



ESSAY COLLECTION

CHILDREN'S RIGHTS IN THE DIGITAL WORLD

UNICEF-ESSAY COLLECTION
CHILDREN'S RIGHTS IN THE DIGITAL WORLD

This essay collection about children's rights in the digital world consists of eight science-based essays.

Together with Leiden University and Kennisnet, the Dutch National Committee for UNICEF (hereinafter UNICEF the Netherlands) intends to use this collection to generate more awareness and offer prospects for action to make the digital world safer, fairer and more accessible for children.

July 2024

The essays feature contributions from Utrecht University, the University of Twente, Erasmus University Rotterdam, the University of Amsterdam, John Dewey College, the Dutch Institute for the Classification of Audiovisual Media (NICAM), the Authority for the prevention of online Terrorist Content and Child Sexual Abuse Material (ATKM), the Netherlands Authority for Consumers and Markets, Leiden University, Kennisnet and UNICEF the Netherlands..

FOREWORD

Children in the Netherlands use online platforms, communities and games on an enormous scale. Research has shown that children up to the age of six spend an average of 100 minutes a day on digital media. In turn, adolescents spend an average of six hours a day on their mobile phones, two and a half hours of which is spent on social media.

These figures clearly demonstrate that the digital world forms an integral part of the lives of children and adolescents. Whether they are at home, hanging out in the neighbourhood, or at the gym, they are constantly connected to digital applications and to each other via these applications. With developments in the field of artificial intelligence (AI) and virtual reality continuing apace, the digital world is set to become increasingly intertwined with their physical reality.

Children are very aware of the unparalleled opportunities offered by the online world. They are picking up skills in this world that are indispensable for the future that lies ahead of them. They stay in touch with friends and make new connections. The online world helps children develop their identity and offers them no end of entertainment.

While this digital world continues to develop at an incredible pace, safeguarding children's rights is lagging behind. And that is a huge concern, as the UN Convention on the Rights of the Child continues to apply in full, including online. In line with this Convention, all children must have access to the opportunities afforded by the digital world. This also means that they must be able to learn the digital skills they need for their development. By the same token, children must be protected from various risks, such as harmful content, gambling and online sexual abuse.

Together with Leiden University and Kennisnet, UNICEF the Netherlands is publishing this essay collection to expand the knowledge of children's rights in the digital world in the Netherlands. What these essays show is that the digital world is fraught with dilemmas that require us to strike a carefully considered balance between different children's rights. They also demonstrate that safeguarding the rights and interests of children in the digital world is a challenge that demands commitment from all involved. On the other hand, they prove that there are plenty of opportunities to make the digital world safer, fairer and more accessible for children. As policymakers, professionals and educators, it is up to us all to seize those opportunities.

I would like to thank the authors of the essays for working with us and sharing their insights in this collection. Their expertise and knowledge are at the cutting edge of digitalization and children's rights and will prove invaluable in helping us seize the opportunities and overcome the challenges we currently face. Together, we can make sure that every child can develop in a healthy and safe manner, starting from a solid base, including in the digital world.

I hope you enjoy reading these essays. Let's put these insights to good use.



Suzanne Laszlo
Director, UNICEF the Netherlands

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INTRODUCTION

Computers, mobile phones, tablets, interactive whiteboards, game consoles and VR headsets: digitalization forms an integral part of the world that children and adolescents inhabit. In the digital world children acquire online skills that will prove crucial for their future. On top of that, children use them to establish and maintain social contacts, find role models to emulate and access hours of entertainment.

The UN Convention on the Rights of the Child continues to apply in full in this digital world. According to the Convention, children are entitled to a secure, fair, accessible and educational digital environment that offers them the best possible start. Together with educators, professionals and the world of business, government has a duty to make sure that children enjoy the protection, support, help and resources they need, including in the digital world. To help plot the right course in this field, the UN Committee on the Rights of the Child¹ published its General Comment 25² in 2021 on the rights of children in relation to the digital environment. As a party to the Convention on the Rights of the Child, the Netherlands has a duty to comply with these guidelines for all children in the Kingdom of the Netherlands.

To gain more insight into the issues at play at the intersection of children's rights and digitalization, UNICEF the Netherlands has partnered with Leiden University³ and Stichting Kennisnet⁴ to publish a collection of essays. In these essays, experts reflect on a variety of issues involving children's rights in the digital world. The experts in question are affiliated with Leiden University, Utrecht University, the University of Amsterdam, the University of Twente, Erasmus University Rotterdam, John Dewey College, the Dutch Institute for the Classification of Audiovisual Media (NICAM), the Authority for the prevention of online Terrorist Content and Child Sexual Abuse Material (ATKM), the Netherlands Authority for Consumers and Markets, Stichting Kennisnet and UNICEF the Netherlands.

Grounded in scientific insight, each of these experts takes a closer look at the rights of children in the digital world. The experts also offer recommendations for public institutions, the world of business, professionals and educators. The purpose of this collection is to contribute to greater awareness, the exchange of knowledge and the development of policies geared towards making the digital world more secure, more accessible and fairer for children. These essays have been brought together in the 'Children's rights in the digital world' collection you are currently reading. Topics covered in this essay collection include digital inclusion, harmful content, digital resilience, the mental impact of social media, the datafication of education, legislation in the field of online sexual abuse and economic exploitation. To conclude the collection, we offer a reflection on the full scope of the topics covered in the essays. The authors were given completely free rein to express their knowledge and views in these essays.

UNICEF the Netherlands hopes that this rich collection of essays encourages people to exchange further thought on how we can join forces to better safeguard the rights of children in their digital environment, and in particular, on how we can use the insights presented in this collection in the development of effective legislation and regulations. After all, children have the right to play, make friends, learn and enjoy leisure time online, all in complete safety, without any need for concern. One element that cannot be overlooked in this is the experience of children themselves, because they are fully aware of what is going on in the digital world. There is a huge mountain to climb, but these essays reveal that there are plenty of prospects worth working towards.

1 The UN Committee on the Rights of the Child supervises compliance with the UN Convention on the Rights of the Child and its Optional Protocols by the 196 countries who have signed up to the Treaty. The Kingdom of the Netherlands is one of these countries.

2 A General Comment is an authoritative document containing a detailed explanation of one or more articles from the UN Convention on the Rights of the Child.

3 Leiden University has hosted a UNICEF Chair in Children's Rights since 2012, a special partnership between Leiden University, UNICEF the Netherlands and the Leiden University Fund. The purpose of this partnership is to gather and spread knowledge about children's rights, and to offer academic educational programmes for students and professionals from all over the world. This essay collection is part of that remit.

4 Stichting Kennisnet is a public organization for education and ICT and is committed to safeguarding the rights of children in the digital learning environment.



ESSAY 1

**CHILDREN ONLINE:
DIGITAL INCLUSION AS
A FUNDAMENTAL RIGHT**

Alexander van Deursen, Professor of Digital Inequality, University of Twente

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Children online: digital inclusion as a fundamental right

Author: Alexander van Deursen, Professor of Digital Inequality, University of Twente

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1. Introduction

The purpose of *digital inclusion* is to enable everyone to take part in the technological developments that shape everyday life. This participation facilitates equal opportunities in all areas of life, as well as input in the issues that matter. This essay focuses on digital inclusion of children. For them, equal opportunities are a fundamental right. To gain more insight into what any initiatives promoting digital inclusion for children should focus on, I will first revisit the origins of the concept of digital inclusion itself. In the 1990s, researchers and policymakers started highlighting the *digital divide* between people who did and those who did not have access to computers and the internet. Their assumption was that access offered a plethora of benefits, and that a lack of access put people at a disadvantage. Unfortunately, the issue of the digital divide faded into the background around the turn of the century: as the share of the population with digital access kept growing well past a majority, politicians and policymakers concluded that the problem was as good as resolved. Indeed, the term 'digital divide' seems to imply that there is a huge difference between two groups on opposing sides. However, research over the past two decades has emphasized that any differences manifest on a spectrum, with people who use technology for most everyday tasks at one end, and people who never use technology at all at the other. As the differences observed are relative, researchers prefer to use the term 'digital inequality'.

Scientific insights over the past two decades have dragged digital inequality back into the spotlight. Many national and international policy agendas refer to pursuing digital inclusion: a more positive annotation that stresses the importance of taking part in digital society. Even so, it must once again be noted that this term does not suggest an absolute schism between inclusion and exclusion. Besides inequalities in the

ownership of devices and connections, the emphasis has shifted towards resolving new dimensions, such as improving internet skills or encouraging use of the internet. Unfortunately, this reveals an entirely new flaw: in this train of thought, the concept of the 'internet' is mainly limited to the use of websites and social media. This is an aspect that obviously cannot be ignored, but at the same time, researchers and policymakers need to realize that the society we live in is witnessing a growing range of technological developments, such as the Internet of Things and applications involving artificial intelligence. Consequently, the field of play in which children are active is set to become increasingly complex. What we take the internet to mean today could not be more different from a decade ago and will be entirely different again in another ten years' time. The activities and interactions in which our children engage as part of their daily lives are taking place via an ever-expanding array of digital technologies, which together form our media landscape. It is imperative that initiatives in the field of digital inclusion take the increasing complexity and multimodality of this media landscape into account.

Following a description of the media landscape in which children operate (Part 2) and the positive and negative outcome thereof (Part 3), this essay will discuss the four stages children need to go through to be able to make optimal use of their media landscape (Part 4). 'Optimal' in this context means achieving a positive outcome in the main areas of everyday life, as well as the ability to avert any possible negative consequences. Also, because 'children' are by no means a homogeneous group, I will list the factors for each stage in which inequalities may manifest themselves. I will conclude the essay by offering several recommendations for promoting digital inclusion (Part 5).

2. Children in the media landscape: increasing complexity, dependence and impact

In their everyday lives, children are surrounded by digital technologies, a large share of which are simply taken for granted. Examples include the internet, social media such as YouTube, Instagram or TikTok, smartphones, smart devices (wearables), television and game consoles. These technologies are part of an extensive media landscape, as outlined in Figure 1. At the core of this diagram, there are different types of input, such as text, numbers, audio or video. The lower half represents the traditional side, in which this input is shaped by utilizing a certain structure or texture, such as grammar when forming a sentence. These structures are then broadcast in a meaningful format, such as a speech, photo or article. Finally, these formats are presented on a medium, such as television, radio or a newspaper.

The upper half represents the digital landscape. Here, input is structured or textured by coding it into a programming language, algorithm or artificial intelligence, for example. This code is then presented in a meaningful format on platforms such as apps, websites or games. Access is gained via media including computers, smartphones, tablets or smart devices. As well as analogue and digital media, we also have converged

media. These include smartphones that combine phone functionality with a camera, web browser or diary.

Whether consciously or subconsciously, and whether intentionally or unintentionally, children are exposed to many components of our media landscape. In fact, the media landscape forms an inescapable part of their daily lives and development process. When attempting to understand digital inequality, it is important to consider the composition and quality of the components in the landscape. Ideally, these should form a coherent, meaningful and structured composition that leads to the desired outcome. If this is not the case, the composition can be adjusted. For example, when a child tries to reach out to similarly-minded people on Facebook but is unable to find any, they can try Instagram, or when homework is more and more frequently discussed in Minecraft, this partially serves to replace WhatsApp. These shifts result in a dynamic media landscape that is susceptible to change. As they grow older, children become increasingly autonomous in this landscape, and they will make their preferences for certain media, activities or content more keenly felt.

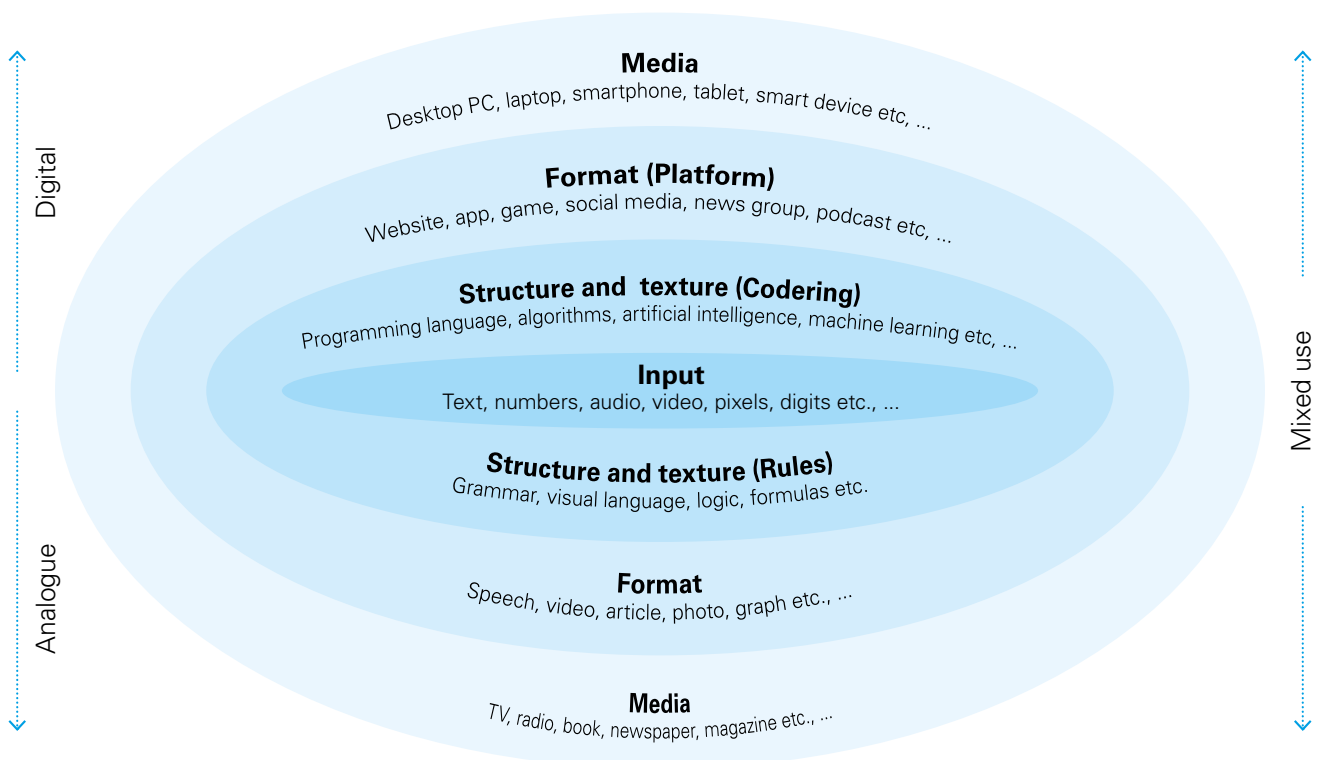


Figure 1. Media landscape (Van Deursen & Helsper, 2021).

3. Positive and negative outcomes of the media landscape

The misconception that exposure to digital technology means that children are digitally included by default disregards the diversity and inequality that exists among children and ignores any potential negative effects. As this essay progresses, it will become clear that there are major differences in the extent to which the media landscape contributes to the lives of children. The potential opportunities are huge, but many children make little or no use of them. Given the ever-increasing impact of the digital world, this is a concern. That is because there is a close connection here to social inequality: structural and recurring patterns of the inequal distribution of opportunities, goods and rewards. Social inequality not only serves as the foundation of digital inequality; the increasing complexity of technology and our increasing dependence on it reinforces it (Van Deursen, 2023).

Despite the importance of participation in the media landscape and in digital society, little or no research has been carried out into the **positive and negative outcomes of technology**. It is unclear, for example, whether inequalities among adults — whether socio-economic or social-cultural — manifest in the same manner among children (Helsper, 2020). One thing that is certain is that the impact of technology on the lives of children is a hot topic in the public discourse. In debates of this kind, the emphasis is often on the negative effects, which receive a relatively large amount of attention in research on children. In research on adults, this focus shifts more towards positive outcomes. Generally speaking, these positive effects are framed in a narrative of progress, with producers often stressing new opportunities while simultaneously overlooking any negative effects, despite researchers sounding a note of caution, albeit in a nuanced or specialist manner (van Deursen, 2023). In any case, theoretically derived categorizations suggest that both positive and negative outcomes of the media landscape occur in various areas of the daily lives of children (Helsper, 2012): economically, in relation to finance and education; socially, in relation to personal and formal networks; culturally, in relation to identity and engagement, and personally in relation to health, leisure and self-development.

The positive outcomes of media use into which research has taken place often relate to the cognitive development of children. This is improved by greater motivation to learn, for example, or because children remember any information they encounter on various media and platforms more easily. Other examples include better understanding of the physical and mental development children go through, making online friendships and staying in touch with friends via social media, the ability to express themselves through their own creations or videos on TikTok, or increased participation in social and political life (Cortesi et al., 2020). The broader negative outcomes generally relate to exposure to potentially harmful content and contacts, or harmful behaviour such as cyberbullying, intimidation or criminal activity (Livingstone, Mascheroni & Staksrud, 2018). Other effects that have been identified include poorer performance at school due to shorter attention spans (Carlson, 2005), diffuse learning habits (Chen & Yan, 2016; Wei et al., 2012), disturbed sleep (Cain & Gradisar, 2010), or having less time to study and do other activities that support cognitive development (Krischner & Karpinski, 2010). The public debate often focuses on regular use of digital technology and the negative impact on the psychological wellbeing of children. Such connections have indeed been established in a range of studies, but shortcomings in the research methods used cast doubt on these links, resulting in a lack of consensus (Orben & Przybylski, 2019).

The above framework illustrates that the media landscape has both positive and negative outcomes on children. This suggests that digital inequality cuts both ways: differences in both positive and negative outcomes determine the resources available to a child and their position in society. What this means is that digital inclusion ought to focus on creating opportunities, and on averting undesirable outcomes. To illustrate what lies at the basis of achieving positive and negative outcomes, I refer to Figure 2. The blue boxes are based on the essence of Van Dijk's 'Resources and Appropriation Theory' (2005). This theory posits that technology is appropriated in four key stages: (1) attitude

and motivation, (2) material access, (3) digital skills and (4) use. Together, through complex mutual interaction, these stages determine the outcomes and offer a useful starting point for developing digital inclusion interventions. The figure also reflects the relationship with social inequality. The positive and negative outcomes determine the resources available to children or the social context in which they find themselves. Alongside personal characteristics, these factors in turn influence the four stages of access and any positive and negative outcomes: a feedback loop that illustrates the recurring relationship between social and digital inclusion.

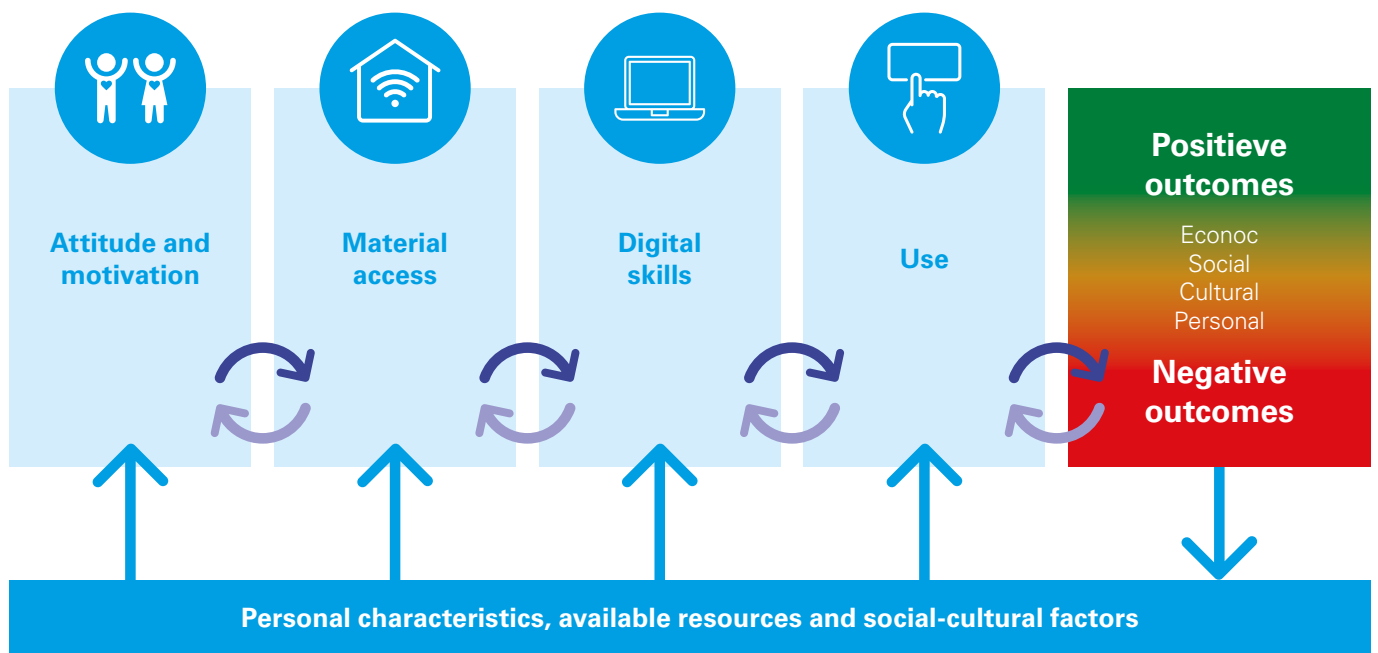


Figure 2. The process of media appropriation, factors that influence this and positive and negative outcomes.



1. Attitude and motivation

Having a positive attitude towards a medium or platform, as well as the motivation to use it, are the first preconditions. Children may not be able to see the need for an application or platform, may not have the inclination or time to use it, may reject it because their friends or parents discourage them from using it, may not have the money they need to buy it, or may have had a bad experience with similar applications. Such considerations play a particularly important role when first accessing and buying a medium or platform and in the acquisition of the necessary skills (Dutton & Reisdorf, 2017). On top of that, it has been shown that children's negative attitudes are further reinforced when they are unable to take part due to material, social or cognitive limitations (Huang, Robinson & Cotten, 2015). The latter can lead to this stage becoming an even greater barrier. The little research that has focused on attitudes and motivations has demonstrated that children with more highly educated parents have a more positive attitude toward technology (Zhao, 2009). Aside from cultural factors, it is likely that psychological factors also play an important role.



2. Physical and material access

This stage relates mainly to the composition of the media landscape. The available data on children mainly relate to whether they have internet devices and connections at home. The fact that there is huge disparity in this area became even clearer during the coronavirus pandemic. Low-income families struggled with a lack of equipment to enable all children to participate in home schooling. In addition, this stage relates to material access, or in other words: the quality and safety of the main and peripheral equipment used, software, subscription plans and connections. Take smartphones, for example: a relatively cheap way to use the internet. Even so, they fail to serve as a replacement for desktop or laptop computers, because advanced applications and activities are trickier to run on them (Van Deursen & Van Dijk, 2019). Despite the countless location and communication apps they come with, smartphones are less suitable for homework, for example. In the media landscape, each medium or platform has its own specific characteristics. A more limited composition prevents the potential diversity of activities and the associated outcomes.

There is a strong correlation between differences in physical and material access for children and the financial situation of their families. Powerful computers for education or studying are expensive, and low-income families own fewer of these devices than wealthier families (Statistics Netherlands StatLine, 2022). On top of that, children from higher-educated families have more access to media and platforms in their spare time and use more advanced smartphones (Vigdor, Ladd & Martinez, 2014). Older children use better mobile phones, and do so in more locations (Mascheroni & Ólafsson, 2018). Aside from income, education level and age, it is likely that factors such as ethnicity, health and neighbourhood characteristics play a role, as may family composition and the backgrounds of the parents (Lauricella & Cingel, 2020; Nikken & Oprea, 2018). The model in Figure 2 illustrates that limited material access has consequences for the steps that follow. For example, poor-quality equipment not only holds children back from gaining the experience they need to develop digital skills (Enyon & Geniets, 2016); it also prevents them from carrying out certain activities.



