

The Case for a UNCRC General Comment on Children's Rights and Digital Media

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Executive summary

This report examines the case for a General Comment on children's rights and digital media by reviewing the global evidence, children's voices and expert opinion. These urge that society's growing reliance on digital environments has profound consequences for children's rights.

Digital media are no longer luxuries, but are rapidly becoming essentials of modern existence – and this applies increasingly in the global South as well as the global North. Faced with the challenge of understanding and managing fast-developing social and digital innovations, governments around the world, along with organisations that work with children, are calling for a coherent, principled, evidence-based framework with which to recognise and address children's rights and best interests. This is required to fulfil our ethical obligations to children. It is also a matter of practical necessity.

States around the world are struggling to address children's provision, protection and participation in the face of rapid technological transformation. Many, if not most, states lack the knowledge and understanding with which to respond adequately to the unfolding changes in digital environments and their implications for children's lives and society more broadly.

We argue that the case for a General Comment on children and the digital environment is both compelling and urgent, noting:

- > **The risks that children face** in digital environments as well as the scale of the **opportunities they may be excluded from.** These are profound and impact on virtually all children's rights, placing an urgent imperative for the Committee to respond.
- > **The rapidity of change.** Children are often the first to engage with fast-developing digital environments, yet the consequences for their wellbeing are too often neglected or overlooked as states rush to embrace new economic opportunities in the absence of principled and practical ways to ensure respect, fulfilment and protection of children's rights.
- > **'The digital' is not going to go away.** If anything, the changes it is bringing to everyone's lives, and the potential for conflicts between children and adults' rights, and children's protection and participation rights, are going to increase and intensify.
- > **Digital transformation is being driven by corporate interests that pay little heed to children's rights.** We are witnessing the fundamental relocation of communication, learning, health, civic participation, social relationships and other societal processes onto proprietary platforms primarily motivated by profit. While many constructive initiatives for children are instigated by business, many also collect and monetise children's data in ways that seemingly evade government oversight and regulation.

We can illustrate the case by pointing to a few (among many other) recent problems:

- > The growth of web streaming of child sexual abuse and exploitation, whereby children typically in a global South country are abused 'to order' via live web streaming services, sometimes with the knowing cooperation of their parents, typically by men located in the global North.
- > The sale of 'smart' toys (dolls, teddies) and other domestic products (e.g. baby monitors, rucksacks, among other instances of the 'internet of things') which collect children's personal data (including their conversations) in ways that parents do not understand, leaving them vulnerable to privacy abuses when data are 'hacked'.
- > The explosion in 'fake news', 'filter bubbles' and other forms of bias and misinformation, deliberate or otherwise, that favour manipulative persuasion over knowledge and decision-making for the public – and children's – good.

However, **it is important not to be swayed by these new risks into taking an overly protectionist approach.** Digital media offer children extraordinary new opportunities – to gain much-needed information at low cost, to engage with affordable educational resources and knowledge, to overcome forms of discrimination or exclusion, to participate and be heard in meaningful decision-making processes, and much more. In meeting its commitments to the Sustainable Development Goals (SDGs), the United Nations (UN) and many other bodies recognise that the digital environment offers huge opportunities for the implementation and monitoring of the SDGs in relation to realising children's rights. No wonder that states and child rights organisations are seizing on the attractive and scalable possibilities of using digital media to deliver health information, community resources, emergency response or other programme initiatives to children in hard-to-reach settings.

There are certainly challenges – for example, in ensuring that digital literacy education and child-centred design accompany top-down policy initiatives; in embedding children's voices and concerns in planning new digital resources; and in ensuring that business-led innovation is subject to effective national and international regulation that recognises children's rights and is informed by risk impact assessments. But all this, we argue, makes it all the more imperative that a principled and authoritative framework is established, and all the more likely that such a framework will be welcomed by states.

