on how they affect children as internet users. This empirical study focuses on examining how children understand different marketing content on the Web and whether they are aware of the digital marketing paradigm and its various promotional activities.

\section*{Methodology}

The opinion pool entitled “The impact of digital marketing on children’s rights” was conducted in January 2020 for one month using quantitative research techniques, via an electronic survey on UNICEF’s U-Report platform (serbia.ureport.in). The U-Report is designed for teens and young adults between the ages of 15 and 30 and has been launched with the aim of integrating them into the beneficial changes of the community by allowing them to express their views and opinion on important social issues. The participation of children and youth on the platform is in line with the national Law on Personal Data Protection\textsuperscript{26}, i.e. voluntary and anonymous. The results were subsequently summarized and managed by UNICEF, and thus the concept of ethics in research with children was preserved\textsuperscript{27}. Out of 1,838 registered U-Reporters from all regions of Serbia, 1,320 participated in the survey, which makes for a response rate of 71.8 percent. The structure of the survey participants was dominated by women (69 percent), young people aged 15-19 (54 percent) and the Belgrade region (29 percent), which can be explained by the structure of registered U-Reporters. In the context of the conducted research, we have defined a child in accordance with

\begin{footnotesize}
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\item \textsuperscript{22} Ibid.
\item \textsuperscript{24} Ibid, 722.
\item \textsuperscript{25} Ibid.
\item \textsuperscript{26} \textit{Zakon o zaštiti podataka o ličnosti}, Beograd: Službeni glasnik RS, br. 87/2018, Član 16, 21 i 59.
\end{itemize}
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Article 2 of the draft of the Law on the Protection of the Rights of the Child (2019) as every human being between birth and the age of 18, and youth according to the National Strategy for Youth of the Ministry of Youth and Sports (2015) as the category of persons aged 15-30.

Through the research we wanted to explore whether children and youth in Serbia are aware of them, or whether they perceive and understand their exposure to them? Accordingly, the research hypotheses put forward are:

\[ H1: \text{Children and youth in Serbia are not aware that their personal data is collected for online advertising purposes;} \]

\[ H2: \text{Children and youth in Serbia do not understand the techniques and practices of online advertising.} \]

The conducted research consisted of 13 questions, the first of which referred to the consent to participate in the survey. The other questions were divided into two groups, the first of which concerned the purpose for which young internet users disclose their personal information and what type of data they most commonly share, the habit of taking quizzes on social networks, and the understanding of the cookie policy on websites visited. The second group of questions explored their understanding of various techniques and practices used in digital marketing, such as remarketing, in-application adverts, native advertising, influencer marketing, which make them potentially exposed to unwanted, age-restricted or adult ads.

The aims of the research are to (a) determine the extent to which children and youth are aware and understand that their personal data and online behavior are potentially exploited by advertisers and the digital marketing techniques used in relation to this; and (b) give recommendations to digital advertisers and publishers in Serbia, based on the research results, on how to improve children’s rights on the internet.

**Results and discussion**

Firstly, we wanted to examine whether children and youth in Serbia understand the age limits of creating a social media account. In Europe, most social media platforms have the minimum age of 16 (13 with parental consent) before a user can create an account. However, in practice, there is a habit of age fabrication on social media with children and many parents allow their children to lie about their age to

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28 Ministarstvo za rad, zaposljavanje, boračka i socijalna pitanja RS, Nacrta Zakona o pravima deteta i zaštitniku prava deteta.

29 Ministarstvo omladine i sporta RS, Nacionalna strategija za mlade za period od 2015 do 2025. godine.


circumvent age restrictions on social media sites\textsuperscript{32}. When asked in the survey: \textit{How old were you when you opened your first social media account?}, less than a half of the survey participants (43 percent) confirmed that they became active on social media aged 13 or above. Alarmingly enough, as many as 57 percent of children and youth in Serbia did so before the age limit, and 10 percent of them with only 7-8 years of age (Figure 1). In order to get more accurate results, the survey participants were also asked: \textit{Do you know how old you have to be to open an Instagram account?}. Instagram was chosen as it is one of the most popular social networks amongst youth\textsuperscript{33,34}, but also because it is associated with high levels of anxiety, depression, bullying and the “fear of missing out” among young users\textsuperscript{35}. One-third of the respondents said they knew (about) the age limit for opening an Instagram account (35 percent), whilst two-thirds did not know it (26 percent) or were not sure (39 percent), confirming the previous finding that children and youth in Serbia are mostly unaware of age restrictions on social networks.