3. Digital skills

Digital skills play a key role in the process of access and are essential for translating use (the next stage) into achieving positive or preventing negative outcomes (for a review, see Livingstone, Mascheroni & Stoilova, 2023). Many digital inclusion initiatives focus on teaching these digital skills. Besides the skills needed to consume information offered on the internet, communication skills and content creation skills are also important (Van Deursen & Helsper, 2016). For all these skills, a distinction can be made between functional and critical aspects (Van Deursen & Helsper, 2020). These functional aspects are more about actively putting the skills to good use and using applications because they were designed by their producers. The critical aspects are not so much about use in itself, but about awareness of the context in which applications are designed and used, and the impact on the individual and society. For more, see the text box below.

From a *functional* perspective:

- operational skills involve knowing which buttons to push to operate hardware and software;
- information skills involve defining search terms and selecting information on a website or in an app, for example;
- communication skills involve exchanging online messages, sharing knowledge, as well as creating online profiles, deleting messages, blocking contacts or configuring privacy settings;
- content creation skills involve the ability to produce attractive content, in the form of text, audio, photo, video or any combination thereof, for example.

From a *critical* perspective:

- operational skills involve understanding that the way in which online applications are designed has consequences on how users behave;
- information skills involve assessing online information or understanding that algorithms decide the way in which information is presented;
- communication skills involve the ability to flexibly adjust one's behaviour in online situations, assessing the psychological and social impact of an online message, or making ethical considerations when tagging, sharing or posting a photo or video;
- content creation skills involve understanding that content will be popular if it complies with certain standards, values and stereotypes.

Functional skills are not merely a precondition for critical skills. Equally, critical skills are not acquired automatically when children improve their functional skills. Vice versa, a child may understand perfectly well what an algorithm on a social medium seeks to achieve, without possessing the functional skills to protect their autonomy. Unfortunately, little valid research is available into the digital skills of children, especially when it comes to critical skills. The findings that do exist show that children have mainly mastered functional operational skills, but that more attention needs to be given to searching for information, selecting it, processing it, and above all, critically assessing it — recognizing fake news, for example (Van Deursen et al., 2023).

Children blindly repeat information way too readily and are highly vulnerable to the risks of misinformation and disinformation. Their critical communication skills are generally underdeveloped too (ibid). The way children present themselves online also leaves much to be desired, and they struggle when it comes to understanding that messages on social media are presented to them in a specific, targeted manner (ibid).

In terms of content creation skills, the many examples of successful vloggers appeal to the imagination. That said, the lion's share of content created by children is most likely never read or viewed. Children who are able to share their opinions or creations publicly help set the topics and agenda of any debate. Current research and policies focus mainly on teaching functional operational and information skills. That focus has recently shifted to functional communication and content creation skills, but critical aspects continue to receive far too little attention.¹

Differences between children are linked to their socio-economic and social-cultural background, both for functional operational and information skills in general, and for all critical skills (Helsper, 2020). The level to which both the parents and children are educated plays a role in this (ibid). In addition, survey research has shown that older children have a slightly higher level of information skills, that girls possess better communication skills, and that boys are more skilled when it comes to creating online content (ibid). One important thing to note is the role played by traditional literacy — the ability to read, write and understand text and numerical data. A high level of literacy is a good indication for both the possession of adequate functional skills and critical digital skills (Van Deursen & Helsper, 2020). Bear in mind here that children of functionally illiterate parents have a greater chance of being functionally illiterate themselves as they grow up, and that in the Netherlands, more than 2.5 million people aged 16 and over struggle with language and/or maths (Reading and Writing Foundation, 2018).



4. Use

After motivation, material access and skills comes the final stage: using the internet. In terms of volume, it can be argued that the proliferation of platforms and devices has resulted in children being connected anytime, anywhere. What is especially interesting here is the activities in which they engage in the media landscape. In all the areas mentioned above, media play an important role in the lives of children. Social media, for example, serve as their main way to stay up to date with current affairs (Robb, 2017). Besides consuming content for news, self-development or learning, children create their own content, write a blog, run a website, or post photos, videos or music files — all activities that are important in terms of the self-expression, creativity and citizen participation of children (Livingstone et al., 2011). Digital inequality research into this stage mainly focuses on differences in performing meaningful or capital-enhancing activities. Navigating the media landscape leads to differing patterns of use, with some patterns leading to more favourable or harmful outcomes than others.

Just how often children use media depends on their age. Younger children spend less time on the internet, for example, and face restrictions in how they can use it compared to older children. They often remain subject to more parental supervision (Nikken & Schols, 2015). When it comes to the type of use, we have seen that children with a higher socio-economic status perform more capital-enhancing activities, experience fewer risks (Helsper, 2020) and are better able to avert any negative outcomes (Scheerder, Van Deursen & Van Dijk, 2019). Children with highly educated parents perform a relatively large amount of information-related activities, for example, while older children perform a relatively large amount of commercial and social activities (Helsper, 2020). That said, older children are also involved in more interactions that are potentially dangerous (ibid). Furthermore, girls perform fewer activities online, but are more active on social media (ibid).

1. Key objectives for digital literacy are currently being developed. Once laid down in law, these will be mandatory for schools (Only available in Dutch). <https://actualisatiekerndoelen.nl/digitalegelettertheid>

4. Conclusion and recommendations

Children form a heterogeneous group in which personal characteristics and socio-economic and cultural factors all influence the four stages they go through when using each of the platforms or media in their media landscape. As such, big differences exist between children in terms of the positive and negative outcomes of their media landscapes. These differences present a major source of inequality. The growing number of opportunities in the landscape reinforce this inequality, as do greater dependence and complexity. As equal opportunities are

regarded as a fundamental right for children, this means that digital inclusion initiatives are necessary, both to promote participation and to achieve positive outcomes, and to protect against and avert the risks. Children need support to be able to use their media landscape in a responsible and positive manner — support that appears to not be easily available to many. When it comes to setting up initiatives, the following considerations ought to be taken into account:

1. Initiatives must broaden their focus beyond the traditional concept of the 'internet'. New technologies, such as artificial intelligence or augmented reality, are causing a major shift in the way in which children engage with society and interact with one another. It is no longer so much about being 'online', but rather about the different 'paths' children take through their own mediated reality or media landscape. The composition and quality of all components of this landscape play a key role in this. Together, they should ideally form a coherent, meaningful and structured composition. Conceptualizing and measuring such compositions is a challenge for researchers.
2. Any initiatives must account for the fact that children do not form a homogeneous group. The differences between children that cause digital inequality can serve as the guiding principle in defining groups of children with similar needs. Any initiatives should take the challenges children experience in economic, cultural, social and personal wellbeing terms as a starting point. For an intervention to offer practical outcomes and to be set up in a natural way, we need clear insight into the circumstances children in each of these groups find themselves in. As part of this, it is recommended that initiatives take possibilities and opportunities as their starting point, instead of focusing solely on risk mitigation.
3. The ability to read, write and understand text (including numerical data) remains essential in a changing media landscape and forms the basis for learning digital skills. Initiatives to improve digital skills could be paired with educational programmes to improve the ability to read and write, for example. A challenge lies ahead for researchers in terms of better interpreting the relationship between traditional literacy and digital skills. Qualitative research forms an indispensable part of this, particularly in relation to the cumulative issues this relationship causes in the everyday lives of children. It is unclear how exactly these two elements are linked, and how one form of literacy enhances the other. Interventions in schools could focus on reading aloud from books (with rich language) about experiences on the internet, for example. After all, a child does not necessarily need to be at a computer to learn how to navigate the media landscape more wisely.
4. Research is required to establish which stage(s) of access present the greatest obstacles to which media and platforms, and which factors contribute to this. As every medium, platform and stage of access has its own limiting factors, a proper qualitative and quantitative approach is required to untangle this web of interaction. This will not be a simple task, because little is currently known about the very youngest children, for example, even though this group is already consuming media.

- A positive attitude towards and motivation are the first preconditions for using a medium or platform. These factors can be improved by making children aware of the opportunities their media landscape offers them. Not all children can see the potential opportunities or understand how they might benefit. On top of that, children need to be aware of the potential risks, and the options available to them to avoid and mitigate these.
 - In terms of physical and material access, a minimum threshold to which every child is entitled may serve as a good starting point. One example could be a quality laptop with software to support their learning processes. In fact, this is the basis of the one-laptop-per-child initiative, in which individual laptops are being made available to schoolchildren. Even so, the idea that broadening physical access among children will improve their access to opportunities for learning and reduce inequalities is shortsighted, as it not only ignores the other stages, but also the social context factors in which children find themselves.
 - In terms of skills, teaching functional and critical skills must play a key role in all initiatives. A deficit of these skills not only leads to fewer positive outcomes, but also leaves children more vulnerable to negative outcomes. Critical skills barely receive any attention today, which is concerning, as these skills are crucial to help children understand and autonomously manage their media landscape.
 - When it comes to use, the final stage of access, the public discourse is all too quick to focus on limiting screentime, even though the research is not consistent when it comes to the effects of media on children. A more important factor would be for children to know what safe and responsible behaviour looks like, and which activities are desirable — meaningful and capital-enhancing — or dangerous. Content creation, for example, offers many opportunities when it comes to the development of self-expression and creativity.
5. The above stages must be addressed simultaneously as part of any intervention. Figure 2 demonstrates that they are sequential and conditional in nature. This does not mean that attitude and motivation should be the highest priority, with material access coming second, and improving digital skills third. Instead, it means that children will not be able to learn skills in an adequate manner if they lack motivation, for example, or if they lack suitable equipment.
6. The development of digital inclusion initiatives for children requires a multi-stakeholder approach. This should include a range of actors and institutions in our society, such as policymakers, public administrators, politicians, schools, the ICT sector and publishers of software and content, as well as parents. These actors could be coordinated by the government, with the roles of each actor clearly defined and further developed. In doing so, it should be remembered that these actors will also need support themselves.
- a. **Policymakers, public administrators and politicians** have a responsibility to put the issue on the agenda, develop a vision regarding the digital inclusion of children, carry out a systematic diagnosis and propose a plan of action.
 - b. **Schools** play an important role in providing information and training to parents. Aside from that, they should take the lead in teaching functional and critical skills. For critical skills in particular, support in the home environment is not sufficient: it has been shown that there is an overlap between vulnerable children and those who have the least access to good support (Helsper & Van Deursen, 2017). Unfortunately, schools are too quick to assume that children learn how to use media through observation or games, and the skills that are covered relate mainly to functional applications used in schools themselves. This simply won't do. Schools can potentially play an important role in achieving positive outcomes, but equally in raising awareness of the potential risks and in avoiding negative outcomes. An open environment in which children feel free to ask questions and take part in discussions about the opportunities offered and risks posed by the media they use would be a useful starting point. To achieve this, teachers will need to receive the necessary training.

- c. Developers and producers** of media applications aimed at children need to take more responsibility. Specific guidelines for these actors should be drawn up to protect children, but also to encourage the right behaviour in children, and to help them develop critical digital skills. In addition, developers and producers are primarily responsible for developing inclusive digital environments for children, through compliance with accessibility requirements at the design stage, for example.²
- d. Parents** often struggle with their children's need with regard to media and need to be supported in helping shape their media landscape, taking into account these needs (Blum-Ross & Livingstone, 2016). Parents who are well-versed in using this technology themselves and who understand the opportunities and risks will be better able to support children. As such, it is important that they themselves are aware of how best to support their children (Livingstone, Davidson & Bryce, 2017). Besides knowing what their children need, parental supervision is essential. A lack of such supervision is more likely to lead to extreme use in children — especially in boys. For older children, it is advisable that parents continue having conversations about the opportunities and risks of the media they use.
- e.** When developing interventions, it is particularly important to make sure that **children** themselves are involved. After all, they know best which problems they face. Actively listening to children and engaging them in the development of interventions will also leave them feeling they were able to contribute to solutions. This will motivate them and may reduce any barriers they face in terms of participation.

In brief, *digital inclusion* means children having equal opportunities to take part in digital society. Unfortunately, this is nowhere near the case today, even in a developed country like the Netherlands. As such, it is high time we developed a thorough and systematic plan of action.

2 (Only available in Dutch) <https://www.kennisnet.nl/artikel/19951/5-voorwaarden-voor-digitale-inclusie-in-het-onderwijs>

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A range of authors were invited to provide the content of these essays. For that reason, the opinions and viewpoints contained in this essay are not necessarily the opinion of UNICEF the Netherlands.



ESSAY 2

THE RIGHT TO PROTECTION AGAINST HARMFUL CONTENT INCLUDING ALSO SOCIAL MEDIA

Tiffany van Stormbroek, director of NICAM, Kijkwijzer

The right to protection against harmful content, including also social media

Author: Tiffany van Stormbroek, Director of NICAM/Kijkwijzer

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1. Introduction

One in every five teenagers regularly comes across nasty or upsetting videos on social media, such as TikTok or Instagram. This usually happens suddenly, without prior warning. The images are posted on platforms — and creep into the lives of children — in their raw form, without any filter, context or explanation. Besides violence against animals and animal cruelty, children also see extreme violence, such as mass executions or bodycam images from a soldier that show him disarming other soldiers at close range before shooting them. Injuries and dead bodies also feature among the content that children might encounter on a daily basis. This type of frightening imagery from war zones and upsetting images of victims are not broadcasted on the eight o'clock news on TV because of careful editorial decisions on what constitutes journalistic merit, but they do find their way onto social media. There, they are able to reach children completely at random. Sure, there are

positive sides to social media too, with plenty of fun, informative, educational and entertaining videos. At the same time, thousands of children are being exposed to videos and personal accounts about self-harm and eating disorders. These are sometimes accompanied by images showing emaciated girls struggling with these disorders or the scars and injuries people have caused themselves. Parents often have no idea what their children are faced with on a daily basis, because this content remains invisible to them. If these videos were to be shown on television, in the same quantity, during daytime hours, there would be a massive outcry from parents, urgent questions would be raised in the House of Representatives, and an action plan would be whipped up in to time to protect our children. It is therefore high time for an age-rating system for social media, and for safeguarding measures to protect our children from this never-ending flow of harmful videos.



2. The platform determines the media diet

To many parents, the Kijkwijzer age-rating system used in the Netherlands serves as an informative tool to decide which films, series, programmes or video content to watch television, in cinemas, online, and on streaming services. However, on social media platforms, you do not get that choice. Instead, the algorithms decide which content users get to see, with upsetting or extreme content more likely to go viral and be actively offered to viewers. The result is an automatic proliferation of harmful content. That is an extremely concerning and undesirable development that is causing harm to our children. With the arrival of social media, the content children are exposed to is potentially more harmful. This harmful nature not only resides in the content of a few individual videos, but also in the algorithms that drive these types of platforms. When children and adolescents watch videos that show violence, eating disorders or discriminatory views, for example, these algorithms push more of that type of content their way. The lack of transparency surrounding these algorithms makes proper enforcement in this area difficult, and makes it harder to provide the right information. The platform determines the media diet of our children, as it were. On top of that, children, adolescents and adults alike are spending more time on social media due to the addictive effect of their algorithms. With a never-ending volume of videos tailored to their exact preferences coming their way, social media soaks up the attention of children, while becoming much more dependent on these media due to the interaction they have on them with their peers. Parents and other educators face an impossible task when it comes to making sure their children grow up safely in this online world. They have no insight into the never-ending stream of content that keeps children — and many adults — glued to their screens for hours on end, completely sealed off from their surroundings, watching videos that command their complete attention.

There is a growing chorus of voices — including that of GroenLinks MEP Kim van Sparrentak — demanding that we ban social media that allow users to scroll endlessly and that play videos automatically (2023, Van Sparrentak). Adolescents fear that the algorithms used by these media will expose them to more and more videos that cause them anxiety, shame or feelings of insecurity. As a consequence, they are not only calling for a warning before any upsetting imagery is shown, but also for information about the type of content, so that they can decide for themselves whether to watch certain content, set up a filter or continue scrolling.

Why are social media and video platforms allowed to keep offering their own stream of content to children? As early as December 2017, the question of whether we have created a monster in the form of social media was discussed on the *De Wereld Draait Door*, an early evening talkshow. The reason was that Facebook, then at the peak of its popularity with more than two billion users, had launched an app for children, called Messenger Kids. The guests around the table, Alexander Klöpping, Hans Schnitzler and Anne van der Krol, responded in unison: ‘Yes, we have created a monster’. Yet nothing has really changed since, other than the fact that even more — and increasingly younger — children are glued to their phones for more hours every day. There absolutely is a positive side to social media, as evidenced by what adolescents say about it themselves in Project Awesome (van der Wal et al., 2023). But that doesn’t mean we can turn a blind eye to the negative or even harmful impact it can have. These are genuine concerns that need to be addressed. What’s more, the solutions needed to tame this monster are already at hand. Proper regulation and enforcement are both elements of this, exactly as has been the case for all other forms of media in the Netherlands for over two decades.

3. The law

The 1989 International Convention on the Rights of the Child, also known as the UN Convention on the Rights of the Child (CRC), lays down the rights of children. One of these rights is protection against harmful content (Article 17 of the CRC). In other words, it is up to the government to ensure that children are protected from visual or audio content that is harmful to them. In the Netherlands, the Media Act protects children against harmful audiovisual images.

Responsibility for achieving this protection is delegated to the **Dutch Institute for the Classification of Audiovisual Media (NICAM)**, founded in 1999 in partnership with the government and the various audiovisual sectors, including broadcasters, film distributors, cinemas and so on. NICAM has since developed an age-rating system under the name Kijkwijzer, which literally translates as both 'the wiser way to watch' and 'viewing guide'. The purpose of Kijkwijzer is to warn parents and other educators up to which age a television programme or film might be harmful to children. This form of co-regulation ensures that age ratings and content pictograms are assigned to films and television programmes to clearly inform the public about the effects of the media in question, and to enable them to consciously choose what they wish or do not wish to watch.

In 2020, the Media Act was amended in line with the reviewed **European Audiovisual Media Services Directive (AVMSD)** from 2018, and as a result, video platforms and social media have also been covered by the act since. Media providers are required to take measures to protect children against content that is harmful to their physical, mental or moral development (see Section 4 of the Media Act). Uploaders are obliged to apply the Kijkwijzer system and to warn for any images that is potentially harmful to children. One condition for this is that these uploaders are based in the Netherlands, are registered with the Chamber of Commerce, have more than 500,000 followers and post at least 24 videos every year. Be that as it may, this group is not responsible for the most shocking of videos, which mainly originate from uploaders with few followers that are not based in the Netherlands. As a result, the current enforcement framework is failing to protect children online. On top of that, enthusiasm among uploaders based in the Netherlands to comply with the law is barely existent. After all, their fellow uploaders based in other countries or with fewer followers do not face any obligation to stick to the same rules. There are no collective regulations at European level, even though that is precisely what is needed for social media content, which simply transcends geographical borders.



4. The Netherlands can lead the way as a country, with Kijkwijzer as its compass

To effectively protect children and adolescents against potentially harmful content, it is important that responsibility does not reside solely with a handful of Dutch uploaders. Instead, the rules for all uploaders in Europe must be the same, and supervision and enforcement must take place at platform level. The platforms themselves need to make sure that children are not exposed to potentially harmful content, as is the case for broadcasters, for example. The international character of social media makes regulation at European level essential. Only by doing so can we take children seriously as users of these types of platforms.

Several of the major platforms are based in Ireland and are covered by the local regulation there. This year, Ireland will start developing a code of conduct for platforms, as well as regulations for supervision and enforcement. This is a welcome development, but more importantly still, we need to move toward a single, uniform regulatory framework at European level that applies to all video-sharing platforms and all uploaders, however small. This framework must be transparent and clear-cut, with the protection of children being its prime concern, and the regulations and assessment must be rooted in scientific research. For some time, NICAM has been recognized at European and international level as an example of European best practice when it comes to an effective system for the protection of minors against potentially harmful content. Aside from the Kijkwijzer system, NICAM is also responsible for providing information, development and supervision. NICAM has also developed Kijkwijzer Online, aimed at uploaders. The Netherlands can take the lead in Europe in this regard, with Kijkwijzer Online serving as its compass. Let's turn Kijkwijzer Online into an export product the Netherlands can be proud of.



Kijkwijzer in the changing media landscape

When Kijkwijzer was introduced in 2001, the aim was to inform parents about potentially harmful media content by means of pictograms, so they could set certain rules when it comes to media literacy. In other words, the system helps them prevent their children from watching certain content. This remains an important objective for younger children today. However, in the face of a changing media landscape and the emergence of digital media, this is no longer always the case for children from around the age of nine. Over the past few years, children and teenagers have become increasingly independent in their media consumption. Teenagers usually have access to their own screen, which they use to watch hours and hours of online content. Parents find it increasingly difficult to supervise this use, and consequently, increasingly difficult to set boundaries when teaching media literacy. Either way, media literacy has changed

over the last decade, as has the purpose of information provision. The latter aims to provide children and their parents with the information they need to enable them to properly navigate the online media landscape. With that in mind, it is important that we target information about content at adolescents themselves. In fact, adolescents have indicated that there is a need for this: over 80% of adolescents between the ages of 10 and 16 say they would like to receive a prior warning about any potentially harmful content (2023, research into the application of Kijkwijzer to the Instagram and TikTok social media platforms). In doing so, we need to carefully consider the purpose for which this information is provided. On the one hand, that purpose continues to be setting boundaries in terms of media consumption: when a child is younger than the age classification, content may be harmful, meaning they should not watch it.

This can work really well for children between the ages of 9 and 12. It can also prove valuable online with a view to using filters and age verification systems. Classification of media content is required to 'feed' these systems. On the other hand, when teenagers decide for themselves, they cannot be expected to be as strict on themselves as their parents would be when it comes to setting age limits. Even when adolescents do not experience videos as upsetting or unpleasant themselves, they can still be harmful. This is the case, for example, with videos showing alcohol consumption (Sadza et al., 2021). In these cases, prior information may activate media literacy skills or knowledge in teenagers, as is the case for regular advertising with warnings about sponsored content.

In other words, the purpose of the Kijkwijzer information online is to protect children from upsetting content and enable adolescents to make their own conscious choices on whether or not to watch something (restrictive mediation and self-protection, respectively). On the other hand, empowerment also plays a role. Children must be enabled to make the right choices by themselves, precisely because their media consumption has become so much more individual due to the widespread use of smartphones. In fact, children themselves have indicated that they have a need for reliable information on which to base their media choices. We need to join forces to improve digital skills and awareness and to make the digital environment safer for children.

What kinds of warnings do adolescents want to receive?

To date, the literature on needs and wishes with regard to age-rating systems has mainly focused on parents. Recently, Scharrer et al. (2020) allowed American children on a media literacy curriculum to work out for themselves how a rating system should work and what it should look like. Generally speaking, the twelve-year-olds in the study said that rating systems should not just show an age, but should also provide information about the content of a production. However, when they were given the chance to draw new ratings for themselves, they tended to mimic the existing ratings, which in the US, consist only of an age specification. The likely cause was that they possessed too little capacity for abstraction at their age to come up with something genuinely new. NICAM has also commissioned several studies to gain insight into the needs and wishes of adolescents with regard to information about potentially harmful content. One of the conclusions was that adolescents wanted specific warnings that enable them to make a choice, taking into account their own preferences and vulnerabilities. By and large, adolescents want to see more than just an age rating. They want to know why a production is rated as it is and exactly what type of content it contains. Comments such as 'sensitive content' are often found to be too abstract or nondescript, and may even leave adolescents more eager to find out just what that content might be.