The 2014 Day of General Discussion (DGD) on 'Digital media and children's rights' held by the UN Committee on the Rights of the Child concluded that:

- > **States should adopt a national coordinating framework with a clear mandate and sufficient authority** to coordinate all activities related to children's rights and digital media and ICTs at cross-sectoral, national, regional and local levels **and facilitate international cooperation.**¹

It also recognised that digital media intensify both risks and opportunities for children. Consider, for example, the current imperative for refugee children to have access to mobile technology to sustain family connections and learning opportunities, even though this same technology can put them at risk of abuse. Those building digital opportunities

¹ OHCHR (no date b, p. 19).

need a framework to alert them to unintended risks; those addressing risks need a framework to ensure they do not inadvertently curtail children's opportunities.

While it might be feared that the technology is developing too fast to be managed, we urge the contrary: **it is possible and now urgent to encourage and enable states to recognise and identify key trends, to take the steps they can, to marshal their resources to address early on the problems that can be foreseen, and to build the competent and trusted institutions required to anticipate future innovations and challenges as they unfold.** We believe, further, that a General Comment on children's rights and digital media will be enthusiastically welcomed by states as offering helpful principles, timely insights and needed guidance in meeting present and future challenges.

In this report we consider a wide range of evidence alongside children's views and expert opinion, and conclude that a General Comment would significantly support states' capacity to foster equity and inclusion, justice, protection, provision and the participation of children in relation to digital media. A General Comment would meet two urgent priorities:

- > Provide urgently needed guidance on interpreting the Convention articles in a rapidly evolving and technologically challenging environment
- > Identify mechanisms to assist states to fully understand the challenges and opportunities facing children's enjoyment of rights online and in relation to digital media broadly, so as to meet their obligations to promote and protect these rights.

We are mindful that the task of a General Comment on these issues is a complex one. It must carefully balance guidance on a wide range of issues with adequate depth. **While this is a challenging task, the groundswell of international support for a General Comment on these issues renders it an achievable one.** The structure for a General Comment that we set out at the end of this report recommends a series of principles and a decision-making framework to support states confidently to develop and implement the necessary legislative, regulatory and monitoring mechanisms to protect children and maximise their opportunities in a digital world.

Without principled, coherent and authoritative guidance, states will continue to struggle to meet their obligations to children, including instituting the vital regulatory checks and balances to ensure that businesses meet their responsibilities to children.² Taking action now will enable states to face the challenges of the digital age in its early stages. The sooner child rights issues are recognised and addressed as part of the wider rush to embrace digital and business innovations – rather than tacked on belatedly or even too late – the more secure a foundation can be laid for a present and future in which the digital environment is inseparable from any other environment.

² As specified in General Comment 16 on the business sector.

1. Introduction

In 1989, the United Nations adopted the Convention on the Rights of the Child (UNCRC), the most widely ratified human rights treaty in the history of the UN.³ It asserts that human rights instruments apply to children, delineates the particular rights of children to ensure they develop to their full potential, and sets out special mechanisms to deliver these. The UNCRC has been supplemented by the Optional Protocols and its interpretation has been explicated in relation to key dimensions of child rights in a series of General Comments. As the Child Rights International Network notes,

General comments constitute an authoritative interpretation as to what is expected of States parties as they implement the obligations contained in the CRC.⁴

In an era of rapid technological change characterised by the growth of online digital networks, the adoption of and increasing reliance on mobile and social media, and a host of associated technological opportunities and risks, it is becoming clear that children's rights are both realised and infringed in new ways. **Digital media pose new and broad-ranging challenges for states in meeting their responsibilities to secure children's rights to provision, protection and participation in society.**

These challenges are already salient in the global North. Witness the widespread hopes and fears, anxieties and confusion about the internet, as well as a flurry of state, regulatory and industry responses, often produced in haste and under pressure. Witness, too, the rising tensions between public and private sectors, between states, between families and the institutions of school, law enforcement and governments, and even between children and parents as societies struggle to manage technological change.