![Figure 1: Age at the time of opening the first social media account](source: authors (n=1.320), single answer)

Having in mind that children may be more willing to disclose personal information on websites as they do not fully comprehend the underlying dangers\textsuperscript{36}, the

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survey included the question *To what purpose do you share your personal data online?* More than half of the young respondents said that they provide personal information in exchange for an incentive, such as access to compelling content - web pages (44 percent), music, video, movie (13 percent), while free internet (Wi-Fi), due to desire to socialize, came second (26 percent). In this regard, the research by Lwin *et al.* found that children driven by socialization motives had a lower level of concern about online privacy, and that children disclose more personal information when they are promised a simple incentive\(^{37}\). Speaking of types of personal data, the survey participants most often disclose their email address (56 percent) and social media account (19 percent), while in particular, a smaller group of respondents who confirmed that they reveal their mobile number (8 percent) and personal photo (4 percent) should be mentioned, given that these data are very susceptible to be compromised on the internet.

![Figure 2: Personal data that children and youth in Serbia most often share online](image)

*Source: authors (n=944), multiple choice answers*

In addition, when asked: *Have you ever played a quiz on social media?* most survey participants answered in the affirmative (81 percent), showing that they are uninformed about the perils of the Cambridge Analytica scandal\(^{38}\). And it is not just personal data hidden in the quiz that these third-party applications collect; they also plug into a social media host and collect information contained in the profiles and the connected friends, thereby supplying quiz creators with even more data, which makes children very vulnerable.


In addition to voluntarily sharing personal information online, children might often not even be aware of leaving a digital footprint on the websites they visit. Many data collection practices occur without children’s knowledge or consent, or under circumstances that do not empower them to understand and control the use of their personal information. In this regard, when asked the survey participants: *Did you consent to the cookies for the collection of your personal data?*, it turned out that more than half of them (55 percent) are aware of the existence and meaning of cookies, making their data available only to chosen websites. Yet, the other half either do not know whether they gave consent to websites collecting their personal data (8 percent), do not pay attention to cookies (12 percent) or are unaware that they have the functionality of collecting personal information (25 percent). Of concern here is the last category of respondents, one-quarter of young internet users in Serbia, who are not at all aware that the websites they visit collect, use and/or might sell their personal information to advertisers.

Despite the lower awareness of the role of cookies, most young internet users surveyed (74 percent) noticed that they were exposed to behavioral advertising techniques. The smaller group, one-fourth of them, responded to the question: *Have you noticed that you are sometimes “followed” by ads from the websites you have visited?* that they do not know about it or have not noticed this type of remarketing practice (26 percent). Remarketing (or retargeting) is defined as “a way to connect with people who previously interacted with the website, allowing to strategically position ads in front of these audiences as they browse Google or its partner websites”\(^39\). Under the prohibited remarketing categories, Google states that advertisers cannot use them to target ads, i.e. for the promotion of products or services to children under the age of 13\(^40\), which, based on the results of the research, indicates that this is followed in Serbia.

Apart from the remarketing practice, we have also explored if children and youth notice ads in mobile applications. Namely, in-app ads can have a negative ethical, privacy and health impact on young users, as mobile and application based advertising tends to be much more personalized, on-demand, and embedded within interactive digital experiences, thus making it harder to regulate due to design characteristics\(^41\). Despite the fact that as of September 2019, Google’s Play Store requires all of its publishers to provide additional information about the age group of the intended audience for every app, a most recent research by Meyer *et al.* (2020) aimed at analyzing applications played by children found out that particularly among free apps, highlighted a high prevalence of advertising using distracting features, manipulative approaches, and content that did not appear to be age-appropriate\(^42\). When it comes


\(^{42}\) Ibid.
to our research, most of the respondents (92 percent) answered affirmatively to the question: \textit{Do ads appear in the mobile apps you use (gaming, music)?}.