In 2023, NICAM commissioned YoungWorks to interview teenagers to find out how they would like to receive information about harmful content on social media. The conversations revealed that they wanted to be informed via short-form videos. Adolescents are perfectly familiar with alerts on social media, but believe these aren't sufficient. The alerts don't stand out enough, the description provided is too vague, and often, they prove to be incorrect. Adolescents need a serious warning that is easy to spot and reliable. The study revealed that banners with warnings prior to online video did meet the information requirements of teenagers. These requirements stem from unpleasant experiences they have unfortunately had with harmful content, mainly on TikTok and YouTube. The young people in the study reported feelings of anxiety, insecurity, guilt and shame (YoungWorks, 2023). The same study made it clear that adolescents aged 12 and over want to decide for themselves whether to watch potentially upsetting videos. They do not like it when upsetting videos are shown unannounced. They want to make a carefully considered choice based on information provided prior to the video. In addition, these types of warnings function as a heads-up, leaving adolescents ready to scroll past if the content does

turn out to be too upsetting. Adolescents aged 12 and over believe they are better able to deal with upsetting content than younger children, but still report a selective sensitivity for certain elements, such as animal cruelty. As a consequence, they want to be warned. That said, they do not want to wait for a Kijkwijzer banner to disappear after a few seconds — they want to click and watch or scroll past straightaway.

Invest in a front-end Kijkwijzer for social media (short form)

Commercial motives reign supreme in the world of social media. The public interest of ensuring minors are protected often takes a back seat. It is NICAM's mission to safeguard this public interest. This can only be done when the regulations at European level are the same, because Dutch children get to see international content, and online content makers and media platforms operate internationally. Let's hold the social media industry accountable, as is the case with other forms of media, and let's make sure they take this responsibility. Let's not simply accept that our children get to see all that harmful content, and let's invest in a front-end Kijkwijzer system, so that proper information is available and technical protection measures can be taken. Children are entitled to this protection.

Both the platform and the content on the platform should be rated in advance on the basis of scientific criteria, as is already the case under the current Kijkwijzer rating system. The platforms are currently keeping us in the dark about their algorithms. By means of the advisory age limits for the platform as a whole (usually 13) and parental controls, they place responsibility completely with the end user: parents and children themselves. In doing so, they are failing to provide the information required to make carefully considered choices. That leaves end users — parents and children, as well as all other users — unable to take responsibility in the

same way as they would for traditional media, such as television. The character of social media is fundamentally different to that of traditional media, particularly in the way content is presented on the basis of inscrutable algorithms. There is no way that a protective measure for traditional media, such as a watershed — under which content that might be harmful to children under the age of 12 can only be broadcast after 20:00 — can be applied to this content and these platforms. Instead, the solution must be twofold. On the one hand, it is important that the content offered on these platforms is rated, and on the other hand, the protection of minors needs to be adequately assured at the front end when designing online media.

The platforms themselves need to take responsibility for preventing children from being exposed to potentially harmful content, as is already the case for on-demand video platforms such as Netflix, Videoland and Disney+. In addition, end users need to be able to take their own technical protection measures once content on these platforms has been rated. Adolescents must be able to configure these measures themselves, and parents must be able to do so for younger children. This is bound to work better than what social media platforms are currently doing: shouting from the rooftops that children should not use their apps until they are aged 13 and over. A measure of this kind only makes these apps more appealing to them: it is like handing out free candy at school before saying that children under the age of 13 are not allowed to eat it.

5. Conclusion and recommendations

Adolescents must be enabled to make the right choices by themselves. This is not the same as placing the full responsibility on their shoulders. We need to join forces to keep working toward the improvement of digital skills and awareness to render the digital environment a safer place for children. Teenagers are on the lookout for excitement and sensation; they are always pushing the boundaries. By the same measure, they are entitled to protection, and they need to be given the option to protect themselves from shocking and harmful videos. Adolescents can only make conscious choices in this area when they have access to information to base these choices on. Clear information about all potentially harmful content on online platform — of the same kind as we are already used to seeing for traditional media — plays a crucial role in this. At the same time, children, teenagers and their parents should not bear full responsibility. This needs to come paired with robust European legislation and regulations, as well as a framework agreed at European level that forces online platforms to protect children and adolescents using an online Kijkwijzer system to provide them with the transparent information they need. At the same time, supervision and enforcement must take place at the individual platform level. Only that way can we make sure that our children are optimally safeguarded against harmful content — something they are entitled to, including online.

Recommendations

- **Hold social media platforms accountable**

Let's make sure that platforms take their own responsibility for preventing children from coming into contact with potentially harmful content, and let's monitor whether this is the case. As a crucial element in this, the videos offered on these platforms must be rated using an independent and transparent system grounded in science so they can be labelled with information about their content. Let's not simply accept that our children get to see all that harmful content; instead, let's invest in a front-end Kijkwijzer system, so that proper information is available and technical protection measures can be taken.

- **The Netherlands can take the lead, with Kijkwijzer as its compass**

A single framework must be agreed and enforced at European level for all video-sharing platforms and all uploaders (including smaller ones, who often post more harmful content). This framework must be transparent and clear-cut, prioritizing the protection of children, and the regulations and assessment must be rooted in scientific research. Let's turn Kijkwijzer Online into an export product the Netherlands can be proud of.

- **Invest in a Kijkwijzer for social media**

Most teenagers, parents of teenagers and parents of young children indicate that they need a reliable system such as Kijkwijzer to provide them with information about potentially harmful elements in videos on TikTok and Instagram, for example. As part of this, they want to see information that is as specific as possible. This might come in the form of banners or a billboard prior to the video, in which any harmful elements are listed (e.g. 'Caution: animal cruelty'). Adolescents also want to know why a video is rated as it is and exactly what type of content it contains. That way, they can make a conscious choice on whether or not watch any upsetting content (YoungWorks, 2023). Children and adolescents attach a certain significance to the Kijkwijzer logo: it contributes to the originator of the content being seen as serious and reliable (YoungWorks, 2023).

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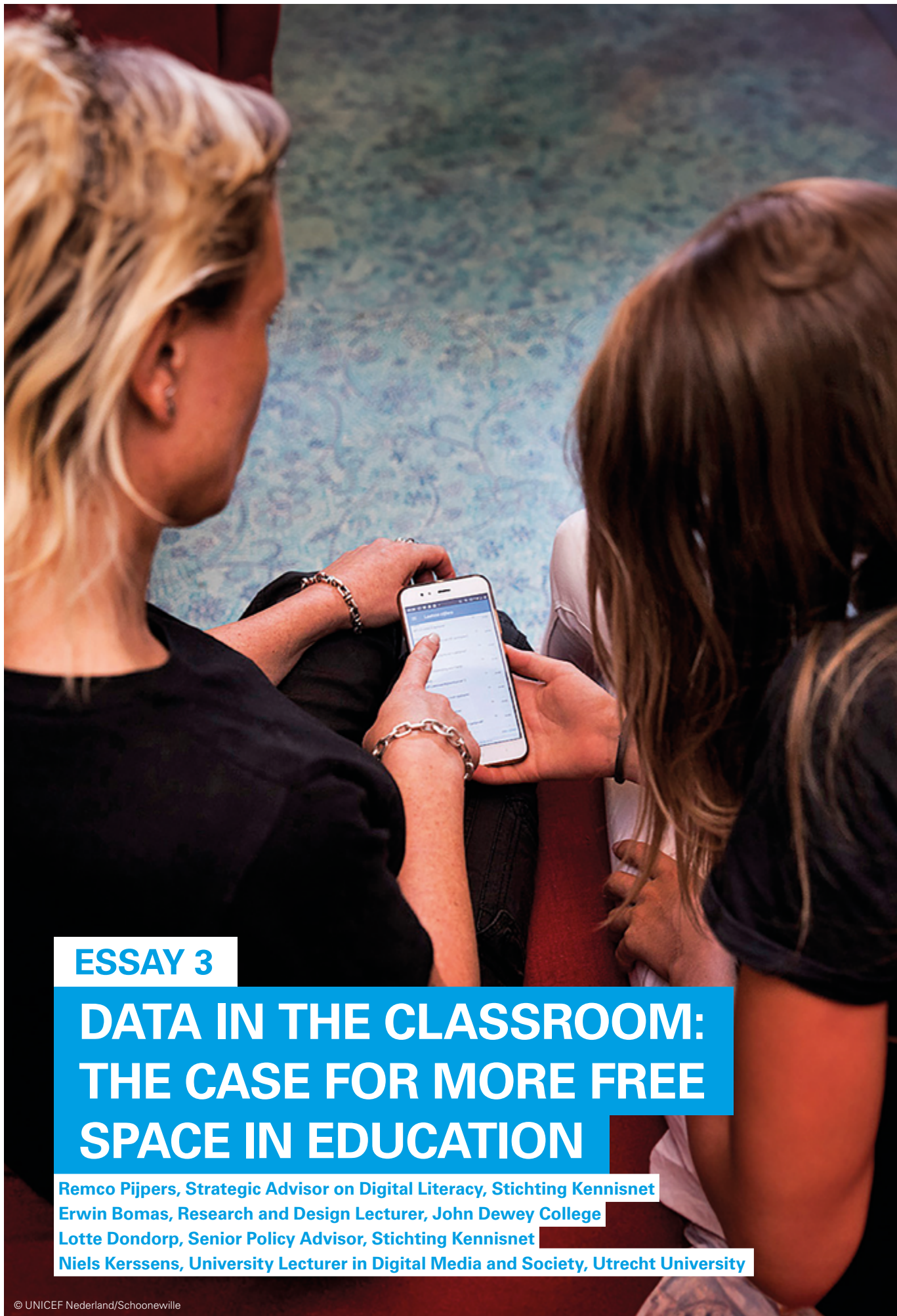
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ESSAY 3

DATA IN THE CLASSROOM: THE CASE FOR MORE FREE SPACE IN EDUCATION

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1. Introduction

A classroom in the Netherlands is more than just a room with four walls and a window, connected to the schoolyard or a neighbouring green space. The modern classroom is a ‘cloud classroom’: a ‘blended’ learning environment in which all kinds of educational platforms merge with teaching and learning practices via devices such as laptops, tablets, interactive whiteboards and VR headsets. These platforms, supplied by national and global tech providers, form a complex digital infrastructure that uses user data as its fuel.

This data-driven infrastructure has a significant impact on the rights of children. On the one hand, there is hope that data-driven education will leave children’s rights in a stronger position. After all, the data gathered serve as an additional source of information that helps teachers and students get more grip on the learning process, enhancing the right to education and development along the way. That said, data-driven educational technology

can also put children’s rights under pressure. The right to privacy and data protection and the right to play and leisure are just some examples of where this could be the case. The development of data-driven classrooms requires a new children’s right, namely the right to free space in education.

In this essay, we will outline the development of the data-driven classroom, with a particular focus on primary and secondary education in the Netherlands. Next, we will assess the impact on children’s rights as laid down in the UN Convention on the Rights of the Child. We will conclude by making the case for more public control over digitalization in education; an argument in which concern about the impact on children’s rights forms a powerful starting point. To achieve this, schools will need to play an active role, supported by the government and public organizations — in partnership and consultation with the developers of educational technology wherever possible.



2. The cloud classroom

The collection of educational data is not a new phenomenon (Lawn, 2013; Biesta, 2012). Even so, a huge amount has changed over the past two decades. The volume and extent of the data collected in relation to pupils at school has expanded significantly. This more intense collection has gone hand in hand with digitalization in education, based on the assumption that educational data offers insight into problems in education, while simultaneously offering the solutions (Williamson, 2017). The extent to which this data is used to make decisions about education, educational support for children and administrative matters has also intensified (Williamson, 2017). In fact, the term 'datafication' is often used in this context (Jarke & Breitner, 2019).

The datafication of education is part of a wider trend of 'platformization' in society. More and more sectors of society, such as journalism and higher education, are dependent on digital platforms developed by global tech companies such as Google (Alphabet), Apple, Facebook (Meta), Amazon and Microsoft for certain elements of the services they provide (Van Dijck et al., 2016). Through the term 'platformization', the authors are referring to the growing influence of digital platforms on the way in which these sectors of society are set up and designed. Datafication forms an inextricable part of this process. User data serve as the fuel behind the revenue models of these digital platforms, which are extending their reach deeper and deeper into the heart of these sectors of society.

This platformization can be observed in the public education sector too, with the aforementioned major tech companies expanding their services into the educational technology market. For more and more schools worldwide, Google Workspace for Education and Microsoft Office 365 for Education serve as the organizational hub of their digital environment (Kerssens, Nichols & Pangrazio, 2023). Consequently, these global platform companies are not only gaining more control over the design, setup and educational principles of digital learning environments, but also over the data flowing into their platform ecosystems (Kerssens and Van Dijck, 2021, 2022). These ecosystems are also fuelled with data by a range of educational platform technologies supplied largely by smaller, national educational technology developers that operate on the

cloud-computing services of major tech companies, without this being instantly evident to schools and professionals in education. The coronavirus crisis delivered a further boost to this platformization and datafication trend all over the globe, as schools had no choice but to fall back on a range of platforms provided by both national and global tech companies to deliver their education (Williamson & Hogan, 2020; Selwyn, 2020; UNESCO, 2020).



The growing emphasis on collecting, processing and analysing data in education is not solely driven by the influence of technology businesses. Platformization and datafication offer technological opportunities that seem to fit seamlessly with the rationale of result-oriented working methods, in which the emphasis is on measurable results. These result-oriented working methods have been broadly embraced by both the national government and school boards over the past two decades, with a view to improving the educational performance of Dutch pupils using data-driven ways of working and learning (Kerssens & De Haan, 2022). This development is accelerating the irreversible adoption of data-driven platform technology in classrooms across the Netherlands.

The modern classroom has been transformed into a cloud classroom that is connected to all kinds of digital applications and data flows in the cloud. Alongside paper books, interactive whiteboards, tablets and laptops have become an integral part of this picture. However, what we cannot see — and what professionals in education also often have little insight into — are the consequences of all these digital data connections. How is this cloud classroom affecting the rights of children?

3. Data collection in the cloud classroom and the impact on children's rights

Datafication is having a major impact on childhood. Keeping a constant eye on children using digital tools, for instance, is often viewed as a mere expression of care (Mascheroni & Siibak, 2021). Parents feel more at ease if their child is wearing a smartwatch with a GPS tracker while playing outside, for example. That raises the question: when does this care become a more or less covert method of control? And what impact is this care or control having on the privacy and autonomy of children? This tension is clearly evident in education too. As such, a relevant question to start with would be whose interest is being served through the processing of educational data (Livingstone, 2023).

Data collection in education has an impact on several rights under the UN Convention on the Rights of the

Child (CRC), being the right to education (Articles 28 and 29 of the CRC), the right to development (Article 6 of the CRC) (we are combining the right to life and development and the right to education for this purpose), the right to privacy (Article 16 of the CRC), the right to protection against discrimination (Article 2 of the CRC) and the right to play and leisure (Article 31 of the CRC). This impact is not always clear-cut. Whether children's rights come under pressure or are strengthened depends on our choices about when, in what way and in what context technology is used. In the face of this development, schools, public organizations and professionals in education will need to play a more active role, in dialogue with suppliers of educational technology and supported by the government.



3.1 The right to education and the right to development

On adaptive learning platforms, pupils practise at their own level. The algorithms in these systems automatically select the sequence of tasks, tailored to the child's level as calculated by the system. Pupils who struggle with the subject matter are able to spend more time practising that way, while pupils who pick up what is being taught more quickly can progress faster. Via the learning analytics dashboard of the learning platform, teachers gain broader insight into the progress of their pupils and can make adjustments based on the data collected. Learning methods of this type potentially contribute to the right to education and the right to development of children. On top of that, a vast collection of data in an educational context, such as data about learning results, absence or wellbeing, offers better insight into trends at group level, school level or national level, not to mention the opportunity to change course where needed. Once again, this may well contribute to the right to education and the right to development.

That said, the increasing collection of data can also exert pressure on the right to education and development. The more we measure, the more information we have at our disposal. One potential pitfall here is that this may lead to us only considering information that can actually be measured, even though not everything important to good-quality education can be captured in data. Educational theorist Gert Biesta describes education as a 'weak process' that cannot be captured in prescribed protocols (Biesta, 2015). What constitutes good education should be a constant topic of conversation. Also, what good education looks like is constantly evolving in the open context of a school day, a teaching moment and in encounters between different people.

In education, we cannot simply talk about output generated by a programme in a prescribed manner, let alone compare that output at different levels. Of course, measuring and recording data is useful and even necessary if we want to improve our education system. But we do need to resist a culture in which the only thing that matters is what can be measured. Biesta makes the case for schools as a 'sanctuary', where 'a different wind can prevail than the wind of results alone', and where encounters are key (Biesta, 2023).



3.2 The right to privacy

'Kids shouldn't have to sacrifice privacy for education', claimed a headline in The New York Times back in 2018. According to this article, for many children, going to school in our current digital era means that their personal data are shared with tech giants such as Google and Microsoft. The privacy terms of these companies are anything but transparent. As a consequence, there is no clarity on exactly which data is collected, linked and shared on pupils and their behaviour in the digital world. At the same time, few alternatives are available to the resources provided by major tech firms, which are generally good quality and simple to work with. And standing up against the enormous market power of these actors or demanding more insight into what exactly is happening to the data of pupils is a mammoth task.

Even so, it does make sense to oppose privacy breaches. Returning to The New York Times, another interesting article appeared in 2023 under the headline 'How the Netherlands is taming big tech'. This article described how the Dutch government and Dutch organizations, such as ICT education cooperative SIVON, were holding Google to account. The latter had provided insufficient clarity regarding what was happening to the data of pupils on Google Workspace for Education. The company has since taken measures in the field of privacy and transparency to ensure that schools in the Netherlands — having taken their own measures within their digital environment — can continue to work with Google Workspace. Following a privacy assessment, new agreements have also been reached with Microsoft.

Be that as it may, we are still a long way from all privacy concerns being resolved. To the big tech firms, gathering data that enables them to commercially profile their users remains their main revenue model. What's more, it is not just the big tech firms that are gathering data about pupils. Research by Human Rights Watch revealed that during school closures at the time of the coronavirus pandemic, children's digital behaviour was being tracked in 49 countries by countless minor educational apps and sites (Han, 2022).

When deploying new digital resources in education, it is important for schools to check every single time whether the privacy of pupils is guaranteed, especially when data regarding pupils is being collected. If schools wish to work safely with software provided by major tech firms, they will also need to properly configure their own digital environment by turning different functionalities on or off. One example is specifying 'Europe' as the location for cloud storage.

By the same token, it is important that schools think carefully about how far they want to go when it comes to monitoring children. Some schools are using safeguarding technology based on artificial intelligence, for example. Search terms that hint at bullying, radicalization or mental health issues are reported to teachers by means of a smart algorithm, so that any potential risks can be identified at an early stage. This type of technology raises questions in terms of privacy, but the impact can also be felt much more widely. Those who feel like they are being watched — especially when it is not clear who is watching them, and when — feel less free. And those who consider themselves to be in a situation where someone is watching will start to behave differently.



3.3 The right to protection against discrimination

The cloud classroom contains a range of computer systems that use algorithms to make decisions or judgements about pupils based on data. This can lead to more objective assessment of pupils, for example when an adaptive test reveals that the level of a pupil is higher than a teacher had estimated. As such, these systems can enhance the right not to be discriminated against. But when these algorithms contain inherent prejudice, or when they use a dataset that contains inherent prejudice, using them might actually lead to discrimination and exclusion.

For that reason, careful consideration is essential when deciding whether algorithms are to be used in a certain situation. In England, for instance, an algorithm was used to allocate grades based on earlier data when exams were unable to proceed as planned during the coronavirus crisis. Pupils from poorer backgrounds were allocated lower grades, because the dataset revealed that it was precisely these students who often achieved lower results. The algorithm based its choices on data from the past, resulting in unfair predictions about the capacity of individual children in the present. Using this type of dataset to reach decisions can lead to the reflection and reinforcement of unequal and unfair patterns in society. In any case, these types of patterns — which ought to be corrected, if anything — do not yield a fair prediction of educational results. For that reason, it is important that human beings always check decisions that may have significant consequences for children. Furthermore, we always need to carefully check the reasoning behind any recommendations, and whether there are any covert prejudices or errors in the way algorithms generate decisions based on data.



3.4 The right to play and leisure

Digital education makes it possible to work independently of time and location. During the coronavirus crisis, it soon became evident how important this can be. Even after that crisis, digital education is helping to reach pupils that would not be in education otherwise. At the same time, the possibilities of this digital world mean that pupils never properly get to leave the school environment behind. Digital administration systems, and all the educational data that circulate within them, are causing extra pressure. Take grades or homework assignments that are uploaded at unexpected times in commonly used pupil monitoring systems such as Magister, for example.

Children have the right to play and leisure. And that means we need to put a halt to the constant flow of data every now and then. That means putting administration systems on standby after 17.00, for example. Clear agreements with students regarding when they can expect to receive information from their school might be an alternative solution.

4. The case for a new children's right

It is extremely important that the education sector, together with government, public actors and educational technology firms, takes action to safeguard the various rights of children rights. In doing so, safeguarding the right to free space in education is paramount. In fact, this ought to be an entirely new right in our digital era.



The right to free space in education

It is important that schools continue to allow plenty of free space for pupils to try something new, learn, play, practise or fail without feeling like they are being watched or judged. A huge amount of information is being recorded about the learning process of children, including on minor exercises and learning milestones. The systems used to do so respond instantly and assess the level of a pupil based on the answers they have provided. This turns every exercise into a test. The result is extra stress for pupils, as well as a sense that they are not allowed any space to do their own thing. It is important that pupils are always given the time and space to practise and try things by themselves, without their progress or behaviour being monitored. If any monitoring does take place, it is important that it is always clear when this is happening, and by whom. In addition, it is crucial to incorporate plenty of free time during which no monitoring takes place.

The new opportunities for storing and sharing data are also bringing new sets of eyes into the classroom. Take a pupil who finds out through the pupil monitoring system in the morning that he did not do well enough in his French test to get the grade he needed — and who is instantly aware that his parents back at home have already been told the same thing. The space to process this new information and consider whether — or how — to share it with parents has vanished. Solutions are at hand, of course. Parents might agree with their children not to look at the system, or schools can opt not to share grades with parents automatically. What is required to implement these solutions is proactive conversations and action to reinstate the free space that pupils have lost. In practice, this has proven not to be as easy as it seems. Doing so requires awareness on the part of both schools and parents, including with regard to new situations in which the freedom of pupils may be compromised.

Precisely what free space in education looks like or should look like is not easy to define. In essence, it is space in which teacher and pupil can devote their time and attention to seeing one another, but also space within which a pupil can feel 'unseen' for a while. This kind of space is not something that is self-evident or comes about automatically. What is needed to create it is a constant conversation between educational professionals, pupils and parents. Based on this conversation, that space can be actively reconfigured time and time again.

5. Conclusion and recommendations

Pupils are subject to ever more intense analysis of their development, interaction and wellbeing, using ever more powerful analytical tools and more intimate technology. In the future, this technology is likely to venture closer to our bodies and into personal domains such as our thoughts and emotions (Van Est, I., 2014; Kennisnet, 2023). This development is driven by both a public and private desire to improve education, but also by the commercial interests of parties supplying products to the education system — and in some instances, by the mere fact that new opportunities are implemented without proper consideration of the impact on children's rights.

None of this is to say that schools need to withdraw from the digital cloud. The possibilities of the digital realm also offer a huge number of opportunities for children. The arrival of the internet, for example, opened up a wealth of information to children. Distances to other classrooms became smaller, and new opportunities arose for children to express themselves creatively. The digital cloud enables greater cooperation and facilitates remote education; a positive outcome for children who cannot attend school due to illness, for example.

In essence, bearing in mind the rights of children when using data-driven educational technology is about asking the right questions. These questions should not be about the optimal way to use data-driven technology, but instead, about what free space looks like for children in a digital environment. We need to ask this question in good time, again and again, and of children themselves. Schools must allow the space for children's voices to be heard. Just like adults, children are not always able to assess what is best for them in specific situations. Nevertheless, it is important to hear what they have to say, and to act on their opinions. Doing so requires proper conversations, explanation, follow-up questions and decisive action in response.