These challenges are now becoming acute in the global South in the wake of the rapid uptake of digital media, particularly via mobile platforms.⁵ An estimated one in three children worldwide already uses the internet.⁶ Much future growth in internet use will occur in the global South where children constitute between one third and a half of the population – most often via a mobile phone. As a result, the proportion of users under the age of 18 is likely to grow significantly in the short term.⁷ Further, 'from the age at which children begin lower secondary school, the proportion of adolescents using the Internet exceeds the Internet usage rate for the general population in nearly all countries across the globe.'⁸

³ See OHCHR (no date a).

⁴ See UNCRC General Comments, Child Rights International Network (www.crin.org/en/library/publications/crc-general-comments). The existing 20 General Comments support the UNCRC in relation to pressing issues by 'clarifying the normative contents of specific rights provided for under the Convention on the Rights of the Child or particular themes of relevance to the Convention, as well as offer[ing] guidance about practical measures of implementation.' Especially relevant General Comments include explanation of what is meant by the child's 'best interests', how child rights apply throughout adolescence, state obligations regarding the impact of the business sector, child rights regarding freedom from violence, and the child's right to rest, play and a cultural life. Currently in development are General Comments on the rights of street children, and on children in the context of international migration.

⁵ See Byrne et al. (2016); Livingstone and Bulger (2014); Livingstone, Carr and Byrne (2015).

⁶ Children here and throughout are defined as everyone under the age of 18 years; see UNCRC (1989, Article 1).

⁷ See Livingstone, Carr and Byrne (2015).

⁸ See ITU (2016).

As a consequence, many countries are facing the problem that ‘fast-paced, widespread growth often occurs far ahead of any understanding of what constitutes safe and positive use in digital contexts’,⁹ especially as the internet is generally designed for adults:

“When children’s social environment is no longer only physical but also digital, then that’s got to have an impact on almost every aspect of their lives. If there was a CRC for the Digital Age [... to tell governments the] most important things that you need to do to ensure that your young people’s engagement is constructive, rather than destructive or worrying, then that would be a hell of a good start.”

Christopher De Bono, UNICEF East Asia and Pacific Regional Office

In short, almost every aspect of children’s lives is becoming influenced by, even reliant on, digital and networked media in one way or another.¹⁰ Many policy, legislative and regulatory mechanisms do not adequately support and protect children online.¹¹ Many young internet users around the world do not have the benefit of appropriate forms of adult guidance from parents, teachers and other caregivers.¹² The need for reliable, evidence-based mechanisms and guidance spans the full range of children’s rights, but this is too often unrecognised or little understood in many countries.¹³ Such difficulties themselves tend to result in anxiety, impeding the search for proportionate, evidence-based, sustainable solutions that support children’s agency and rights.

In this report, we carefully weigh children’s views, expert opinion and a broad range of research and evidence to evaluate whether a General Comment on child rights and digital media is needed. **We conclude that a General Comment on children’s rights in the digital age is not only important, but also urgent.**

⁹ Livingstone, Byrne and Bulger (2015, p. 3).

¹⁰ The integral role of media was already recognised at the 10th anniversary of the UNCRC by the Oslo Challenge, which emphasises that the media and communication environment is integral to many, if not all, of children’s rights. See UNICEF (no date); Sacino (2012).

¹¹ Byrne et al. (2016); Livingstone et al. (2011).

¹² Livingstone and Byrne (2015).

¹³ See Livingstone, Carr and Byrne (2015).

2. Children's rights and digital media

2.1 Recent developments linking children's rights and digital media

Interest in rights-based approaches to children's internet use crystallised in 2014, which marked the 25th anniversary of the UNCRC, as well as the 25th anniversary of the World Wide Web. **In September 2014, the UN Committee on the Rights of the Child held a Day of General Discussion (DGD) on 'Digital media and children's rights'**.¹⁴ The resulting report recognised that 'what happens offline today, will also be manifest online and what happens online has consequences offline'¹⁵ and that 'ICT in itself is neither good nor bad from a human rights perspective – its benefits or harms depend on how it is used.'¹⁶

While the report urged that 'a balance between empowerment and protection of children in the online world has to be found',¹⁷ it is not clear that significant and constructive steps are now being taken or even that the importance of digital and networked media is sufficiently high on the agenda of many states, given uncertainties and dilemmas about how to ensure that digital and networked media promote and protect rather than undermine children's rights.¹⁸

The DGD report concluded with key recommendations for states:

States should recognize the importance of access to, and use of, digital media and ICTs for children and their potential to promote all children's rights, in particular the rights to freedom of expression, access to appropriate information, participation, education, as well as rest, leisure, play, recreational activities, cultural life and the arts.