An increasing percentage of children aged 12–15 turn to Google for “true and accurate information,” but only a minority can correctly identify camouflaged forms of marketing such as native content and sponsored links\(^{43}\). Therefore, in order to examine if children and youth in Serbia can distinguish native advertising techniques from editorial content, we asked the survey participants: \textit{Do you differentiate between paid and standard texts on websites?}. As a result, one-third of them (35 percent) marked that they are not sure or not making a difference between these two types of content. Additionally, one-fifth of children and youth (20 percent) did not even know native advertising exists, defined as “a practice by which a marketer borrows from the credibility of a content publisher by presenting paid content with a format and location that matches the publisher’s original content”\(^{44}\). If we sum up these two categories of findings, we can conclude that more than half of children and young people in Serbia (55 percent) do not clearly distinguish paid from editorial content on portals.

Based on the research results so far, it should come as no surprise that most survey respondents (85 percent) noticed ads that were intrusive, not age-appropriate or aimed at adults. The most prevalent categories were weight loss ads, artificial beauty products, alcohol (beer), hookahs and bank loans.

![Figure 3: The most noticeable ad categories, not suitable for children and youth](source: authors, open-ended question (n=905))


Finally, the last survey question was dedicated to purchasing habits imposed by online influencers. Namely, if considered to have a high level of “social influence”, brands will engage influencers hoping to ride on their wave of influence to facilitate brand likeability. As influencer advertising has far less protection than traditional marketing, children rights organizations have expressed concerns about this form of digital advertising that primarily relies on children as marketers. When asked: *Did you want or buy something recommended by online influencers on YouTube or Instagram?*, most respondents in our research confirmed that online influencers did not impact them, because more than a half (53 percent) did not buy or want anything promoted or advocated, and one-fifth of respondents (24 percent) confirmed that influencers did not affect their buying choices. Do the reasons maybe lie in the fact that domestic influencers are not monetized by brands as opposed to the foreign ones?

**Conclusions**

Marketing today has become social, networked, omnichannel and highly personalized, managed by software and algorithms, making children worthy targets, profitable influencers or a legal obligation, whose breach can easily jeopardize an advertiser’s reputation. This perspective does not consider the real position that children occupy in the advertising ecosystem, their right to be protected from privacy violations, from the compromise of personal data and unwanted advertising.

When it comes to the impact of digital marketing practice and techniques on children and youth in Serbia, both hypotheses have been confirmed. Young Internet users are not aware that their personal data is collected for advertising purposes and do not sufficiently understand the techniques and practices of Internet advertising which they are exposed to. Given that more than half of our survey participants opened their social media accounts before the age of 13, that most of them consciously or unconsciously share their personal data online (including sensitive information such as personal photos, mobile numbers and social connections), and that they are oblivious to website cookies, it does not come as a surprise that children and youth in Serbia have become the active targets of behavioral and unwanted advertising, involving content that is inappropriate for their age.

The research results require action on the part of publishers, as huge amounts of first party (cookie-based) data are created on portals, enabling all forms of advertising. In addition, responsible development of websites and mobile applications, and independent setup of devices used by children are some of the ways to ensure children's safety online. The third recommendation is to enhance the parents’ digital literacy skills to create a safe digital environment for children. Parents should be able to balance between the online threats to children and the gratification of children's rights on the internet, as declared by the Convention on the Rights of the Child. Using

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45 Nyst, ed., *Privacy, protection of personal information and reputation rights*, 19.
dedicated devices pre-configured for children use, parent-approved apps (e.g. You Tube for Kids, Google Family Link parental controls), zero-profile browsers, turning on safe internet search and enabling ad blocking software are some of the ways to protect children in the digital world. The safe online environment is mostly in the hands of parents, as the advertising industry itself does not have the technology to detect minors who use websites and applications. However, this does not absolve them of responsibility, as data protection and violation remain one of the primary issues that need to be addressed in order to respect and support children's rights online. It is unlikely that data protection legislation (such as COPPA and GDPR) can address all the threats children face while enjoying their human rights online. Additional instruments, such as codes of conduct for responsible marketing and advertising to children imposed by brands and advertisers, can be useful in supplementing the data protection laws.

A recommendation for future research on the impact of digital marketing on children is to engage parents. The aim would be to identify their understanding of the need for a balance between the abuse of children's rights online and the denial of personal freedom.

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