Teachers too need to remain aware of children's rights and make every effort to create as much space as possible for their pupils. They can start doing so through small gestures, such as deciding not to read through a

case file packed with information about a pupil, and allowing that pupil to start the new school year with a clean slate. Alternatively, they can do so by not marking a pupil as late or as having forgotten their things in the pupil monitoring system every single time, or by delivering their maths lesson outside in the schoolyard, even when that means no new data will be added to the adaptive system today.

At school level, being aware of children's rights means headteachers and other teachers viewing digital technology with an open mind. They would do well not to take the application of data-driven technology for granted as a way to improve the quality of the education they provide. Doing so requires a professional team, whose thinking is based on values that may be at odds and on the significance of this technology in its context, and not simply on the effective nature of technology and the returns a certain toolset might generate. It is also important to have conversations about individual choice. These might concern the degree to which result-oriented working methods strengthen the focus on data collection in education, for example, and what impact this has on the free space of pupils.

Getting all of this done in a carefully considered manner and with the necessary sensitivity is a complex task that cannot be completed without a strong education sector in which schools work together. SIVON, the ICT education cooperative, is a great example of this. Cooperation is necessary to learn from each other, but also to ensure schools are in a stronger position in their dialogue developers of technology. Schools can demand that educational technology respects the rights of children as a basic precondition.

Fortunately, laws and regulations are also in place at European level to protect the rights of users — including children — wherever technology is used. What's more, this legislation is being expanded. Even so, national governments also need to ensure compliance with these rules and laws and the UN Convention on the Rights of the Child, both offline and online.

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ESSAY 4

THE IMPACT OF SOCIAL MEDIA ON ADOLESCENTS' MENTAL HEALTH

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The impact of social media on adolescents' mental health

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1. The issue at hand

Adolescents in the Netherlands spend an average of six hours a day on their mobile phones, two and a half hours of which is spent on social media³. On average, adolescents switch between five different social media platforms⁴ in search of entertainment (TikTok), to chat with their friends (Snapchat), to communicate with their parents (WhatsApp) or to share what is happening in their lives (Instagram, BeReal). This heavy use of social media raises certain questions. One of the most important of these is this: how is the use of these media affecting the mental health of adolescents? Are social media delivering mainly joy or mainly sorrow through the screens of our adolescents? Which adolescents are most vulnerable? And what can parents, schools, teachers and the government do to counter any potentially negative impact of social media? The answers to these questions form the core of this essay.

We will start this essay by taking a look at the insights we have gained through scientific research. It has been shown, for example, that the mental health of adolescents has deteriorated since the 1960s. We will explore the potential causes for this, and we will consider the role social media play in this. In doing so, we will focus on international research, as well as on our own findings through [Project AWeSome](#). Standing for Adolescents, Wellbeing and Social media,

Project AWeSome is one of the first long-running studies in this field in the Netherlands. The quotes from adolescents included in this essay originate from interviews conducted over the course of 2022 and 2023 with adolescents between the ages of 14 and 18^{1,2}. To conclude, we will consider the societal consequences of social media, focusing in particular on the role of parents, teachers, public authorities and policymakers.

This essay is about mental health, which is a two-dimensional concept. On the one hand, this concept means the absence of mental health problems, such as anxiety, symptoms of depression and psychosomatic issues. On the other hand, it means the presence of wellbeing: feeling satisfied with your life and being happy. The first dimension — the absence of any mental health problems — is self-explanatory, as these problems are diametrically opposed to mental health. The second dimension is more complex, because it is completely normal to feel unhappy or less satisfied with your life from time to time⁵, even though you can still be in good mental health despite these dips. In essence, the second dimension is about an individual's capacity to regain balance, learning to regulate feelings of unhappiness and dissatisfaction over time so that they eventually disappear^{5,6}.

Interviewer: “What impact is social media having on you?”

Girl (15): “I feel happier because I only follow things that I like, and that give me joy.”

Boy (15): “Social media makes me feel a little sad about all the awful stuff that is happening in the world. Without social media, you'd be less aware of that.”^{1,2}

2. The mental health of adolescents is deteriorating

Studies suggesting that the mental health of adolescents is deteriorating are published on a regular basis^{7,8}. Newspaper headlines tell us there is a ‘mental health crisis’ or ‘mental health pandemic’ among our young people⁹. Publications like these would have us believe that the increase in mental health issues is a recent phenomenon. However, this view is not quite in line with reality, because the deterioration of mental health actually started several decades ago. A comparison of data on American adolescents aged between 14 and 16 gathered over the period from 1948 to 1989, for example, reveals a striking rise in mental health issues¹⁰. Across different periods stretching from 1983 to 2003, researchers have found a rise in such issues among adolescents in a range of countries, including the United States, Sweden and China⁸.

In the Netherlands too, mental health issues are on the rise among adolescents, in any case between 1983 and 2003^{11,12} and between 1990 and 2019¹³. However, the increase is less marked than in other countries, such as the United States^{14,15}. While mental health issues in adolescents remained relatively stable between 2012 and 2016, there was a further rise between 2016 and 2020¹⁶. This may be due to the consequences of the COVID-19 pandemic¹⁷. Although, two years later in 2022, this rise showed no signs of slowing down¹⁸. That year, 30% of adolescents in the Netherlands aged between 11 and 16 reported that they were struggling with mental health problems¹⁹. In addition, research by the Trimbos Institute revealed that 23% of young adults aged between 18 and

24 have suffered a depressive episode in their lives¹¹. These figures show that a considerable percentage of Dutch young people experience mental health struggles and deserve our attention. It is high time we set out to find what is causing this.

2.1 The causes of this deterioration

The scientific literature offers at least 15 possible causes to explain the deterioration in mental health (see Table 1). One frequently suggested cause is the rapidly declining importance of religion since the 1970s, leaving adolescents — and adults alike — without a sense of purpose and connection in their lives. Another cause that goes hand in hand with the decline of religion is the increasing importance of individualism: the belief that everyone is able — obliged, even — to shape their own life and that people exist independently from one another²⁰. Individualism brings with it a loss of certainties and clear frameworks. That can negatively affect the mental health of some vulnerable people, because not everyone finds it easy to live without a clear framework²⁰. Another possible cause is the greater emphasis on performance, status and wealth²¹. Mental health issues are more prominent in societies that attach greater importance to extrinsic values, such as financial success, status and physical attractiveness. An emphasis on values of this kind can set standards that are unrealistic or unachievable for some adolescents. The resulting gap between their expectations and reality can negatively impact their mental health^{22,23}.

Table1. Causes identified for the deterioration of mental health in adolescents

1. Broader definition of mental health issues (ca. 1960)
2. Broadening of criteria for diagnosis (ca. 1960)
3. Greater collective awareness of mental health issues (ca. 1960)
4. Decline of negative stereotypes about mental health issues (ca. 1960)
5. Increase of mental health issues among parents (ca. 1960)
6. Decline of religion (ca. 1970)
7. Rise of individualism (ca. 1970)
8. Greater emphasis on extrinsic objectives: financial success, status and beauty (ca. 1980)
9. Shift towards knowledge economy in prosperous countries (ca. 1980)
10. Decline of social play in early youth (ca. 1980)
11. Increase of school stress among adolescents (ca. 1980)
12. Changing media environment (violence, consumerism, pessimism) (ca. 1990)
13. Increasing concern among adolescents about their future (ca. 2010)
14. Smartphones and social media (ca. 2010)
15. COVID-19 lockdowns (2020)

Another cause for the rise in mental health problems is the broader definition of what constitutes a mental health problem since the 1960s²⁴. Before that time, extramural mental health care was barely existent, and mental illness was only recognized in its most extreme form, such as psychosis. This broader definition came paired with a broadening of the criteria for diagnosis and increasing societal awareness of mental health issues²⁵. This decade also marked the start of a decline in negative stigmas surrounding mental health issues²⁶, leaving adolescents free to admit at an earlier stage that they were struggling with their mental health. Another cause cited by researchers is the decline of social play through which young people have traditionally formed friendships, learned to give and take and learned to be assertive²⁷.

In addition, researchers have identified increased concern among young people about their future¹¹, as well as an increase in mental health issues among their parents⁷, who also more readily admit to struggling with their mental health than previous generations¹¹. Finally, another cause was found in the 1990s — long before the arrival of social media — in the form of the changing media environment adolescents find themselves in, with a stream of visual violence, consumerism and pessimism coming their way²⁰. What’s more, this changing media environment also offered them inescapable opportunities to compare themselves to unrealistically perfect celebrities and models^{20,28}.

Even though myriad causes have been suggested for the decline in mental health, not all of these causes have

been investigated equally systematically. This is less the case for the ‘educational stress hypothesis’²⁹. This hypothesis argues that the shift towards knowledge economies in prosperous countries over the past few decades has made the life opportunities of adolescents more dependent on their educational performance. As a consequence, they may experience more stress at school, which may lead to a rise in mental health problems³⁰. Swedish researcher Björn Högberg, who has compared the mental health of adolescents in 33 countries³⁰, is one of the proponents of this hypothesis. As expected, he found that adolescents in more prosperous countries experienced more stress as a result of their schoolwork. In addition, the effect of school stress on mental health in these countries was greater than in less prosperous countries.

In the Netherlands, the number of adolescents experiencing stress at school has always been well below the international average, although there has been a significant drop in that position over the past decade¹⁹. By 2017, the school stress experienced by our adolescents was comparable to the international average, according to the Utrecht HBSC study, and by 2021, there had been a further rise in this level of stress¹⁹. Parents and children in the Netherlands are attaching ever greater importance to the best possible grades and the highest possible level of education¹⁹. Within Project AWeSome too, we have found that adolescents cite ‘school/homework’ as the main cause of any stress they experience (see Figure 1), especially when compared to five other causes, including their home situation and social media².

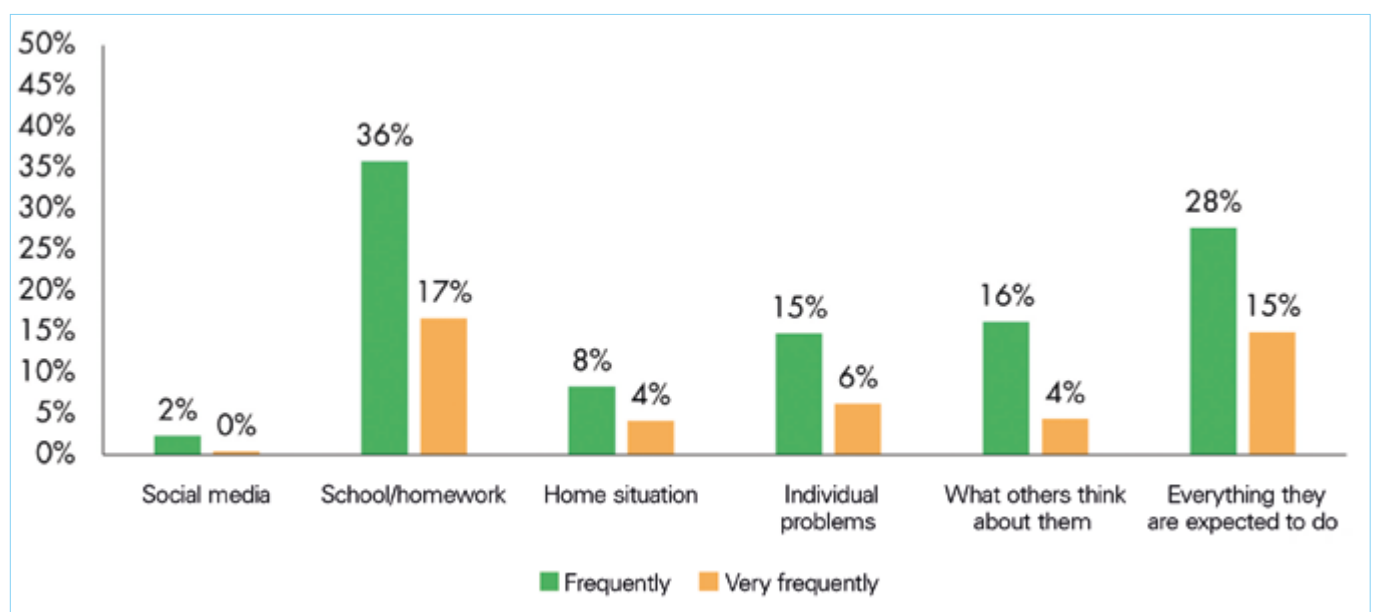


Figure 1. Causes of stress among adolescents aged 14-18 in the Netherlands (Project AWeSome, 2023).

2.2 The gender gap in mental health

One thing that stands out in the literature is that girls report more mental health issues than boys in nearly all studies^{8, 11, 31}. In fact, this 'gender gap' has been evident in most countries ever since the 1980s^{8, 31}. Paradoxically, girls in prosperous countries and in countries with greater gender equality experience poorer mental health than girls in less prosperous countries and countries with lower gender equality. This was revealed in a study by Campbell et al. comparing the gender gap between 77 countries³¹. In their study, the researchers suggest that this gap exists because societal expectations about gender equality in prosperous countries are not in line with the everyday experience of girls. Consequently, girls in these countries find it more difficult to achieve their goals than girls in poorer countries, negatively impacting on their mental health³¹. An alternative possibility is that girls in countries with greater gender equality are torn between conflicting expectations: they feel pressure to perform and be independent, while also needing to comply with traditionally female standards and values, such as beauty and a caring nature.

The gap between boys and girls also appears to have widened during and after the COVID-19 period^{17, 19}. In 2021, girls in the Netherlands reported significantly more mental health issues than in 2017, compared to a lower increase in boys¹⁹. Life satisfaction also declined in girls over the same period, significantly more than it did in boys¹⁹. The fact that the mental health of girls is poorer than that of boys might be down to girls experiencing more school stress than boys²⁹. Our own research shows that girls feel around twice as much stress about school/homework than boys², even though in general, girls obtain higher grades at secondary school than boys³². On top of that, girls also tend to feel more stressed about the expectations of their parents and teachers surrounding their future¹⁹ and about unpleasant interpersonal experiences, such as arguments with their parents, friends and love interests³³. All of these forms of stress may serve as an important cause for their poorer mental health.

Boy (14): "Social media has helped me discover who I am, and what I like and don't like. Using it allows me to learn more about myself."

Girl (14): "You shouldn't compare yourself to others on social media, but that's easier said than done. It has been a difficult time for me. I've been seeing a psychologist for a while..."^{1,2}

3. The role played by social media

Ever since adolescents started embracing social media platforms such as Instagram, Snapchat and TikTok en masse³⁴, researchers have been turning to the use of platforms to explain the deterioration of mental health³⁵.³⁷ This shouldn't come as a surprise. The potential risks to which adolescents are exposed has only grown in line with the rapid rise in the use of these social media. These risks not only reside in more screentime, but also in the fact that this screentime increasingly occurs out of sight of parents, and is more and more often driven by algorithmically controlled recommendation systems. Such systems can cater to the preferences of adolescents with frightening precision, but can equally play on their vulnerabilities. Furthermore, the deterioration in the mental health of adolescents appears to have picked up speed over the past decade, coinciding exactly with an inversely proportional rise in social media use among adolescents.

American researchers Jean Twenge and Jonathan Haidt regard the increased use of social media as the main explanation for the decline in mental health among adolescents^{35,37}. In their studies, they have found a weak statistical connection between high social media use and low mental health among adolescents. Their research is receiving a lot of attention both inside and outside the academic world, partly because they write persuasive and accessible books and blogs for a wide audience. But what this wide audience is less aware of is that most of their findings are based on data gathered at one specific moment in time. This lack of a time element in their studies makes it impossible to determine whether the use of social media is a cause or consequence of poorer mental health. After all, adolescents with mental health issues may be turning to social media more often to find information or access support from their peers. Platforms such as TikTok, for example, offer countless therapeutic videos that find an eager audience among young people. For adolescents like these, it is perfectly possible that their mental health is affecting their use of social media, instead of the other way round.

3.1 The research is not unequivocal

Over the past decade, hundreds of empirical studies have been published about the relationship between social media use and the mental health of adolescents. In fact, so much research is now available that no fewer than 25 meta-analyses have been published on this topic over the last three years³⁸. These reviews and meta-analyses

have revealed that the impact of social media use on mental health is minor³⁸. The vast majority of these meta-analyses cautiously interpret this impact exactly as it is: 'minor'. However, certain other meta-analyses based on the same empirical studies interpret this minor impact as 'substantial'³⁵, 'severe'³⁹ or even 'harmful'⁴⁰. Such differences in the interpretation of the same statistical impact are nothing new. Ever since the 1980s, for example, there has been a fierce academic debate about the impact of violence in games on aggression^{41,42}. Often, the scholars involved do not so much disagree on the exact extent of these effects, but rather on the exact way in which these effects should be interpreted.

The thing that is often overlooked in these kinds of debates is that statistics representing the extent of an impact are generally determined at an aggregate level. In other words, they represent the average impact of social media use on youth mental health. Aggregated statistics of this kind may give the impression that the impact of social media is minor on all adolescents. However, every individual in their right mind knows that this cannot possibly be the case. No two adolescents are the same. Even within their own families, parents see one child respond in a totally different manner to what is happening around them compared to the other. Aggregated data are based on large groups of adolescents, each of which differs greatly in their sensitivity to social influences in general⁴³, and to social media in particular⁴⁴. These differences are not adequately reflected in the aggregate data reported by empirical studies and meta-analyses.

3.2 No two adolescents are the same

Once we assume that the wellbeing of some adolescents is positively and that of others negatively impacted by social and other media, both the optimistic and pessimistic conclusions about the impact of social media use may well be true. The optimistic conclusions may simply pertain to other adolescents than the pessimistic conclusions. In our own Project AWeSome, we have demonstrated this individual impact of social media use on several occasions^{45,47}. We did so by following a large group of young people every day over the course of several months, via their phones. Using this method, we found that most adolescents experienced little or no impact of social media use on their wellbeing. But for around 10%, social media use has a positive impact, while for a different group of 10%, it had a negative impact⁴⁸.

There is no need to be concerned about the adolescents for whom social media use has no impact or a positive impact on their wellbeing. However, there is a need to be concerned about the group of adolescents who experience a negative impact. When we realize that there are around 54 million adolescents (aged 12-18) in Europe and once we extrapolate our 10% to that group, we are left with the fact that the wellbeing of 5.4 million adolescents could be harmed by social media use. That is a figure we need to take seriously. It is also a figure that might explain why the mental health of adolescents has deteriorated at a faster rate over the past decade than before. The negative impact that social media use is having on this group comes on top of the 14 other causes that were identified long before the advent of social media.

Determining the exact individual impact that social media are having on adolescents can help us resolve the contradictions between optimistic and pessimistic interpretations of that impact. On the other hand, it can also help us understand when, why and for whom the use of social media is having a positive or negative

impact on mental health. Instead of asking ourselves whether the use of social media is or is not causing mental health issues, a better question would be why it is that some adolescents get on fine in the online world, while others experience problems. It is also important that we identify the adolescents who are experiencing problems through their use of social media. Armed with that knowledge, we will be able to target prevention and intervention strategies at this specific group.

Over the past few years, research has been carried out into the so-called 'risk' and 'resilience' factors that leave adolescents vulnerable or resilient to the detrimental impact of social media on their mental health. Several meta-analyses suggest that young people who are vulnerable offline due to other factors that harm their mental health are also at a higher risk online^{49,50}. Adolescents who feel anxious or stressed, who are being bullied or who have a tendency to compare themselves socially are more vulnerable to the impact of social media on their mental health than other adolescents^{37, 51, 52}. By the same token, adolescents who are resilient offline are also at a lower risk online.

Girl (14): “ I’m much more sociable. I’m also in touch with friends much more often these days.”

Boy (16): “Personally, TikTok has completely destroyed my attention span, so back in March, I thought: you know what, I quit. It really wasn’t much fun.”

Girl (16): “I don’t necessarily feel any impact, I don’t feel more insecure, or more secure – neither, really.”^{1,2}

As with research into social media in general, research into the risk and resilience factors of social media often falls back on aggregate data. Generally speaking, this research offers only modest evidence of differences between broad groups, such as boys and girls. Even though girls generally spend more time on social media, report mental health issues more frequently and compare themselves to others more often, there is no conclusive evidence of their increased

vulnerability to the negative impact of social media. The differences that have been observed are often minor, meaning they don't apply to all girls. Once again, any negative impact is mainly felt by girls who are already vulnerable. That said, the minor gender difference means that some boys too are vulnerable to the impact of social media. That much is also clear from what the boys quoted in this section are saying.



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4. Conclusions and recommendations

There is no denying the fact that the mental health of adolescents has deteriorated over the past few decades. It also seems to be the case that this decline has accelerated over the last ten years. Some of the causes we have mentioned in this essay apply at a collective level, such as the increased emphasis in prosperous societies on extrinsic values like financial success, status and beauty. Other causes are presenting at the individual level. Adolescents tend to start struggling with their mental health when they are experiencing stress at school, for example, or when they have parents with mental health problems. These collective and individual factors may reinforce each other. When adolescents are already more vulnerable due to certain factors, negative experiences on social media can be extra detrimental to their mental health.

The vast majority of adolescents acknowledge that there are positives and negatives to using social media^{1,2}. They experience joy and sorrow through their screens. Having a convenient way to stay in touch with their friends makes them happy, but they admit that using social media can also leave them feeling insecure and upset¹. Precisely because social media use is a double-edged sword, regulating it is proving to be extremely tricky. Nobody wants to deny adolescents the positives of social media. That leaves us with an important question: how do we help young people maximize the positives of social media while minimizing the negatives? The considerations we believe parents, schools and teachers, public authorities and policymakers should bear in mind are listed below.

4.1 Parents

Adolescents need their parents to help them build resilience to the irresistible temptations and potential risks of social media. We have long assumed that media literacy can help our young people protect themselves against any possible risks. But knowledge alone isn't enough. The AI-based recommendation engines of the latest generation of platforms are so savvy that they can easily undermine the agency that vulnerable young people have. One of the consequences of this is that adolescents are tempted to use their phones at inappropriate times and places, such as over dinner, before going to bed, during the night and during in-person conversations. What's more, they often continue to do so in spite of any ban imposed by their parents. During our

interviews, some adolescents showed us screen times of 8, 9, and in a single case, 14 hours. This is excessive, and they are well aware of this fact themselves.

One important task reserved for parents is to teach their children self-control, which helps them learn to deal with the temptations and risks in their surroundings. Children and adolescents need to learn that there are standards and rules they should stick to. This applies all the more to phone use, while also presenting an extra challenge to parents. For other things, such as doing homework, not lying and setting the table, it is relatively easy to set and enforce rules. To both parents and kids, these rules fall within the 'moral' (lying is bad) or 'conventional' (homework is part of life) domain of bringing up children. Phone use is different. To parents, this often falls under the 'prudential' domain: it may present certain risks to adolescents, not dissimilar to smoking and alcohol⁵³. To adolescents, however, their phone falls under their 'personal' domain; the same domain as their friends and clothing. The problem is that this domain is where young people resist authority and interference by their parents. When it comes to clothes and friends, you better stay out of it as a parent — and the same applies to phones.

Even so, setting clear and consistently enforced rules is crucial for matters in the personal domain of adolescents: no phones at meal times, no phones during in-person conversations, and no phones in the bedroom. It is also important to agree clear rules for phone and social media use at the earliest possible stage — even before a child gets their first phone, for example. Consistent enforcement of these rules helps a certain behaviour become second nature to children and adolescents. The rules become a habit, making complaints and bargaining a thing of the past. On the other hand, when a rule is not enforced consistently, there may be no end to the amount of resistance or bargaining an adolescent engages in, leaving parents barely able to reverse the phone habits they will soon develop.

4.2 Schools and teachers

Research in various countries has shown how phone use — both at school and outside of it — affects the educational performance of adolescents. A meta-analysis based on 39 empirical studies found a minor negative link between phone use and performance at school⁵⁴. As underlined earlier, it is important to take these minor

links seriously, as they may mean that for a small share of adolescents, phone use negatively impacts their educational performance. Even more importantly, we need to acknowledge that the current generation of social media brings significant potential for distraction. Our research found that the negative impact of social media as a source of distraction or procrastination⁵⁵ is many times greater than the negative impact on wellbeing, self-confidence⁵⁶ and friendships between adolescents⁴⁶. For that reason alone, it is important that mobile phones are banned from classrooms.

In principle, phone education at school is no different from phone education in a family setting. At school and in the classroom too, this education can only be effective if clear rules are consistently enforced. Within a school setting, there are two dimensions to this consistency: rules must be consistent over time (you can't be allowed a phone one day and not the next) and consistent between teachers (you can't be allowed a phone with some teachers and not with others). As is the case at home, it is important that teachers set the right example. In principle, the rules that apply to pupils should also apply to them.

One thing schools can do is set clear rules in terms of conduct and routines, in consultation with pupils and their parents. At a school that has its house in order, the sanctions for failure to comply with the rules are transparent. Everyone must also be clear about any exceptions to the rules. These exceptions must be understood by all parties and clearly formulated, to avoid any renegotiation or discussion⁵⁷. An effective phone policy of this type can only be successful if everyone is fully behind it, including teachers, parents and pupils. And that takes time and dialogue. Some schools may opt for different behavioural rules and routines. Proper and comprehensive guidelines, based on the book 'Running the Room' by Tom Bennet, for example, may prove useful in this⁵⁷.

4.3 Public authorities and policymakers

Legal bans on phones in the classroom are in place or are being considered in a range of countries, including France, China, Finland and Australia. In the Netherlands too, phones will no longer be allowed in the classroom from January 2024 onward, unless they are essential to the subject matter. The Netherlands has not opted for a statutory ban, but for a guideline instead. We believe this is the right move, because it is naive to believe that a ban enshrined in law is a silver bullet. As such, it won't come

as a surprise that in countries that have introduced a legal ban on phones, schools regularly play fast and loose with the rules. In France, for example, schools themselves are responsible for enforcing the law. This would also be the case in the Netherlands if a legal ban were to be put in place. A ban of this type can offer schools an excuse to get rid of phones altogether by hiding behind the law. But if a ban is nothing more than that, it is just a symbolic piece of legislation that is doomed to fail, as evidenced by convincing insights from the educational literature.

As an alternative to banning phones in schools, certain countries and states are considering or implementing a complete ban on certain platforms. This is the case for TikTok in India, Nepal and the US state of Montana, for example. A complete ban of this kind would be at odds with various articles of the UN Convention on the Rights of the Child⁵⁹, which has been ratified by the Netherlands and all other EU countries. The Convention stipulates that children have the right to access these platforms to access the benefits they offer and share their opinions. According to the explanatory notes to the Convention on the Rights of the Child, 'meaningful access to digital technologies can support children to realize the full range of their civil, political, cultural, economic and social rights.' (General Comment no. 25, Article 4, 2021)⁵⁹.

The government have a responsibility to support parents and schools in the raising of children. They can achieve this by offering clear guidelines for both parties. In addition, it is important to regulate at the point where any risks first manifest, being on the platforms themselves. In fact, a broad consensus exists among EU countries on that point. The digital environment in which our children find themselves has witnessed a dramatic transformation over the past few years. In our conversations with adolescents, for example, we noticed that some of them have been left more vulnerable in AI-driven digital environments. In 2021, the Organisation for Economic Co-operation and Development (OECD) expanded its typology of the possible risks underage children face on these platforms. The OECD not only identified risks in terms of content, contact, conduct and consumer rights, but also advanced technological risks, privacy risks and risks to the mental health of adolescents⁶⁰. All of these risks deserve the attention of policymakers.

Over the past few years, several laws have been introduced to protect children and adolescents in the digital world. Unfortunately, as we speak, effective enforcement of these laws remains lacking. The profiling

of minors on platforms has been banned under the General Data Protection Regulation (GDPR) since 2018, for example, but still takes place regardless on a daily basis. Even though as researchers, we strictly comply with the GDPR, platforms clearly feel no need to do so. Fortunately, the European Commission has introduced flagship legislation in the form of the Digital Services Act (DSA). In 2023, in line with this Act, the European Commission ordered the largest platforms to recognize the risks identified by the OECD and offer an assessment of how to avoid or mitigate these. What sets the DSA apart from previous legislation is that it outlines a clear procedure for enforcement.

To conclude, as we have argued in this essay, by no means all children and adolescents are negatively impacted by the risks identified by the OECD. Nevertheless, it is important that we apply the precautionary principle⁶¹ when it comes to minors. In line with this principle, the fact that the use of social media platforms can cause harm to minors should be sufficient justification to take measures to prevent or reduce such harm. Safeguarding the mental health of children and adolescents will require the attention and involvement of parents, schools, teachers and government. That said, platforms also need to take effective measures to encourage minors to use social media in a conscious, controlled and safe manner.

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A range of authors were invited to provide the content of these essays. For that reason, the opinions and viewpoints contained in this essay are not necessarily the opinion of UNICEF the Netherlands.



ESSAY 5

DIGITAL RESILIENCE: THE CASE FOR CHILDREN TO PARTICIPATE

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Digital resilience: the case for children to participate

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1. Introduction

Children are growing up in an interactive digital society. In many ways, this makes their lives a lot easier, and it offers them myriad opportunities. That said, digital media can also have a negative impact on the lives and wellbeing of children. To ensure that children can actively take part in digital society on an equal footing and in a manner that benefits their wellbeing, there are growing calls to strengthen their resilience.

It is often assumed that the digital resilience of children can be improved by investing in their digital literacy, and more specifically, in media literacy. The term media literacy refers to the array of skills an individual needs to navigate and develop themselves in our media society in a conscious, critical and active way (Dutch Media Literacy Network, 2021). Over the past few years, we have witnessed huge growth in the number of interventions aimed at improving the media literacy of children, including [programmes at schools](#). Generally speaking, these interventions are geared towards improving the media-related knowledge and skills of children.

Although the possession of media-related knowledge and skills is an important precondition for building digital resilience, this is not sufficient. Even when children have all the media-related knowledge and skills they need, they do not always act on them (Rozendaal et al., 2011; Jeong et al., 2012; Vahedi et al., 2018). This implies that

enhancing media-related knowledge and skills — through media education at school, for example — will not necessarily result in digitally resilient behaviour.

Aside from media-related knowledge and skills, what else do children need to successfully seize the opportunities offered by the online world, while also dealing with the risks it poses in a resilient manner? This is the key question in this essay. Based on current scientific insights, we will substantiate what children need to be digitally resilient. We will also explain why it is important to actively involve children in research into their digital resilience and in coming up with interventions that help them strengthen that resilience. Giving children a voice means sitting down with them to explore how digital media are influencing their lives, which opportunities and challenges are coming their way, and what it is they need to be digitally resilient. Doing so will provide us with the insights we need to help politicians, policymakers and intervention developers devise effective initiatives that are relevant to the daily lives and needs of children and that can positively contribute to their wellbeing. As such, the topic of this essay ties in closely with several of the rights in the [UN Convention on the Rights of the Child](#) (CRC), such as the right to development (Article 6 of the CRC) and the right to meaningful participation (Article 12 of the CRC and others).

2. Opportunities and risks

Children gain access to myriad chances and opportunities through digital media. To name just a few examples, digital media can help children establish new contacts, build deeper relationships and shape their identity. Digital media can also encourage them to learn, grow and develop into active citizens of the world (Allen et al., 2014; Pang et al., 2022; Valkenburg & Peter, 2011). Even so, the use of digital media may also bring with it a range of negative effects. One of the main concerns in the current public discourse is their impact on the wellbeing of children. Research has shown, for example, that the use of digital media, and social media in particular, can contribute to an increased risk of depression, anxiety symptoms, fear of missing out and loneliness (Nesi, 2020; Valkenburg, Meier & Beyens, 2022).

Another matter of concern is the growing threat posed by artificial intelligence (AI) and other emerging technologies to the wellbeing and rights of children (UNICEF, 2021). The lion's share of the daily interactions

children have online are already driven by AI, for instance. Examples include the smart algorithms that decide which entertainment and news content is shown to children on social media, which music they listen to on their streaming services, or which online advertisements they get to see. These algorithms can be useful, as they make online experiences more personal and relevant. That said, they also bring with them a risk of developing a limited world view due to filter bubbles and echo chambers, a risk of privacy breaches due to the commercial collection of data and profiling practices, and a risk of being misled due to exposure to disinformation such as deepfakes. On top of that, a new digital divide is looming on the horizon. While some children may benefit enormously from AI-driven online services, others may only be involved to a limited extent due to low levels of knowledge and skills or a lack of access to the required equipment (Yang, 2022). This may lead to greater social inequality (UNICEF, 2017).



3. Digital resilience

Digital resilience is a dynamic process in which digital media users adaptively apply strategies that help them mitigate the risks posed by the online world while making the most of the opportunities it offers (Hammond, Polizzi & Bartholomew, 2023; Lee & Hancock, 2023; Sun et al., 2022). This process may take place either before, during or after interaction with digital media. The strategies applied before using digital media are often preventive in nature and geared towards avoiding online risks. Examples include setting a strong password, using an antivirus app or setting a screen time limit. The strategies used during interaction with digital media, on the other hand, focus on limiting and resolving online risks. Examples of these strategies include critical reflection on the reliability of online information and reporting distressing messages on social media to the platform in question. The strategies applied after the use of digital media largely involve bouncing back from online risks, such as managing negative feelings caused by online experiences or enlisting external support in the event of online bullying.

Research into the digital resilience of children has revealed that not all children are equally resilient online. Some apply resilience strategies more successfully than others, leaving them better able to effectively limit online risks and make the most of online opportunities. But why is one child more digitally resilient than another? Based on current empirical and theoretical insights in communication science, development psychology and behavioural science, we argue that different individual and environmental factors influence the digital resilience of children. Below, we will discuss a selection of these factors.

3.1 Media-related knowledge and skills

Insights from communication science suggest that the possession of media-related knowledge and skills is an important precondition for building digital resilience. Potter's theory of media literacy, for example, posits that media-related knowledge and skills are fundamental in acquiring media literacy, as they offer the context within which individuals, whether young or old, can access media, and can understand, assess and create media (Potter, 2004). For example, an individual can only critically reflect on an advertising message if that individual is able to recognize and understand the

commercial and persuasive nature of that message. Similarly, to avoid falling prey to disinformation online, media users first need to know how to identify the reliability of a source.

The Media Literacy Competency Model (Dutch Media Literacy Network, 2021) offers insight into which media-related knowledge and skills matter most. According to this model, there are eight media literacy competencies, which together can be regarded as the complete set of knowledge, skills and mindset that each individual — and consequently, every child — needs to navigate our media society. These competencies are the ability to operate devices and software, explore applications, find information, create media, connect via media, discuss media, analyse media and reflect on media use. As such, any media education ought to focus on transferring these competencies as a precondition for the ability to understand and use digital media, which in turn is an essential precondition for building digital resilience. In the Netherlands, this is currently happening through the implementation of the core objectives on digital literacy in primary and secondary education.

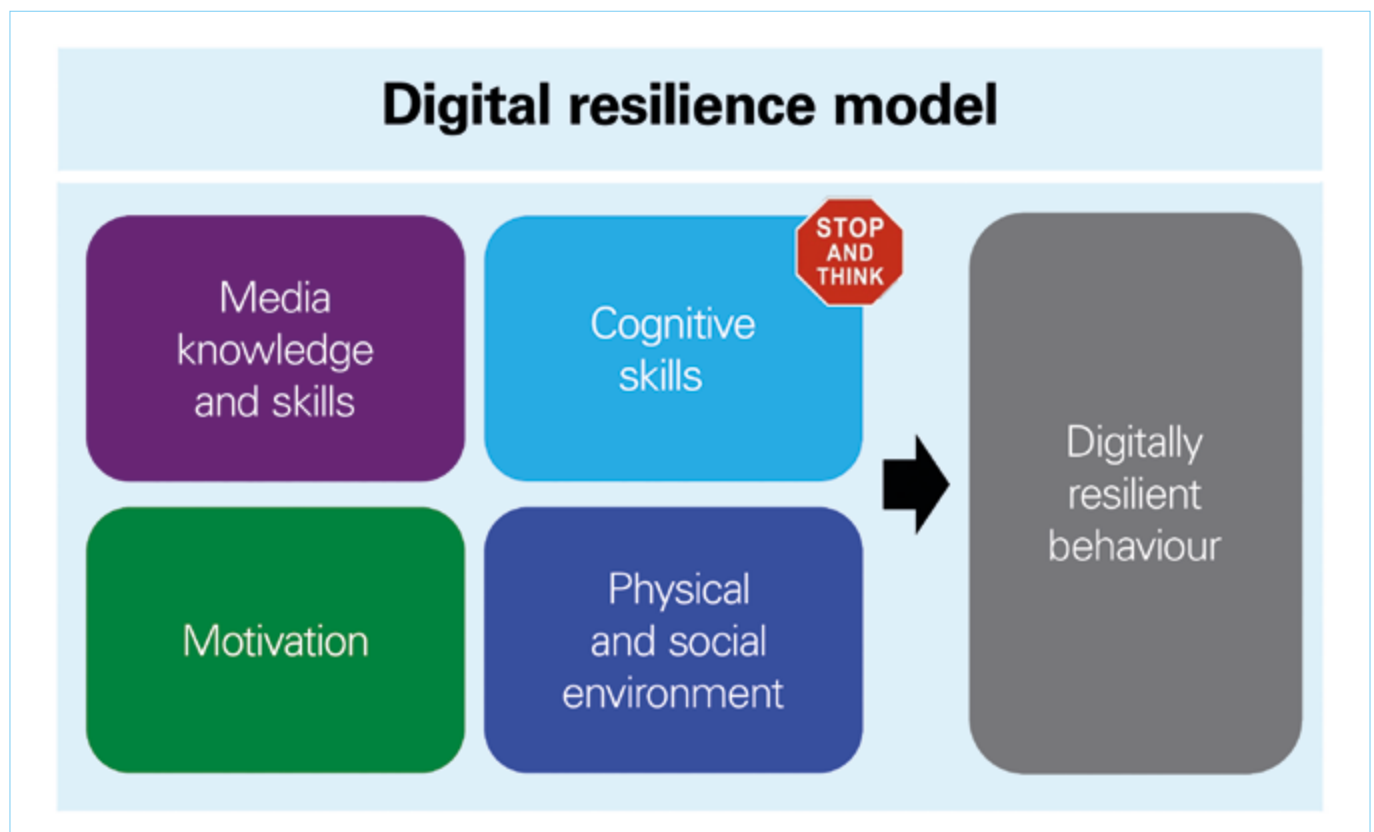
3.2 Cognitive skills

As we have seen, the possession of media-related knowledge and skills is an important element in the digital resilience of children. However, prior research has shown that possessing media-related knowledge and skills does not automatically lead to the behaviour change that contributes the digital resilience of children. Scientific insights into the cognitive development of children suggest that this is because children have not yet fully developed the cognitive skills they need to convert this knowledge and these skills into action (Diamond, 2012). In other words, to be able to use digital media in a resilient manner, children must be able to control their impulsive reactions to media use and respond in a different way instead. This process is also referred to as the 'stop-and-think' reaction, as it requires children to keep their impulsive reaction in check and come up with an alternative strategy to deal with the situation (Rozendaal & Figner, 2020). The stop-and-think reaction is closely linked to the executive functions of children. These are a set of mental processes that help children monitor and control their emotions, thoughts and actions, and that are only fully developed by the time they become young adults (Diamond, 2012).

Executive functions such as attentional control, action control and emotion regulation play a key role in the capacity of children to stop and think while they are using digital media. Attentional control enables them to shut out any irrelevant information and retrieve and integrate relevant information in an efficient manner. If children want to use media in a resilient way, they need attentional control to process any media content and respond proactively by diverting their attention or efficiently retrieving relevant knowledge and skills from their memory. On top of that, they need action control and emotion regulation to overcome the impulsive emotional and behavioural tendencies they experience in response to the enticing appeal of the media they use. Generally speaking, children with better-developed action control and emotion regulation behave in a more self-controlled and independent way. They also show greater perseverance. The assumption is that children with less-developed executive functions are more likely to respond immediately to the emotionally attractive aspects of the digital media they use, and therefore less likely to stop and think. Consequently, they are more likely to experience the downsides of digital media.

3.3 Motivation

Aside from possessing the media-related knowledge and skills and the cognitive skills (executive functions) required to behave in a digitally resilient way, it is also important that children are motivated to do so. Theories from behavioural science, such as the COM-B model (Michie et al., 2011), suggest that motivation is a major determinant of behaviour. The fact that children are able to behave in a digitally resilient way because they possess the right knowledge and skills does not automatically mean that they want to behave that way. Motivation is a prerequisite to convert knowledge and skills into behaviour. According to the self-determination theory, whether children are motivated to display certain behaviour depends on the degree to which they experience autonomy, competence and social connection (Deci & Ryan, 2000). Autonomy relates to the degree to which children feel they can decide for themselves, with regard to which resilience strategies to use, for example.



Competence relates to the confidence they have in their own ability. This includes the self-confidence they need to effectively apply strategies, for example. When it comes to social connection, the sense of connection to others is key. An example here is the degree to which children feel confidence in others and dare to ask them for help.

3.4 Physical and social environment

Another important basic principle in theories around behavioural change is the fact that behaviour does not take place in a vacuum, but instead depends on the physical and social environment in which it occurs (Michie et al., 2011). This physical and social environment can both impede and facilitate digitally resilient behaviour in children. When it comes to the physical environment, for example, significant factors include the degree to which the features of digital media platforms and apps enable digitally resilient behaviour. The way a game is designed, for instance, can make it extremely difficult for children to quit or refrain from making in-game purchases (Van der Hof, 2022). On the other hand, certain features of platforms and apps can help children behave in a resilient way online. One example of this is platforms and apps that operate on a 'privacy-by-design' basis, in which

the privacy of children is considered as early as at the design stage.

The social environment of children can also impact their digital resilience in different ways. Social norms, for example, play a major role. This includes the degree to which friends are also behaving in a digitally resilient way, or the degree to which such behaviour is approved of in their social circle. When their classmates shield their social media profiles from being visible to strangers, for example, children are more likely to do the same themselves.

In addition, the media education provided by parents can also play a role. By supervising what children do online and having conversations about online risks, parents can help their children develop strategies to manage these risks. Open dialogue is a crucial factor in this. Children often say that conversations with parents or other media educators are most valuable if these conversations are emotionally supportive and non-judgemental. It also helps when media educators recognize digital resilience as a process of trial and error, in which making mistakes is part of the learning process (Hammond et al, 2023).

4. Implications for interventions and policy

The above theoretical and empirical insights suggest that children will only behave in a resilient manner if they have the media-related knowledge and skills they need to display such behaviour, if they possess the necessary cognitive skills (executive functions), if they are motivated to display such behaviour, and if the media in question and their social environment enable them to display such behaviour. These insights have significant implications for the development of interventions and policies aimed at improving the digital resilience of children.

For interventions such as media education programmes at schools, it is important that the focus is not solely on teaching media-related knowledge and skills, but also on strengthening executive skills, such as the stop-and-think reaction. Making sure that children are more motivated to apply effective strategies while using digital media is another important factor. Doing so will enable children to make the most of the opportunities offered by digital media while preventing or resolving potential risks. Even though executive skills develop naturally as children grow older, research has shown that these skills are trainable and can be improved at any age. Mindfulness and other cognitive and socio-emotional development programmes offer useful techniques in this regard, particularly when they are offered together (Diamond & Lee, 2011; Langenberg & Brandsma, 2013; Snel, 2019).

For media educators wishing to motivate children to behave in a digitally resilient way, it is especially important to focus on autonomous motivation. They can do so by getting children to come up with arguments themselves or using certain strategies to help them avoid risks and seize opportunities online. In doing so, they should avoid any controlling language, as this increases the likelihood of resistance and lowers the chance of achieving the desired behavioural change. In addition, they should create the feeling that children will succeed in applying resilience strategies by showing confidence in them and giving positive feedback on their performance. Showing empathy and understanding towards children is also essential, as is stressing that by displaying certain behaviour, such as reporting discriminatory social media messages, they are not only helping themselves; they are also helping others by making the online world more fun, safe and sociable.

Any policies must be focused on rules and guidelines that facilitate the digital resilience of children, or in other

words, that enable them to behave in a resilient manner online. One example of such a policy is the policy on smartphones at school (Pijpers, 2023). Since 1 January 2024, a new nationwide guideline has been in place regarding the use of smartphones and other devices in class at secondary schools. The guideline stipulates that this type of equipment should only be used for educational purposes. From the 2024/2025 academic year onwards, these rules will be extended to primary education too. The objective of this nationwide policy is to create a school environment in which it is easier for children to resist the unnecessary distractions presented their devices.

Another example is the Kijkwijzer age-rating system by the Dutch Institute for the Classification of Audiovisual Media (NICAM). The Kijkwijzer system warns users of any potentially harmful content in television programmes, series and films. Since 1 July 2022, uploaders of online videos that are based in the Netherlands, that are registered with the Chamber of Commerce, that have more than 500,000 followers and that post at least 24 videos every year are also obliged to use Kijkwijzer to warn children of any potentially harmful images. This includes images showing violence, sex, animal suffering or 'upsetting' content. Children have indicated that they would like to be warned of such images so that they can decide for themselves whether to watch something or continue scrolling (NICAM, 2023). As such, the application of the Kijkwijzer system will make it easier for children to use strategies that contribute to their digital resilience.

The [Code for Children's Rights](#) is another good example of a policy instrument that facilitates the digital resilience of children. This code offers tools that help designers and developers understand the rights of children and ensure these rights are considered when developing apps, games, devices and other digital technology. Putting the interests of children first in all digital activities that affect children is the leading principle behind this code. By taking the interests of children and their unique properties into account in the design of apps, games, smart devices and other digital technology, risks can be minimized. Another significant basic principle of the code is that personal data are processed in a way that is lawful for children, and that any information regarding the use of a digital service must be easily recognizable and understandable for children.

5. The importance of participation

The insights in this essay help us better understand the digital resilience of children — and the factors that facilitate and impede this resilience — from a theoretical perspective. However, to develop effective interventions and policies, it is crucial that the perspective of children themselves is also considered, alongside any theoretical perspectives. It is also vital that we take their everyday experience into account. What are the most important opportunities and risks in the eyes of children themselves when it comes to their online world? Which coping strategies do they feel are effective in helping them deal with these opportunities and risks? What is stopping or helping them to apply these strategies? What do they deem important to learn? And which interventions meet these needs?

Children are still rarely asked to actively participate in, discuss and decide on the development of policies and interventions focusing on their digital resilience. UNICEF and the Ministry of Foreign Affairs have recently taken an initial step towards engaging children in policy development regarding digitalization (UNICEF, 2023), but exactly what these policy measures and interventions look like is still largely decided by adult professionals and policymakers. Children have a different perspective than adults, especially when it comes to digital media. For example, prior research has shown that children were mainly concerned about violent imagery online, a fact that was completely overlooked by researchers, the public discourse and policies (Livingstone et al., 2014).

By entering into dialogue with children — as happened before when the Youth Climate Movement was involved in the Dutch National Climate Agreement, for example — we gain more insight into the questions, requirements, experiences and solutions children have. The way in which children view and experience their online world can enrich the perspective of adult professionals and policymakers, and help them to develop interventions and policies that truly matter to children. The resulting interventions or policies often have a much greater impact.

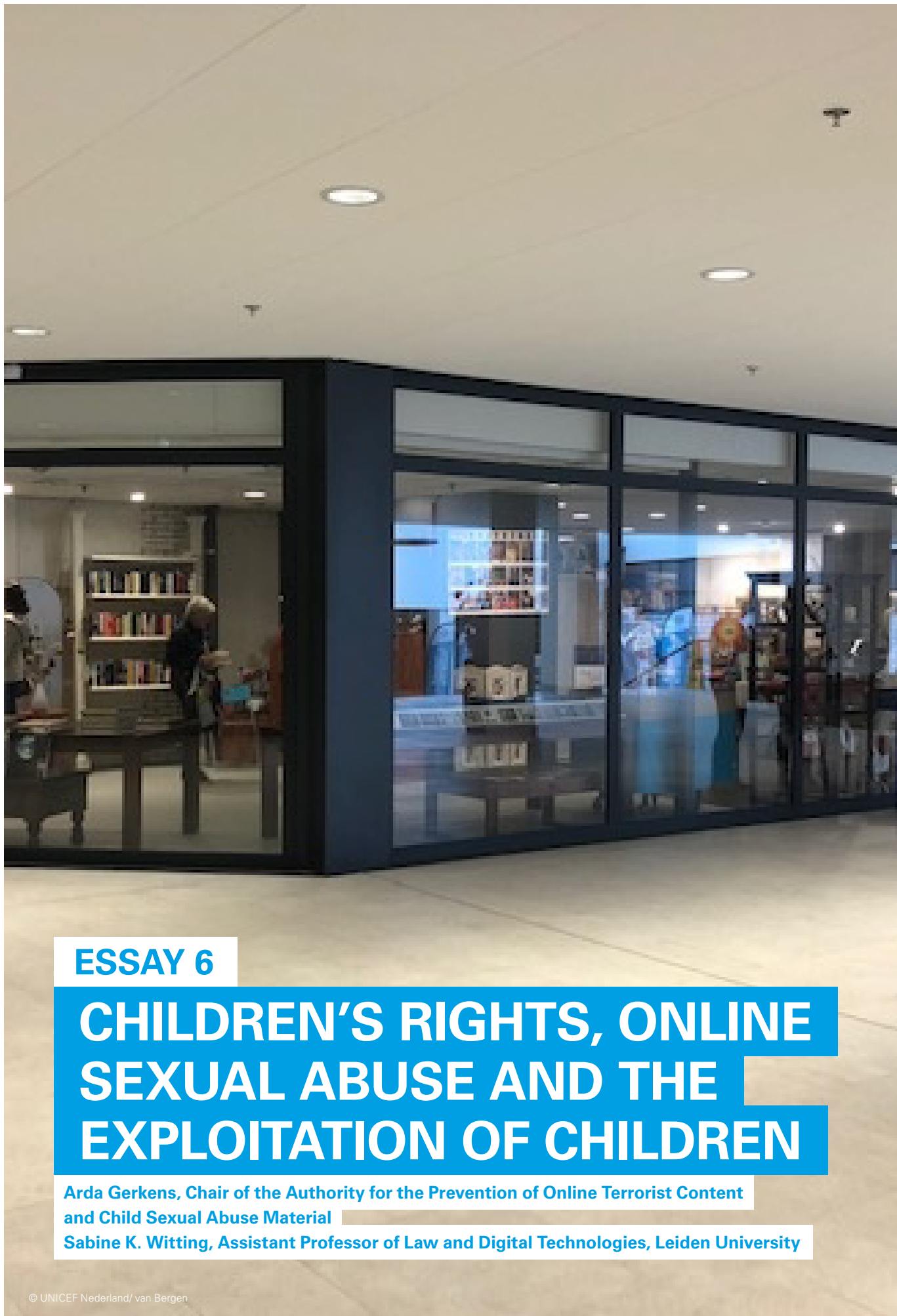
Participating, being involved in solutions and making decisions together also helps children develop their talents, skills and competencies. Meaningful participation gives them the sense that their voice is heard and that their opinion matters. Guidelines for meaningful participation also emphasize the importance of equivalence between children and researchers, a focus on action and change, and an active role for children in all stages of the research project, including in the interpretation of the results (Dedding et al, 2023). Allowing children to help make decisions on an equal footing recognizes one of their most basic needs: the feeling of having a say and having an impact. According to the UN Convention on the Rights of the Child, this basic need is a fundamental right. As such, it is essential that we genuinely take children seriously in any discussion, especially when it comes to digital resilience.

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A range of authors were invited to provide the content of these essays. For that reason, the opinions and viewpoints contained in this essay are not necessarily the opinion of UNICEF the Netherlands.



ESSAY 6

CHILDREN'S RIGHTS, ONLINE SEXUAL ABUSE AND THE EXPLOITATION OF CHILDREN

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Children's rights, online sexual abuse and the exploitation of children

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1. Introduction

In days gone by, we had our first kiss behind the bike shed in the schoolyard. These days, young people largely live their lives online — and their sexual development has shifted into the digital realm too. Adolescents today are constantly experimenting with their sexuality in online environments, by sharing sexually explicit images with each other, for example. Unfortunately, this otherwise healthy experimentation behaviour is often exploited for nefarious purposes. Setting boundaries and respecting them is even more crucial online than it is offline. When those boundaries are crossed online, the consequences go further than the psychological impact alone — the images in question often linger online for a long time to come. For that reason, the UN Convention on the Rights of the Child (CRC) — stipulates that children are entitled to protection against sexual exploitation and sexual abuse (Article 34 of the CRC), both online and offline (Article 25 of the CRC)¹. Because the topic of sexual abuse and sexual exploitation stirs up such strong emotions, it is also an offence that is treated with little nuance in the public discourse. As a result, the human rights of (possible) perpetrators barely receive any consideration,

and there is little appetite for understanding the position in which they may find themselves².

In this essay, we will take a closer look at recent developments in terms of the regulations around online sexual abuse of children in the Netherlands and Europe. We will analyse how legislation efforts are mainly geared towards the right of the child and protection against all forms of sexual abuse and sexual exploitation (Article 34 of the CRC). Next, we will demonstrate how such a limited perspective overlooks the complex interplay between the different children's rights under the CRC, in particular Article 16 and Article 6. We will also reflect on how this development stands in the way of finding the answers we need when it comes to the complex issue of online sexual abuse of children. We will conclude this essay with a range of specific recommendations on how stakeholders at both Dutch and European level can adopt a holistic approach toward the rights of children when formulating prevention and response mechanisms in relation to the online sexual abuse of children.

2. Current developments in the Netherlands

The mood in the Netherlands quickly turns sour when it comes to any association between underage children and sexuality. Dutch children receive age-specific sex education to prevent any sexual abuse. In these lessons, children learn how to respect the boundaries set by other people, and how sex forms part of a loving relationship. In the spring of 2023, sex education for primary school children suddenly became a topic of public debate. Poorly informed politicians fanned the flames of this discussion by suggesting that children as young as four were being confronted with sexuality that clearly was not appropriate for their age. One political party even argued that sex education had no place in the classroom, even though the Guidelines of the Committee for the implementation of the Optional Protocol to the Convention on the Rights of the Child on the sale of children, child prostitution and child pornography (CRC/C/156, paragraph 56) stipulates that children should receive comprehensive sex education at all levels of the education system³.

Two significant entities are involved in combating the online sexual exploitation and sexual abuse of children in the Netherlands. Back in 1995, the internet industry set up a hotline for anonymous reports from the public and other hotlines around the world. At the time this hotline was set up, the images circulating mainly involved children that had been abused in a private setting. Over the course of the decade that followed, more and more material was reported that was created by children themselves. These were images they had sent to their boyfriends or girlfriends, and that were sometimes being published online without their consent. For that reason, the Child Pornography hotline set up the Helpwanted helpline to support victims. Using this helpline, children and adolescents could easily access the support they needed when material had been circulated online.

Even though images shared online can be regarded as illegal material, this does not always mean that any sexual abuse is involved. By 2017, 12% of adolescents had shared an intimate photo themselves over the course of the last six months. In 2012, this figure stood at around 5%⁴. There is no reason to think this figure has not gone up any further. Only a small percentage of these images lead to an unpleasant experience (in 6% of boys and 14% of girls)⁵. Even so, all these images are illegal under Dutch criminal law, as they depict underage children in a partially or fully undressed state or in a sexual pose. When the online sexual abuse of children

is being discussed, the voluntary nature of these types of images is barely considered. As a result, clear-cut and very necessary solutions — such as sex education, conversations around sexual experimentation online, the role of free pornography for adults and the protection of the privacy of the child — are often disregarded. To sum up, because the debate around the voluntary sharing of such images focuses so strongly on the protection of children, we are failing to note the other children's rights that play a role in this context, such as the right of children to privacy (Article 16 of the CRC) and the right to development (Article 6 of the CRC and others).

2.1. The Dutch legal context

What exactly are the regulations on online child sex abuse under Dutch law? The term used in Dutch legislation is the 'sexualization of children'. Before discussing the legal framework in more depth, let's turn our attention to Article 240b, clause 1 of the Dutch Criminal Code⁶, which reads as follows:

Any person who distributes, openly exhibits, creates, imports, passes on, exports or possesses an image — or a data carrier, containing an image — of a sexual act involving or appearing to involve a person who has apparently not yet reached the age of eighteen years will be penalized by a prison sentence of a maximum of four years or a Category 5 fine.

According to this provision, the sexual abuse of children, whether online or offline, includes images or devices containing an image of a sexual act involving a person who appears to be underage. The production of images showing online child sex abuse can take place in a range of ways, and different actors can be involved. This definition includes images that were voluntarily created in the context of a relationship and with each other's consent, abuse recorded online or offline by the perpetrator themselves or by someone else, or the production of this type of material for commercial purposes. On some occasions, children's heads are photoshopped onto pornographic images of adults. Computer-generated material and realistic cartoons that show children being sexually abused are also prohibited. Finally, this definition includes normal images of children that have been misappropriated, for example by zooming in on their genitalia. In other words, all sexual material showing someone who is or appears to be underage can be considered illegal.

The topic of consensual sexual exploration among adolescents has been subject to a significant amount of discussion over the past few years, including in the Netherlands. Objectively speaking, consensual self-generated sexually explicit material and child sexual abuse material depict the same behaviour. In both cases, sexual activity involving a minor is being shown. In many countries, provisions like the one quoted above do not allow for any distinction between the circumstances in which such material is produced. This type of law also criminalizes the production, distribution and possession of voluntarily generated sexually explicit material as child sexual abuse material⁷. Even when initially produced and shared with consent, self-generated sexually explicit material can leave adolescents at risk. Such material can be spread further among third parties outside the control of the child, or can be used in instances of bullying⁸. In view of these risks, the law argues for the criminalization of self-generated sexually explicit material, either as a child sexual abuse material offence or as a separate, less severe offence. This criminalization is thought to serve as a deterrent for the production of such sexually explicit material⁹.

However, by shifting our focus away from the right of children to protection alone, we can facilitate a more balanced approach toward age-appropriate adolescent sexual exploration and protecting adolescents from sexual abuse and sexual exploitation. In its General Comment 4 regarding the health and development of adolescents, the Committee on the Rights of the Child acknowledges that sexuality is part of the development of a personal identity. By the same token, the Comment recognizes the challenges facing adolescents in this regard¹⁰. Even though the development of a sexual identity has traditionally taken place offline, the digital environment¹¹ serves as an increasingly important domain for such activities, for example in the form of sharing sexualized or nude images, videos or text. Given the fact that adolescents often share this material on a voluntary basis as part of a developmental interaction, this needs to be considered in the law and in any policies in this area¹². The Committee on the Rights of the Child endorses this approach by stating clearly that the states bound by the Convention must not punish adolescents

of a similar age for consensual sexual activity online, including taking images of themselves¹³.

In response to the complex issues surrounding online sexual exploitation, and to help interpret the legal framework regarding online child sex abuse in the Netherlands, the Netherlands Public Prosecution Service has drawn up a directive to clarify how it will act in cases of this type. This directive offers a framework and rules for the approach to be taken to online child sex abuse and sex offences from a criminal law perspective. The wellbeing of the victim is the central tenet in this directive. As such, the voluntary sharing of image material is not regarded as a criminal offence, as long as the images in question have not been leaked. Once again, the position of the victim is the deciding factor.

The directive sets out in detail what is to be regarded as online child sex abuse. The Dutch Child Pornography Hotline also uses this directive. People who suspect they have come across child sex abuse online can use this hotline to report such images. In the event of a suspected criminal offence, the hotline sends a deletion request to the website and internet host via which the images or videos were published. For 95% of the reports made, the material in question is deleted within 24 hours. The hotline does not have the authority to launch an investigation into the owner of such images or the person who posted them online. Only the courts can do so.

Regardless, the distribution of images remains a difficult problem to tackle. In a case where an image of Mert*, then aged 13, was distributed, the Netherlands Public Prosecution Office initially decided not to prosecute, as per the directive. However, after Mert committed suicide, his parents demanded that prosecution take place, resulting in community service for two of the three suspects. As such, the distribution of sexually explicit images of minors can always result in a case being brought before the court, even when the exact details of the case fall outside of the public prosecutor's directive. What this case demonstrates is that the distribution of these images is not always innocent, but equally, that this phenomenon has now become so widespread that it cannot be adequately addressed under our criminal code.

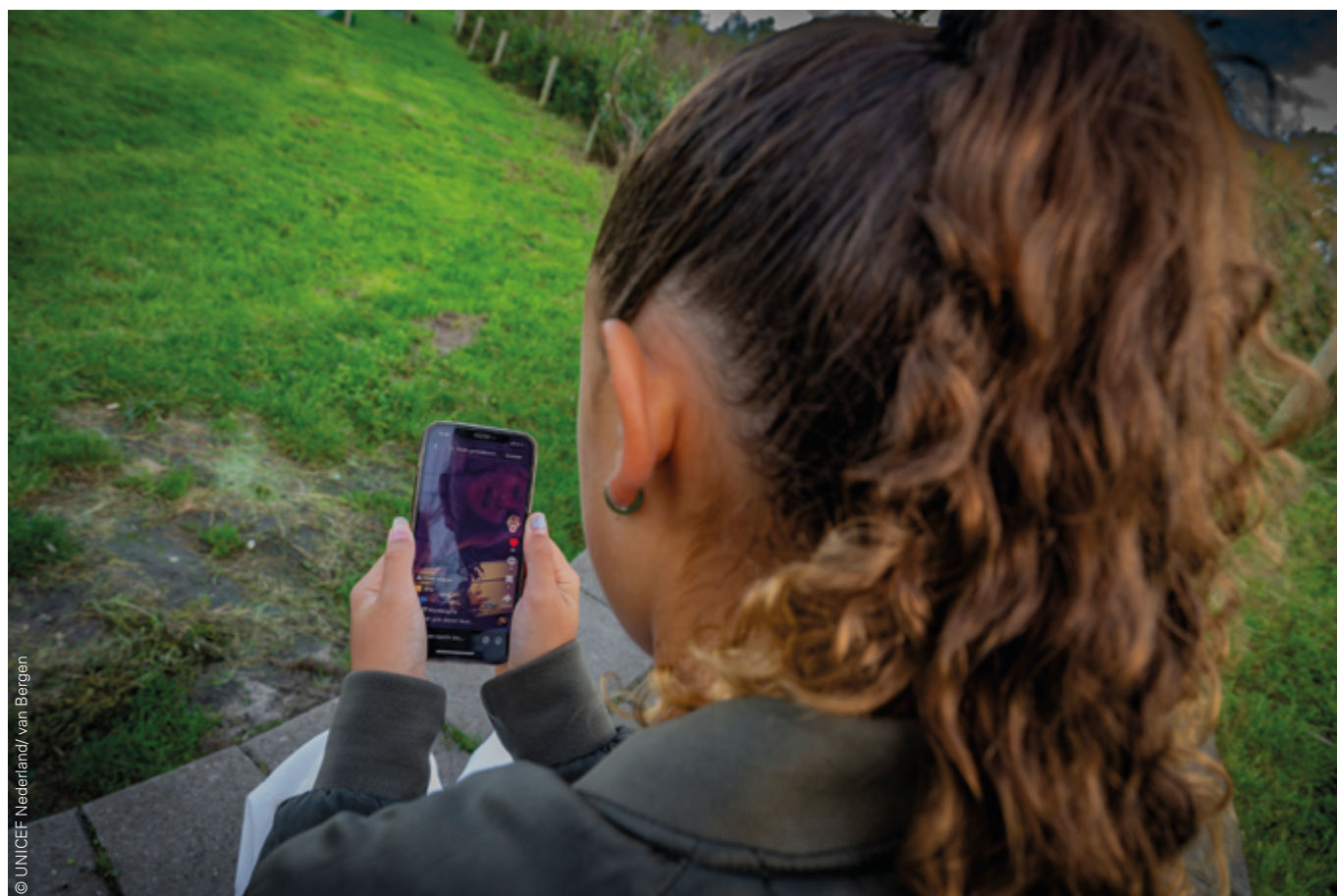
* Name has been changed.

2.2. Recent changes in the Dutch legal context

On 4 July 2023, the House of Representatives adopted a new set of legislation on sexual offences. If approved by the Senate, approaching children under the age of 16 online for sex will be prohibited, unless this is done with mutual consent and the persons involved are over the age of 12. While the proposal was being debated, an amendment was adopted that brings the distribution of nude images without consent by the person(s) depicted under the new sex crime legislation. Legislation making it a criminal offence to distribute nude images online without permission — with intent to harm another person — had already been introduced at the start of 2020.

In addition, new legislation is currently being drafted to deal with online images showing the sexual abuse of children. This legislation instructs the new Authority for the Prevention of Online Terrorist Content and Child

Sexual Abuse Material (ATKM) to deal with any images showing the sexual abuse of children, in addition to online terrorist content. This shifts the fight against the online sharing of child sex abuse images away from criminal law and places it under administrative law instead. The idea behind this change is that it is much more difficult to deal with entities hosting websites on which this type of material is being distributed under criminal law than it is under administrative law. The ATKM will work closely together with the internet industry, and will also be authorized to address parties involved throughout the chain if the final distributor cannot be contacted or is unwilling to remove the material. The ATKM will have the option to hand out hefty fines or impose an order for regular penalty payments. This approach will ensure internet hosts can be dealt with more quickly and effectively.



3. Current developments in Europe

Online sexual abuse and the sexual exploitation of children is also a priority at the European level. In Europe, the public discourse has shifted towards the role of the private sector — more specifically, online platforms and internet providers — and their role in preventing and combating the online child sex abuse. Reports by various providers show that the sexual abuse of children via their services is a persistent problem that requires urgent attention¹⁴, prompting legislators at both national and European level to develop legislation that heightens their accountability.

It is against this background that on 11 May 2022, the European Commission published a proposal for a regulation laying down rules to prevent and combat material depicting child sexual abuse¹⁵ (hereinafter: the proposed regulation). The proposed regulation seeks to offer service providers legal certainty in terms of their responsibilities for assessing and mitigating any risks. Where necessary, providers will be required to take down known and/or unknown child sexual abuse

material. In addition, providers can be obliged to use technologies to identify any possible perpetrators who approach children with the intention of sexually abusing them (online grooming).

The proposed regulation received both widespread praise and criticism from a broad range of stakeholders. Some view the proposed regulation as a crucial step towards holding the private sector accountable for their role in acting on the sexual abuse of children that is taking part on their platforms. Others regard the proposed regulation as a Trojan horse that is set to introduce mass surveillance throughout the European Union. Once again, the impact of such regulatory measures is mainly being discussed from the perspective of the protection of children (Article 34 of the CRC). As a result, the right of children to privacy in terms of the confidentiality of their communication (Article 16 of the CRC) and the impact of such legislation on consensual online sexual exploration by children is not being considered.

3.1 Proposed European regulation

The regulation proposed by the European Commission on 11 May 2022 has significant implications for service providers. One major measure proposed under the regulation is detection orders. When a service provider runs a significant risk of their services being used for online child sex abuse — despite the fact that mitigating measures have been taken — the coordinating authority can demand that a detection order is issued to the service provider. This means that the service provider will be required to use tools to scan all content on their platform, including private communication, for any (possibly) illegal material. To support the implementation of the proposed regulation, an EU centre will be set up as an independent body of the European Union with legal personality¹⁶. This EU centre will facilitate the process of risk assessment, detection, reporting and removal. While some view the proposed regulation as a crucial step in holding service providers to account for their role in tackling online child abuse, others view it as a violation of the rights to privacy and data protection of both adults and children.

One aspect that has been largely overlooked in the debate surrounding the proposed regulation is the impact on sexual exploration by adolescents online. When a provider uses technical tools to detect potentially illegal material, all forms of sexually explicit material generated by children — with or without the consent of the user — may be flagged as potentially illegal material. These

reports may then be passed to national law enforcement agencies for further investigation. The technological tools used, which include artificial intelligence, are unable to determine whether a sexual image or video containing an adolescent depicts consensual sexual exploration, or sexual abuse or sexual exploitation. The gathering of further evidence and the identification of the context in which the images were created by the police and courts will prove to be crucial. Without these factors, the circumstances in which the material was produced cannot be taken into account, and no adequate qualification can be given.

Furthermore, there is a risk that online sexual exploration by adolescents will be subject to constant monitoring by private and public entities, which would constitute a breach of the right to privacy. Even though the measures are intended to protect children against online sexual abuse, the question must be asked — from a holistic children's rights perspective — whether the negative impact on online sexual exploration by adolescents can simply be disregarded as a negligible side effect. Our aim is to put up for discussion this exclusive focus on the protection of children from online sexual abuse in the proposed regulation. For that reason, we are proposing a holistic perspective on children's rights that accounts for the impact of this regulation on the other rights of children, more specifically their right to privacy (Article 16 of the CRC) and their right to development (Article 6 of the CRC).

4. Monitoring private communication

The UN Committee on the Rights of the Child posits that children and adolescents need to be able to express themselves sexually without any fear of legal consequences. However, the Committee has not clearly linked such sexual expression to one of the rights under the CRC, such as the right to privacy (Article 16 of the CRC) or the right to development (Article 6 of the CRC). The formulation of Article 16 of the CRC is modelled on Article 17 of the International Covenant on Civil and Political Rights. According to the UN Human Rights Committee, private sexual activity with the consent of an adult fall under the concept of privacy¹⁷. The right to development (Article 6 of the CRC) presents another potential reference point. In its General Comment no. 3, the UN Committee on the Rights of the Child states that the right of development should also focus adequately on the sexuality, behaviour and lifestyle of children¹⁸. As such, sexual development falls under Article 6 of the CRC 19. Even so, there is currently no clear commitment to consider children's sexual development as part of a protected right, which has implications for how legislators in the European Union and member states approach this issue.

The question is whether the proposed legislation — which grants private and public entities constant insight into the private conversations of adolescents, including any sexual communication — is a violation of children's rights in itself. It is particularly interesting to consider how vulnerable groups of children, such as children in the LGBTIQ+ community, may be affected by such control measures. Recent research by Thorn into the perspectives of LGBTIQ+ adolescents has shown that three out of four participants in the study agreed that it is important to be able to research sexual orientation and gender identity online. What's more, 43% of participants believed it was normal for LGBTIQ+ people of their age to share nude photographs with each other²⁰. Given the importance of digital spaces in which adolescents, including LGBTIQ+ adolescents, can explore their sexuality, any monitoring of their private communication

and flagging of self-generated sexually explicit material is highly likely to have an inhibitory effect on their online sexual exploration. As a consequence, a space that is essential for the sexual development of adolescents is being sealed off. Even though the protection of children against sexual abuse and exploitation online is a legitimate objective under Article 34 of the CRC, the negative impact on the sexual expression of adolescents cannot simply be labelled as a negligible side effect. What is required instead is an in-depth debate to establish a proportionate measure to respect the right of adolescents to sexual development under Article 6 of the CRC (the right to development) and Article 16 of the CRC (the right to privacy). As part of this, Article 5 of the CRC (the principle of considering the evolving capacities of children) must also be taken into account.

In view of the significant concerns in terms of children's rights when it comes to monitoring private communication, it is a positive development that the detection measures in the proposed regulation have encountered strong opposition in the European Parliament. On 22 November 2023, the European Parliament adopted a proposal from the Committee on Civil Liberties, Justice and Home Affairs of the European Parliament (the LIBE Committee) regarding the mandatory scanning of material containing child sexual abuse in the communication of all users, including children and adolescents. Instead, the standpoint adopted by the European Parliament requires that detection orders can only be issued when there is a specific suspicion that a user or a group of users is sharing material containing child sexual abuse online. This would mean that the private communication of adults and children would not be subject to general supervision and scanning. This revised conceptualization of detection orders entails a significant improvement in the protection of the right of children and adolescents to privacy, and ensures a proportional balance between competing children's rights. Ultimately, it is the trilogue that will decide what the legislation ends up looking like.

5. Conclusion and recommendations

The new Dutch legislation on sex crimes seeks to account for the fact that a significant part of the lives of adolescents — including their sexual development — is lived online. Whether the distinction between experimental behaviour and abuse is sufficiently enshrined in law remains to be seen in practice. Legislation today increasingly appears to be veering towards condemning the sexual development of adolescents. Instead of educating them and offering support, we are moving towards a situation where their sexual expression is assessed on whether it is deemed desirable or not. What is being overlooked along the way is the fact that children need support to ensure they can develop in a healthy manner, including sexually, both online and offline. In fact, it is through education that we can make sure children are able to make healthy sexual choices and are not dependent on the world of online pornography for such information. Raising awareness about the consequences of online child sexual abuse among adolescents is another important strategy. This approach has not been adequately researched to date and deserves more attention.

The EU centre to be set up has the potential to become the place within the European Union where the problem of online child sexual abuse is tackled using a multi-

stakeholder approach. A centre of this type opens up opportunities that have not been adequately addressed in the proposed regulation. It is through research, advice, sharing methods, identifying custom solutions in mutual dialogue and encouraging innovation that the fight against online child sex abuse can truly get off the ground. The centre ought to engage privacy organizations such as the European supervisory authority for data protection (the European Data Protection Board, EDPB) as well as children's rights organizations, internet service providers, online platforms, and of course, children themselves. The EU centre can also highlight any areas where the law falls short. Furthermore, in its role as an authority, the centre can enter into dialogue with countries that are not members of the European Union — a significant point, as we are witnessing a shift in images depicting the sexual abuse of minors from within the European Union to countries that are not members of the EU. The fight against online child sex abuse can only truly get off the ground if we take appropriate measures in mutual dialogue with all stakeholders that protect the full catalogue of human rights. Partnerships of this type will help ensure that the sexual abuse of children online can effectively be rooted out, instead of simply shifting to countries outside of the European Union²¹.

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ESSAY 7

TOWARD BETTER PROTECTION OF THE RIGHTS OF THE CHILD AS A PLAYFUL CONSUMER

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Toward better protection of the rights of the child as a playful consumer

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1. Introduction

Children have the right to play and enjoy leisure time. This right is enshrined in Article 31 of the 1989 UN Convention on the Rights of the Child (CRC). Play contributes to children’s development by encouraging rest and recreation, creativity, social interaction and the acquisition of new skills. New forms of play that are attractive to children have come about in the form of digital services such as games, social media and video platforms. Having said that, these digital forms of play are rarely specifically designed for children, and do not always take their rights into account. Instead, they are a highly commercialized form of play, in which the child

is by definition turned into a consumer as soon as they download a computer game or open an account with an online platform¹.

The purpose of this essay is to shine a light on the online economic exploitation of children in certain commercial practices, practices that may violate the right to protection against such forms of exploitation (Article 32 of the CRC) and to free play (Article 31 of the CRC). We will then put forward recommendations to better protect children online in their capacity of consumers.



2. Forms of digital play

Digital play is often associated with computer games. Such games can be played on a game console, PC, laptop, tablet or smartphone, and come in a wide range of genres. Examples of computer games that are popular among children include the battle-royale game 'Fortnite', the sports game 'FIFA 23' and the sandbox game 'Minecraft'. The phenomenon of digital play goes beyond computer games alone, however. Other digital services, such as educational apps, social media and video platforms also include an element of play. The creation of playful online content can offer children great joy and lots of entertainment. Take the sharing of brief comedy sketches or dance moves on video platforms, for example, or live streaming while playing a video game, so that others can watch and comment.

When children create and share such content themselves, they pick up digital and social skills along the way, which contribute to their development. To children, watching social media posts, videos and memes shared by others is a form of entertainment, diversion and fun — which in effect makes it a form of digital play. Elsewhere, we are also seeing various kinds of hybrid forms of play, in which physical and digital play are combined. Children take on the roles of characters in video games and act out storylines in physical play. Conversely, physical games are also mimicked in virtual worlds: hide-and-seek is a popular pastime in Minecraft. Board games may be played remotely over Zoom, and physical play with smart toys that are connected to the internet also constitutes a hybrid form of play.

Elsewhere, advanced technologies such as virtual reality (VR) and augmented reality (AR) are lending an 'immersive' element to games in virtual worlds. VR immerses children in advanced, computer-generated virtual worlds of play that give them the sense of having stepped into an entirely different world to their physical environment. AR, on the other hand, projects a virtual layer onto the physical world, rendering it interactive and manipulable. The game 'Pokémon GO' is one example of the latter: in it, participants 'find' and 'catch' Pokémons, virtual fantasy creatures, by walking around the physical world with their smartphones. The thing all these immersive games have in common is that children can experience completely different realities while playing right next to one another.

2.1 Commercialization

Having said that, these digital forms of play are rarely specifically designed for children, and do not always take their rights into account. As early as 2013, the UN Committee on the Rights of the Child (hereinafter the 'Committee') expressed its concern about the increasing commercialization of physical toys not geared toward imaginative play². What's more, play based on television programmes may expose children to advertising, violent imagery and stereotypes in relation to gender and disabilities, the Committee argues. Although the Committee acknowledged the huge advantages of the internet as a playground for children, it also pointed out the risks involved, such as exposure to cyberbullying, violence and aggression in video games, plus a possible lack of physical activity. In addition, in 2021, the Committee called for greater focus on the commercial nature of digital services used by children³. According to the Committee, the commercial practices that ought to be banned in relation to children include advertising based on behavioural data, neuromarketing and advertising in virtual and augmented reality environments.

Commercial digital play is not only problematic from the perspective of the right to play under Article 31 of the CRC, but equally from the perspective of protection against economic exploitation in the subsequent Article 32. Traditionally, the ban on child labour has been the main focus of this Article, but in our digital world, this right has taken on an entirely new level of significance. After all, children might engage in activities online that veer into the realm of work: take underage influencers, e-sports players and streamers, for example. These children all deserve protection in the traditional sense of this right⁴. That said, the right protects children in a more general sense against commercial practices that manipulate them to gain an undue advantage⁵. In the latter sense, the right relates to the protection of children against unfair or harmful commercial practices in which the best interest of the child is not the prime concern (Article 2, clause 1 of the CRC), but the commercial interest of the provider to make a profit through their digital service ranks first instead.

3. Exploitative commercial practices in digital play

Exploitative commercial practices include commercial practices that fall under the scope of Article 32 of the CRC, which seeks to protect children against commercial exploitation. No definition of ‘economic exploitation’ is provided in the CRC, but the term covers more than child labour alone⁶. It also concerns the protection of children against anyone gaining undue economic advantage by manipulating them⁷. This is because children are exposed to significant risks as consumers of digital services. Behind a playful and entertaining facade that is designed to be attractive to children lurk revenue models that make clever use of commercial practices that may be unfair or harmful to children. In the following paragraphs, we will take a look at some examples of these commercial practices in more detail.

3.1 Sales strategies in digital play

The revenue models that underlie computer games have changed over the years⁸. In the past, computer games were sold in physical format only: you bought a CD-ROM or cartridge in the store and put it in your computer or game console at home to start playing. Now that the internet is all around us, computer games are often downloaded directly to the device they are played on. This has opened up a world of new opportunities for earning money through computer games. Sure, you can still pay a one-off price, but new forms of transactions have come into being alongside, such as taking out a monthly subscription to play a computer game (‘World of Warcraft’), games-as-a-service (including ‘Apple Arcade’ or ‘PlayStation Plus’) and the so-called ‘microtransactions’ that come with free-to-play computer games.

The term ‘microtransactions’ covers a plethora of strategies for earning money through computer games. Examples include the sale of extra add-ons (‘premium content’), such as virtual currency and virtual items like weapons and skins. These transactions are not just limited to games, because online platforms such as Roblox and TikTok also offer optional in-app purchases: Roblox offers virtual branded items (‘collectables’)⁹, while on TikTok, you can send gifts in so-called TikTok battles¹⁰. On top of that, free-to-play games may turn to advertising as a revenue model, giving players the option to play a version of the game without advertising at a

charge. The same revenue model is also used by other digital services, including streaming platforms such as Spotify and educational apps like Duolingo.

3.2 Advertisements

It has been known for some time that advertising can have a negative impact on children. In fact, we no longer schedule advertising around children’s programmes and films on TV and in the cinema for that very reason. However, these adverts are still omnipresent on online platforms and in a large number of games children spend a lot of time on. What’s more, new forms of marketing put across the commercial message in a more subtle way. These methods are harder to spot and think twice about — and all the more effective as a result¹¹. For example, commercial content may be cleverly integrated into non-commercial content, as is the case in advergames.

Children also engage with content whose commercial nature is not always instantly recognizable. This may be the case, for example, with videos shared by influencers, or with music associated with a brand¹². The intertwining of digital play and advertising is a concerning development when it comes to children, as it may lead to less healthy lifestyles, more shopping behaviour and materialism and parent-child conflict, for example. At the same time, children are an important target audience for companies when it comes to marketing: they are spending more and more money themselves, and they influence the purchasing behaviour of their families. Furthermore, not only do children become brand-conscious from a young age, they also often stay loyal to the brands they valued as a child¹³.

Given the potentially negative effects on children, specific advertising rules have been agreed to protect them. Having said that, these rules — barring certain exceptions¹⁴ — are often enforced by means of self-regulation¹⁵. What’s more, the legal requirements are mainly geared towards transparency. Given the intrusive, interactive, emotive and personalized nature of new marketing strategies, these requirements often prove to have little or no effect. In addition, the burden of responsibility is shifted too far towards parents and children¹⁶.

3.3 Dark patterns

With the transformation of revenue models came an evolution in the design of computer games and other digital services that has an impact on the rights and wellbeing of players¹⁷. Since moving on from a single payment prior to the use of a digital service, it has become increasingly important that users of these services spend a significant amount of time on them and are tempted to make in-app purchases¹⁸.

Businesses are entitled to make money, but not in a way that is unfair or potentially harmful to children¹⁹. Commercial practices that take advantage of the vulnerability of children to tempt or force them to make in-app purchases they do not fully understand or would prefer not to have made are simply unfair. Similarly, the use of virtual currency in games or other digital services is an unfair commercial practice if the same price is not listed in euros²⁰. Players may then no longer be aware of the actual value of a virtual product and spend more without realizing. In fact, this makes virtual currencies an example of a so-called 'dark pattern', or a design intended to mislead. Digital interfaces of this type drive, force or manipulate consumers towards making choices that are often not in their interest²¹. Countless other examples exist of dark patterns that may mislead children or manipulate their behaviour in digital games²². Some of these are listed below:

- Pay-to-win is a design choice that takes advantage of the need of players to compete and perform. For example, beating a computer game or reaching a high position in a game is made impossible or artificially delayed unless the player buys power-ups or other expansions (using in-game currencies).
- Pay-to-skip is a similar strategy in which a player pays to skip a difficult level or repetitive and monotonous tasks (also referred to as 'grinding'). In both pay-to-win and pay-to-skip, the game may be designed in such a way that the skills of the player are reduced on purpose to increase the chance of in-app purchases. Some computer games also force players to play at specific times.
- For games that are based on real-world time, players may need to return at a certain time every day to prevent a digital harvest from failing, animals from dying or attractive rewards from being missed.

- Season passes also use a form of manipulation based on time. In this case, you are not paying for the game itself; instead, you are paying for access to highly desirable items and exclusive rewards in the game that are only available during one specific period of time.

3.4 Consequences for children

The practices listed above can be harmful from an economic perspective, as they may unwillingly and unwittingly saddle children and their parents with significant expenses²³. On top of that, these practices can have an impact on the physical world children live in, as time-constrained events or excessive time spent on computer games may disrupt other events, such as education or sports, or exert pressure on social relationships²⁴.

With the emergence of games that offer infinite playtime, the number of children and adolescents who experience problems with their daily functioning has increased²⁵. In 2018, the World Health Organization added 'gaming disorder' to its classification model for medical conditions²⁶. This diagnosis only affects a small percentage of gamers, and some issues with regard to gaming, such as excessive use, are often caused by underlying social or emotional problems²⁷. Regardless of that fact, with some digital games now designed to capture the attention of players for as long as possible, have them return as often as possible and encourage them to make virtual purchases, they are no longer a form of play that is merely enjoyable.

When commercial interests override the interests of children, it is very likely that the rights of children are being violated. What's more, some design choices — even allowing for age and development level — appear to be inherently inappropriate for children²⁸. Both the Unfair Commercial Practices Act (Article 6:193a et seq. of the Dutch Civil Code) and the Digital Services Act (DSA) prohibit dark patterns and provide extra protection for children. Even so, in many cases, this has not yet resulted in age-appropriate games.

4. Digital play and gambling

Design choices in digital play also appear in the form of gambling or gambling-like strategies. Some games, for example, look like gambling games in terms of appearance. Casino games like 'Coin Master', for example, look like a slot machine. Elsewhere, there are computer games that contain gambling-like elements. The best-known example is 'loot boxes': virtual treasure chests that players can buy or — having spent a long time playing — win. When these loot boxes are opened, players receive a random reward in the form of a virtual item. Sending gifts in so-called TikTok battles could also be regarded as a form of gambling. In these battles, users use virtual money (coins) to send gifts to TikTokers going head-to-head in a livestream to win the favour of their viewers. Some viewers experience social pressure to send a gift due to the chance of a 'shoutout' by the TikTokers in question²⁹.

Offering gambling services to children is prohibited under the Dutch Betting and Gambling Act. However, this prohibition only applies to games of chance that fall within the definition under the Act. This piece of legislation does not cover gambling-like games or game elements³⁰, even though these can encourage people

to move on to 'real' gambling³¹. Games of this type can also lead to similar problems, such as unwillingly and unwittingly spending huge amounts of time and money. Aside from financial losses, gambling may also impact a person's health, including through anxiety and depression, or cause problems with their family or relationships.

A ban would be fitting if the design of a digital game resembles gambling to such an extent that it has the same impact³². Children are extra susceptible to gambling, as they are still in a developmental stage. It is nigh on impossible to explain to children and parents alike why practices that have all the same features of gambling and all the same effects are not covered by the Dutch Betting and Gambling Act. An assessment of the existing statutory protection children enjoy against these types of design choices is highly advisable. In addition, an extension of the gambling ban must be considered. Other countries, including Spain³³, Finland³⁴ and Belgium³⁵ are moving ahead with initiatives to ban loot boxes aimed at children. In the Netherlands, a motion put forward by Henri Bontenbal et al. is calling for the same³⁶.



5. Data-driven digital play

The online profiling of children for commercial purposes is another form of commercial exploitation. It is a well-known fact that popular digital services earn money through advertising and in-app purchases specifically targeted at users. They do so by profiling children based on data regarding their online behaviour, for example, before categorizing them as a certain type of consumer. In doing so, children are reduced to data points, completely detached from their life story and individual context. Using data mining and algorithms, their interests, personal features, way of life, sexual identity and individual vulnerabilities are translated into personalized online experiences specifically tailored to them that maximize economic profiteering.

5.1 Personalization

Personalized services can contribute to a positive experience if they make no-obligation recommendations that align with someone's interests. When the objective of personalization is to capture someone's attention in a forceful manner and hold it for as long as possible, on the other hand, it can give rise to effects that are unpleasant or even harmful to children³⁷. Not only are children constantly exposed to advertising online; the advertising they see is specifically selected to generate the biggest possible impact. What's more, using 'click and swipe' data, algorithms flood the timelines of users with content designed to keep them chained to their screens for as long as possible. Sensational content is well-known attention-grabbing tactic and often includes elements that are harmful to children. Examples include severed limbs, decapitated people, suicide and animal abuse, as well as online challenges organized by peers that incite dangerous behaviour in other children and sometimes have fatal consequences³⁸.

Another strategy is to keep users scrolling through algorithm-driven content that exploits their vulnerabilities and entangles them in a mentally, socially and physically unhealthy web of fake news, disinformation, extremist content, content about eating disorders or content

showing extreme sports, for example. Data can also be used to 'calculate' when a user is most susceptible to spending money on virtual items on a platform or in a game, by matching them with other players in a targeted manner, for example (so-called monetized matchmaking)³⁹. Children are extra vulnerable as consumers in this regard and deserve greater protection. It is evidently clear that what comes first in these forms of online personalization is not the joy of children, but the revenue models of digital service providers.

As such, the data-driven character of digital services touches on all online risks that have been identified through research into the effects media have on children⁴⁰. More specifically, these risks include content risks (exposure to harmful content), behavioural risks (displaying extremist behaviour or performing dangerous online challenges), contact risks (automated recommendations by 'friends'), consumer risks (individually targeted advertising and data-driven 'nudges' toward in-app purchases or gambling), privacy risks (excessive data collection and commercial profiling), risks posed by advanced technology (the use of artificial intelligence) and health risks (information about unhealthy lifestyles, compulsive scrolling, feelings of insecurity).

5.2 Legal protection

With the coming into force of the General Data Protection Regulation (GDPR) in 2018, a higher level of protection for the personal data of children was enshrined in law. Among other things, this higher level of protection of their personal data entails that the profiling of children for commercial purposes — such as personalized advertising — is not permitted under the GDPR⁴¹. In addition, the Digital Services Act (DSA) came into force last year, making it mandatory for online platforms to guarantee a high level of privacy, security and protection for children (Article 28, clause 1 of the DSA). This regulation once again stresses that personalized advertising targeted at children is not permitted (Article 28, clause 2 of the DSA).

Under the GDPR, data-driven commercial practices targeted at children are not permitted if these cannot be explained to them or are not in their interest⁴². The latter is the case if the commercial practice in question does not contribute to the wellbeing of children, or is harmful to them or their rights.

Given the online risks referred to above, it can be assumed that most — if not all — data-driven commercial practices are not in the best interest of

children. Change on this point can only be achieved once the design of apps and games starts focusing on creating a personalized, age-appropriate, healthy, fun and challenging gaming experience in a privacy-conscious way. The question is whether personal data are actually required for this purpose. In games, for example, it is possible for children themselves to decide how easy or hard the gameplay should be. By doing so, children (and parents) are able to personalize their privacy settings themselves.



6. Concluding comments and recommendations

6.1 Holistic perspective on children's rights

The central focus of this essay has been the right to play and leisure (Article 31 of the CRC) and the right to protection against economic exploitation (Article 32 of the CRC). However, in light of the examples we have covered, it has become clear that certain commercial practices also have a potentially negative impact on other children's rights, including the right to non-discrimination (Article 2 of the CRC), the best interest of the child (Article 3, clause 1 of the CRC), the right to healthy development (Article 6 and 24 of the CRC), the right to privacy and data protection (Article 16 of the CRC), the right to freedom of information (Article 17 of the CRC) and the right to freedom of thought (Article 14 of the CRC).

In addition, it is important to consider the evolving capacities of children (Article 5 of the CRC) Article 5 of the CRC also states that as they get older and continue to develop, children have the right to a greater degree of autonomy from their parents or other legal representatives. The impact of commercial practices may be different for children of different ages. We know, for example, that the things that are harmful to young children might not have an equivalent effect on older children.

At the same time, we are seeing that teenagers are particularly at risk as consumers. The reason for this is that they use apps and games on a more independent basis, are likely to encounter more risks due to intensive use, and may be more likely to take risks themselves. However, the purpose of children's rights is not just to protect children. Certain rights enable children to take part in society, digitally or otherwise, such as the right to freedom of expression (Article 13 of the CRC) and the right to safe access to digital and other media (Article 17 of the CRC). Given this context, the importance of digital play and leisure to the wellbeing and development of children cannot be underestimated. The right to free

play presupposes that children must also be able to make independent choices in this. Commercial practices as described in this essay must never get in the way of enjoyable, meaningful and healthy online participation of all children.

6.2 Law enforcement

The Dutch government is a contracting party to the CRC with an obligation to ensure that children's rights are safeguarded, and the issues we have discussed in this essay are being addressed in our legislation and regulations. Even so, certain practices are clearly not in line with the protection that children ought to enjoy on the basis of that legislation and regulation. One task for government is to explore how compliance with and enforcement of the law can be improved. In fact, this is a conversation that goes beyond the Netherlands alone. A significant amount of legislation and regulation applies to all of Europe, and the authority to take action does not always rest with the supervisory bodies in the Netherlands. Even so, this does not relieve the government of its duty to identify more specific enforcement methods — or as a minimum, to identify what obstacles there may be and work to remove them. In addition, the government has the duty to monitor whether its legislation still offers protection in the face of new technological developments⁴³. This is not currently the case for gambling or gambling-like elements in digital services, for example.

Children are hands-on experts in digital play, and their side of the story must be central to our approach. For that reason, children must be involved when a policy or law that affects them is drawn up or changed. They must also receive the information they need about their rights in relation to digital services. As such, greater effort must be made to offer children effective legal remedies to challenge any violations of their rights. Children must have the option to submit a complaint to the supervisory authority themselves. As a minimum, they must proactively be made aware of this option — if available.

6.3 Encouraging age-appropriate design

In 2022, UNICEF published a call to action in which children in the Asia-Pacific region urged companies to offer age and developmentally appropriate services to children⁴⁴. In the Netherlands, the UNICEF Youth Advisory Board has offered recommendations with regard to the safeguarding of children's rights by avoiding the negative features of apps and games, for example. Age-appropriate design refers to the approach of providing children with online experiences appropriate for their age in apps and games by taking their rights and well-being into account as early as at the design stage. This is the exact opposite of the current situation: instead of apps and games that are not specifically designed with the rights of children in mind, this approach expressly takes these into account. From a practical perspective, companies can — or should, perhaps⁴⁵ — pick up the gauntlet by carrying out a children's rights impact assessment (CRIA) as standard in the development of apps and games⁴⁶. Among other things, the purpose of a CRIA is to identify the potential risks of an app or game to the wellbeing and rights of children, before taking measures to avoid or mitigate these risks. Moreover, several codes of conduct and standards exist that offer guidelines for the implementation of an age-appropriate design approach at businesses, including the Code for Children's Rights⁴⁷ in the Netherlands, and the CENELEC Age Appropriate Digital Services Framework⁴⁸ at European level.

One issue that requires further consideration is age verification. Unless digital services are suitable for children as standard, it is necessary — or mandatory, even — to know whether any users or those services are children, and if so, which specific users are concerned, so that they can be offered an age-appropriate version. For digital services intended for adults only, a hard line must be drawn between users under the age of 18 and users aged 18 and above. As part of this, it is important that the age verification methods used are accessible, inclusive and privacy friendly. Examples already exist⁴⁹, but their introduction is lagging behind. Once again, government should step in here to encourage the development, use and acceptance of age verification systems.

6.4 Hand in hand

Without law enforcement and access to justice, age-appropriate design in digital play is unlikely to properly get off the ground. Clear and mandatory guidelines for age-appropriate design and awareness campaigns aimed at children and parents with regard to the ways in which children might be exploited or harmed would guarantee compliance with the statutory requirements to protect children. An expansion of the Kijkwijzer and PEGI⁵⁰ age-rating systems may be one way to achieve this. It is equally important that all stakeholders are involved, alongside government and the world of business. Examples include NGOs, the education system and the scientific community, as well as parents and children themselves, of course.

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49. For an example, see: www.yivi.app. For more on this point, see: CNIL, Online age verification: balancing privacy and the protection of minors (2022), www.cnil.fr/en/online-age-verification-balancing-privacy-and-protection-minors.
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A range of authors were invited to provide the content of these essays. For that reason, the opinions and viewpoints contained in this essay are not necessarily the opinion of UNICEF the Netherlands.



ESSAY 8

CHILDREN'S RIGHTS, INCLUDING IN THE DIGITAL WORLD

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Children's rights, including in the digital world

A reflection on the 'Children's rights in the digital world' essay collection

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1. Introduction

Children have the right to play, make friends, grow up, learn and relax, all in complete safety and without any need for concern. They have this right both offline and online — two worlds that are closely intertwined. The positive and negative effects of digitalization come hand in hand, however.

In this essay, we will make the case for the further development of the digital world from the perspective of children's rights. On the one hand, this means we need to take a much closer look at how digital technologies can make a positive contribution to the wellbeing and development of children. On the other hand, it is essential that we identify and acknowledge the darker side of digitalization, so that we can mitigate the risks to the greatest extent possible. We must do so because various children's rights are under pressure, including the right to privacy, the right to life and development, the right to protection against discrimination, the right to play and leisure time and the right to protection from harmful content.

One thing that is certain is that the digital world can be designed in a way that is more fun, safe and educational for children, and that offers them more opportunities. The UN Convention on the Rights of the Child, which enshrines the rights of children in law and which is binding on the Netherlands, can serve as a guiding principle for this. That way, every child in the Kingdom of the Netherlands stands to benefit from digital technologies — and can be protected when necessary. After all, the rights of children are not optional.

In 2021, the UN Committee on the Rights of the Child published its General Comment no. 25 about the rights of children in the digital environment. In this document, the UN Committee on the Rights of the Child offers recommendations to countries on how best to respect children's rights in the digital environment of our children. To name just one example, the Committee has singled out the development of legislation, regulations and specific policies with regard to children's rights and the way in which digital technologies impact the world our children inhabit. But first and foremost, we need to recognize that digital technologies impact the rights of children in a range of ways and can result in both positive and negative outcomes.

In the first part of this overarching essay, we will explain what the rights of children stand for and why it is so important that they are safeguarded in the digital world. Next, with reference to the other essays in this bundle, we will take a closer look at the issues with regard to children's rights that we are currently facing in the digital world, and which lessons we can draw from this. The topics we will cover include the impact of social media on mental health, the importance of digital resilience and digital skills, protection against harmful content online, online sexual abuse and the importance of engaging children and adolescents in the further development of digital services. In doing so, this essay will sketch out a cross section of the issues at play when it comes to the rights of children in the digital world. We will then round up this essay by drawing several conclusions and offering recommendations.

2. The importance of children's rights

The rights of the child, as laid down in the UN Convention on the Rights of the Child (CRC), and implemented in more detail in international, European and national regulation and jurisdiction (Kilkelly & Liefwaard, 2019), include a broad palette of rights and freedoms that are important for the healthy and harmonious development of every child (preamble to the CRC). These rights and freedoms continue to apply in full in the digital environment our children spend time in. What is more, certain rights are of extra importance in the digital world. We previously mentioned the right to privacy, the right to play and leisure time, and the right to protection against harmful content. Other rights children are entitled to include the right to education (Article 28 and 29 CRC), the right to health (Article 24 of the CRC), the right to an adequate standard of living (Article 27 of the CRC), the right to a fair trial (Article 40 of the CRC) and the right to be protected against all forms of violence (Article 19 of the CRC) and certain types of exploitation (economic, sexual and otherwise; Article 32 et seq. of the CRC). In terms of freedoms, the CRC specifies the right to freedom of expression, including access to information (Article 13 of the CRC), freedom of religion (Article 14 of the CRC), freedom of association and peaceful assembly (Article 15 of the CRC) and free access to media (Article 17 of the CRC).

The UN Convention on the Rights of the Child is guided by four general principles (UN Committee on the Rights of the Child, 2003) for the protection of children's rights — also known as the general principles. These principles assist in determining the measures required to safeguard the rights of children, including in relation to the digital world. As such, they form a lens through which the implementation of all other rights under the CRC must be viewed (see also General Comment no. 25). The principles in question are as follows:

1. every child must be able to enjoy their rights to the same extent and free from unfair discrimination (Article 2 of the CRC);
2. in all measures that concern children, the best interest of the child must serve as the prime consideration (Article 3 (1) of the CRC);
3. the right to life and development must be respected for all children (Article 6 of the CRC);

4. every child has the right to share their opinion on decisions that affect children, whether in a general or individual sense, and due importance must be given to that opinion (Article 12).

To a significant extent, the rights of the child serve to protect the best interest of the child. Vice versa, it is also accepted that the best interest of the child must not be invoked to override the rights of the child (General Comment no. 14, paragraph 4). Exactly which interests are concerned very much depends on the specific context, although the UN Committee on the Rights of the Child has defined several compelling aspects. These include the identity of the child, the relationship with its parents and family, care for and protection of the child, safety, the right to health, the right to education and the child's views (General Comment no. 14, paragraph 52 et seq.). That final point touches upon the fourth general principle and means that children must have a voice when conflicting interests are being weighed up that concern them.

Elsewhere, in its General Comment no. 25, the UN Committee on the Rights of the Child refers to the many opportunities available to children online. At the same time, the interests and rights of the child may be jeopardized as soon as children receive inadequate protection — against harmful content, for example, or against exploitation or breaches of their privacy, or because they are insufficiently able to make the most of digital opportunities, including in relation to education, healthcare, play and development. In doing so, the Committee calls on contracting states to give due consideration to vulnerable groups of children, including children with a disability, children who have been separated from their parents, children going through the judicial system (whether as a suspect or a victim) or migrant children. As part of this, it is important to recognize that the digital world was not designed for children in the first instance, but it does play a major role in their lives. For that reason, the contracting states — including the Netherlands — must guarantee that the best interest of every child comes first in all measures with regard to the provision, regulation, design, management and use of the digital environment (General Comment no. 25, paragraph 12 et seq.).

3. The assertion of children's rights

Even though these rights and freedoms are vested in the child, from a legal and practical perspective, children are often dependent on others when it comes to asserting their rights. Generally speaking, children are represented by their parents or other legal representatives in these cases. As such, the position of parents matters in the realization of children's rights. For that exact reason, the UN Convention on the Rights of the Child offers specific protection to the position of parents (Article 18, clause 1 and Article 27, clause 3 of the CRC; see also Article 5 of the CRC). The first task of government is to support parents in their responsibilities with regard to their children. On the part of the parents, it is expected that they regard the best interest of their child as their prime concern (Article 18, paragraph 1 of the CRC). However, when the rights and interests of the child may be or have been jeopardized, the government has a duty and responsibility to protect children, whether or not preventively. In extreme cases, this may mean that children need to be protected from their parents.

Parents and educators in a broader sense also play a significant role in the extent to which children interact with digital technologies, and the way in which they do so. In doing to, the best interest of the child should be the guiding principle for parents. The primary role of government is to support parents in this task, by providing them with proper information, for example. At the same time, we should expect government to protect the interests of children, which may require legislation or regulation, or even certain interventions to protect children against choices made by their parents.

In addition, the UN Convention on the Rights of the Child stipulates that the further a child develops, the more room should be allowed for the autonomy of that child. Article 5 of the UN Convention on the Rights of the Child states that parents need to consider the evolving capacities of their child. What this means is that the older a child gets and the further they develop, the more their wishes and requirements need to be taken into account. The same task applies to government and professionals: any regulation, policies and practices must consider the differences between children. This will affect how younger and older children are dealt with, for example, and which degree of protection is deemed appropriate.

Elsewhere, questions such as the extent to which children can participate in decision-making or whether they have the right to give or refuse their consent to certain decisions or give permission for certain actions also need to be considered from the perspective of the growing autonomy of the child (General Comment no. 25, paragraph 86). Of course, the specific context of the digital environment needs to be scrutinized as part of this. More protection is required with regard to some aspects, while for others, the child's autonomy needs to be recognized and opportunities need to be made available. Parents and educators too must be supported in striking the right balance between both of these aspects (General Comment no. 25, paragraph 86).

The protection of children's rights in the digital environment requires a nuanced approach, in which the rights and best interest of all children should be the main focus, and in which children themselves should be involved. The question of how to safeguard the rights of children must also be asked because the Dutch government is obliged to protect the rights and best interest of children through legislation, policy and other measures (Article 4 of the CRC). In the first instance, this obligation relates to the government's own activities nationwide and other levels, including the execution of government tasks by third parties, as happens in education and social care. Furthermore, the government is obliged to create the preconditions required for the protection of children's rights in the activities of non-governmental actors, such as the world of business and social organizations, as well as parents and educators (General Comment no. 16).

This series of essays aptly demonstrates that non-governmental actors play a key role in a range of areas connected to the digital environment of children. What's more, these actors do not always operate with the rights and best interest of children in mind or are possibly unable to monitor whether these are being respected. As such, public policy is essential, not only to improve our knowledge and awareness, but also to set prerequisites and boundaries where the rights of children may be at stake. As the legal framework for the protection of children's rights is binding, the government can be held to account for this responsibility.

4. Key points from this series of essays

In this section, we will review the issues with regard to children's rights covered in the [essays published previously](#) by UNICEF the Netherlands in a nutshell.

Essay 1: Digital inclusion

The essay 'Children online: digital inclusion as a fundamental right' (Van Deursen, 2023) defines four stages of technology appropriation that together ensure the digital environment is accessible to children:

- **Stage 1:** Children develop a positive attitude towards a medium or platform, as well as the motivation to use it.
- **Stage 2:** Children have access to internet devices and connections. For children from low-income families, this is not a given.
- **Stage 3:** Children possess the digital skills to be able to appropriate the digital world. More specifically, these skills relate to the practical use of digital applications.
- **Stage 4:** Children are capable of making conscious choices online.

At its core, this essay is about the right of every child to enjoy their rights to the same extent and free from unfair discrimination (Article 2 of the CRC). In the Netherlands it can be expected to guarantee that all children have 'equal and effective access to the digital environment in ways that are meaningful for them' (General Comment no. 25, paragraph 9). This also includes the right to education, so that children can learn the digital skills they need (General Comment no. 25, paragraph 104). The essay concludes that digital inclusion in the Netherlands is not self-evident and offers a range of guidelines to prevent digital exclusion.

Essay 2: Harmful content

The essay 'The right to protection against harmful content, including also social media' (Van Stormbroek, 2023) stresses that children constantly run the risk of being exposed to harmful content through communication on social media:

- One in every five teenagers comes across nasty or upsetting videos on social media such as TikTok or Instagram from time to time. Examples include violence against animals, extreme violence such as mass executions, and images of self-harm and eating disorders.
- Algorithms increase the chance of children being exposed to harmful content, as upsetting or extreme content is more likely to go 'viral'.
- Parents and other educators face a near impossible task when it comes to making sure their children grow up without harmful content. They do not have sufficient insight into the range of content children are offered on social media every day.
- To protect children against harmful content online, Van Stormbroek believes an age-rating system needs to be set up to provide information on social media.

The insights from this essay helps us better protect children against content that may harm their interests, and consequently their development. As such, it touches on one of the general principles in children's rights: the right to life and development (Article 6 of the CRC), as well as other rights, such as the right to health (Article 24 of the CRC). The UN Committee on the Rights of the Child has emphasized that the countries that have signed up to the UN Convention on the Rights of the Child must take all suitable measures to prevents risks such as these when it comes to children (General Comment no. 25, paragraph 14). An age-rating system as proposed in this essay would serve as an example of such a measure (General Comment no. 25, paragraph 55). In addition, protection in the digital environment should be closely linked to protection of the best interest of children within society in a broader sense, also bearing in mind vulnerable groups of children (General Comment no. 25, paragraphs 25 and 26).



Essay 3: Data in the classroom

In the essay 'Data in the classroom: the case for more free space in education' (Pijpers, Bomas, Dondorp & Kerssens, 2023), the authors reveal how the education system is increasingly embedded in a digital infrastructure driven by the data of users:

- Powerful digital analysis tools are used to intensively monitor the development, interaction and wellbeing of students.
- Data-driven education can enhance the rights of children. The data gathered serves as an additional source of information that helps teachers and students get more grip on the learning process and improve the quality of the learning process, enhancing the right to education and development along the way.
- Children's rights can come under pressure due to data-driven educational technology. Examples include the right to privacy and data protection (Article 16 of the CRC) and the right play and leisure (Article 31 of the CRC).
- The authors of the essay make the case for shifting the focus toward children's rights when thinking about data-driven educational technology.
- In doing so, one important question is what the datafication of education means in terms of the free space children get in a digital environment.

This essay sharply demonstrates that while digital technologies can contribute to the realization of children's rights, they can also pose a threat — something professionals, parents and children would do well to be aware of. The essay also shows that several important questions remain unanswered and emphasizes the importance of evidence-based education policies in which children's rights are fully embedded (General Comment no. 25, paragraph 103).

Essay 4: Social media and mental health

The essay 'The impact of social media on adolescent's mental health' (Valkenburg, Van der Wal & Beyens, 2023) describes how adolescents themselves are aware of both the positive and negative sides of social media:

- Social media are often viewed as a cause of the deteriorating mental health of adolescents, in particular when it comes to girls.
- This idea has mainly come about because the rapid rise in the use of social media over the past decade has come paired with deteriorating mental health among adolescents.
- Nearly all studies show a minor impact of social media on the wellbeing of adolescents.
- Adolescents who are in a vulnerable position offline are at greater risk of harm to their mental health online too. For these adolescents, social media leaves them at an increased risk of depression, anxiety symptoms, fear of missing out and loneliness.

This essay touches on several children's rights, with the right to mental health (Article 24 of the CRC) featuring most prominently. The findings show that, in order to limit this increased risk of harm to mental health, it is extra important to focus on adolescents in a vulnerable position. The government can be expected to pay the necessary attention to this (General Comment no. 25, paragraphs 84 and 25).

Essay 5: Digital resilience

The essay 'Digital resilience: the case for children to participate' (Rozendaal & De Jong, 2023) explains that it is important for children to be able to apply resilience strategies so they can use social media in a healthy way. The factors associated with digital resilience in children are media-related knowledge and skills, cognitive skills (executive functions) and the motivation to display healthy online behaviour. The authors make the case for involving children in the development of effective interventions and policies, and in doing so, they touch on one of the fundamental principles of children's rights: the right to meaningful participation (Article 12 of the CRC) (General Comment no. 25, paragraph 18 and General Comment no. 12).

Essay 6: Online sexual abuse

In the essay 'Children's rights, online sexual abuse and the exploitation of children' (Gerken & Witting, 2024), the authors reflect on the legislation and regulation aimed at protecting children from online sexual abuse and exploitation:

- A proposed regulation by the European Union stipulates that providers of digital services must remove both known and new child pornography material. Providers can also be obliged to use technologies to detect possible perpetrators approaching children with a view to sexually abusing them.
- Proponents regard this regulation as an important step in holding providers of digital services accountable for their role in tackling online child abuse.
- The authors are concerned that the rights of children will be breached when private and public entities gain constant insight into the private conversations of adolescents, including any sexual communication. Instead, they posit such communication is part of healthy sexual exploration.
- Children and adolescents must be supported in their online sexual behaviour by providing them with the information and help they need. The fight against online child sex abuse can only be effective if we take appropriate measures that protect the full catalogue of human rights.

Not only does this essay demonstrate that the rights of children are increasingly being determined by European legislation, it also draws attention to the possible conflict between different children's rights. The protection of children against sexual exploitation is a major issue. At the same time, the concerns raised by the authors show that other rights may be jeopardized and that a comprehensive strategy is required with the aim of keeping all the rights and freedoms of children in sharp focus (General Comment no. 25, paragraph 24 et seq.).

Essay 7: The right to play and protection against economic exploitation

The essay 'Toward better protection of the rights of the child as a playful consumer' (Van der Hof, 2024) takes a closer look at the right of children to be protected against economic exploitation online (Article 32 of the CRC) and the right to free play (Article 31 of the CRC). Children are exposed to significant risks as consumers of digital services. Certain revenue models lurk behind the playful and entertaining facade of digital services, which is designed to appeal to children. These services make clever use of commercial practices that are potentially unfair or harmful to children, including:

- Making microtransactions while playing free computer games.
- The use of virtual currency, which potentially leaves players no longer aware of the actual cost.
- Gambling-like play elements in games, such as loot boxes: virtual treasure chests that players can buy or — having spent a long time playing — win. When these loot boxes are opened, players receive a random reward.
- Personalized online content and advertisements based on data and algorithms that are geared towards maximizing economic profit.

This essay contributes to our awareness of the impact of digital services on the rights of children. This awareness is a prerequisite to help us protect children more effectively, both as consumers and as individual children with rights and freedoms. Once again, the right balance needs to be struck between access to opportunities for digital play and protection against unfair or even harmful practices. The government plays a crucial role in this (General Comment no. 25, paragraph 111).



5. Conclusion

Due in part to the everyday use of computers, mobile phones, tablets, interactive whiteboards, game consoles and VR headsets, digitalization forms an integral part of the lives of our children. These devices help children acquire online skills that will prove crucial for their future. They use these devices to establish and maintain social contacts, for example, or to find role models to emulate, and they can access hours of entertainment.

To better safeguard the rights of children in the digital world, it is important to make sure that children and educators (1) have access to this digital world in the first place, that they know how to navigate this world in a healthy and safe manner, and that they are supported in doing so in a way that is appropriate for their age and level of development. On top of that, it is important that (2) effective legislation is put into place and enforced in order to protect children against practices that neglect their rights, exert pressure on their rights or even violate their rights. This view is backed up by the recommendations of the UN Committee on the Rights of the child in its General Comment no. 25.

1. It is important that all children — regardless of their background or personal characteristics — are able to gain the knowledge and skills they need in the digital world in a healthy and safe manner. In light of the rapidly increasing digitalization of society, children must be firmly supported in this. This particularly applies to children who are vulnerable in the offline world, for whichever reason. To achieve this, we must firstly make digital applications accessible to all children, just like all other social amenities. Secondly, we must teach children the skills they need to use these digital services in a healthy manner. Thirdly, we must increase their digital resilience. The child's immediate social environment is crucial in this. Children must be supported by their parents, but equally by others,

such as teachers. One essential thing to consider in this respect is the 'evolving capacity of the child': the older a child gets and the further they develop, the more their wishes and requirements must be taken into account. The same task applies to government and professionals.

2. With regard to several matters, there is a need for adequate legislation and regulation — whether or not in a European context — to help make the digital world a safer place. Better enforcement of the existing legislation must be another focal point. All children — and children in a vulnerable position in particular — have the right to be protected from sexual abuse, harmful content, discrimination and economic exploitation. All too often, responsibility for that protection is being shifted to the user (the child and its educators). Compliance with and enforcement of the law and regulations are crucial in creating a safe digital environment for children in games, on social media and on other platforms.

The essays in this series demonstrate that safeguarding the rights of children in the digital world is a task that demands our constant attention. Negative and positive aspects often go hand in hand, correlating with a need for both protection and access and participation. Or, as the essay 'Joy and sorrow through a screen' (Valkenburg, van der Wal & Beyens, 2023) puts it: this is a double-edged sword. Regulating the digital world brings certain dilemmas with it. Data-driven educational technology can support children in their learning process, for example, but this type of datafication also deprives them of the free space they need to learn. Elsewhere, European legislation seeks to improve the way we tackle online child abuse. At the same time, however, this legislation may open the door toward breaches of the privacy of adolescents and others.

6. Recommendations

Recommendation 1: Secure children's rights in the digital world

- In addition to the Digital Services Act (DSA), it is worthwhile for providers of digital services to perform a Children's Rights Impact Assessment (CRIA) when their services may be used by children, or may have an impact on them.
- Use the UN Convention on the Rights of the Child as a foundation for developing the core objectives of the revised curriculum for primary and secondary education on digital literacy. Doing so will contribute to the quality of any lesson content and will ensure that children gain knowledge about their rights, including in the digital world.

Recommendation 2: Listen to children

- Politicians, administrators and policymakers must listen to the experiences of children and adolescents, so that they can take into account their concerns, wishes and expectations in devising policies and regulation and in the development of technology. Doing so will help recognize one of the most basic needs children have: the sense of having a say and having an impact. What's more, according to the UN Convention on the Rights of the Child, this basic need is a fundamental right.
- Guarantee that the opinion of adolescents on all things digitalization is heard in a representative and structural manner as part of the policy process at a local, regional, national and European level.
- Provide children with the means they need to challenge any neglect or violation of their rights in the digital world. Children must have the option to hold the government to account with regard to its responsibility to implement and protect the rights of children in the digital world. Possible solutions include access to effective and child-friendly legal remedies for victims of any breaches of children's rights (General Comment no. 25, paragraph 43 et seq.). This could be realized in the form of collective action together with other victims, for example. A role is reserved in this for the supervisory authorities, such as the Dutch Data Protection Authority and the Ombudsman for Children.

Recommendation 3: Improve digital skills, resilience and inclusion

- Fight digital inequality and organize specific attention for the needs of children in a vulnerable position in any plans of action to improve the digital skills of children. This is particularly important for children growing up in a home setting with limited financial resources, and for children with learning difficulties. Of course, other groups of children deserve our attention too.
- Use a multi-stakeholder approach when developing interventions to combat digital inequality. This should include a range of actors, such as policymakers, public administrators, politicians, schools, the ICT sector and publishers of software and content, as well as children and parents.
- As a government, support parents and schools in the digital education of children. This can be achieved by setting clear guidelines for both schools and parents.

Recommendation 4: Protect children online

- Encourage age-appropriate design of digital services, so that developers consider what is appropriate for children as standard during the design of an app or game. In doing so, the rights and wellbeing of children become an integral element of the design process. There are several codes of conduct and standards that offer guidelines for the implementation of an age-appropriate design approach at businesses, including the Code for Children's Rights in the Netherlands, and the CENELEC Age Appropriate Digital Services Framework at the European level (CEN-CENELEC 2023; IEEE 2021).
- Make social media platforms responsible for preventing children from coming into contact with potentially harmful content, and monitor them to make sure they are doing so. Make sure that children and parents can access information about the content of videos in an independent and transparent manner. Make sure that this information meets the requirements of children and parents.
- Create space by taking a more cautious approach towards recording the development of pupils using digital means. Make sure that headteachers and other teachers view digital technology with an open mind.
- Support children in their healthy sexual development, both offline and online. Through education, we can help make sure that children can make healthy and conscious sexual choices in their offline and online environment.
- Explore how compliance with the existing legislation and regulations can be improved at national and European level, and monitor whether the existing legislation continues to offer the necessary protection in the face of new technological developments.
- Use accessible, inclusive and privacy-friendly age verification methods. Examples already exist, but their introduction is lagging behind. Once again, government should step in here to encourage the development, use and acceptance of age verification systems.

The purpose of this essay collection is to share academic knowledge and offer guidelines to acknowledge and better safeguard the rights of children in their digital environment. Responsibility for doing so is shared, but government can be expected to take a leading role. Parents, educators, the education system, professionals and the world of business can also all make a difference. Active involvement of children and adolescents must be key in doing so.

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PUBLICATION DETAILS

'Children's rights in the digital world' essay collection

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Photography: © UNICEF NL/van Bergen en © UNICEF NL/Schoonewille

Final editing: UNICEF the Netherlands and Studio Rietveld

Design: UNICEF the Netherlands

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The essay collection 'Children's rights in the digital world' has been created in partnership with Leiden University and Kennisnet.



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