In addition, States should ensure that equal and safe access to digital media and ICTs, including the Internet, is integrated in the post-2015 development agenda ... [and] States should adopt and effectively implement comprehensive human rights-based laws and policies which integrate children's access to digital media and ICTs and ensure the full protection under the Convention and its Optional Protocols when using digital media and ICTs.¹⁹

It set out the distinct roles and responsibilities of relevant stakeholders needed to take responsibility for children's rights in relation to digital media, demanding that 'States should also ensure regular monitoring of implementation and assessment of legislation and policies.'²⁰

Since 2014, some significant initiatives have been set in motion, adding to the rising attention towards digital media among those concerned with child rights, as well as the growing concern with child rights among those at the forefront of internet governance. For

¹⁴ See OHCHR (no date b).

¹⁵ OHCHR (no date b, pp. 3-4).

¹⁶ OHCHR (no date b, p. 4).

¹⁷ OHCHR (no date b, p. 3).

¹⁸ See Gasser et al. (2010).

¹⁹ OHCHR (no date b, pp. 18-19).

²⁰ OHCHR (no date b, p. 19).

instance, in its recent mapping of the global Sustainable Development Goals (SDGs) and the UN Convention on the Rights of the Child (UNCRC), UNICEF asserted ‘that all of the Global Goals are relevant for children, not only those which specifically refer to Children’,²¹ urging in particular the importance of digital media for UNCRC Article 13 (freedom of expression), Article 17 (access to information and media), and Article 28 (education), among other articles.²²

Further initiatives include:²³

- > UNICEF’s 2017 report, *The State of the World’s Children*, will address children in a digital world
- > the UN Special Representative of the Secretary-General on Violence against Children’s global initiative against cyberbullying²⁴
- > the WeProtect Global Alliance ‘to end child sexual exploitation online’²⁵
- > the prominence of the digital environment in the 2016-21 Council of Europe Strategy for the Rights of the Child²⁶
- > UNESCO Bangkok (Asia-Pacific Regional Bureau for Education), with Google Asia-Pacific, is developing a regional digital citizenship framework.

Nonetheless, the global community is still far from realising the potential of digital media to support children’s rights. Many states struggle to recognise children as agents and rights-holders with a significant stake in the digital world, undermining their ability to fulfil their fundamental duty of care to children in the digital environment. On the one hand, too many children are being exposed to significant harm. On the other hand, a protectionist mentality often inhibits states’ capacity to realise the expansive possibilities for the digital to support children’s rights. This is compounded by a lack of rigorous and actionable evidence to support effective policy and interventions, particularly in the global South. Crucially, **states are not yet adequately equipped with the necessary frameworks and guidance to enable them confidently to drive effective digital policy and practice that balances children’s protection from harm with nurturing the opportunities for children.**

2.2 The evolving nature of digital media environments

Diverse and highly interconnected technologies are deployed across many domains of society, and these keep changing as the socio-technological context evolves on a global level. In this report, **we use the term ‘digital media’ to refer to the internet and mobile technologies**, digital networks and databases, digital contents and services, along with

²¹ See Wernham (2016), p.2.

²² Relatedly, the International Telecommunications Union (ITU) highlighted six targets (relevant to goals 4: quality education, 5: gender equality, 9: industry, innovation and infrastructure, and 17: partnership for the goals) that make specific reference to ICTs (ITU, no date). These concern school access to computers and the internet for pedagogical purposes, youth ICT skills, and non-discriminatory access to the internet, mobile communication and broadband. See ITU (no date); Sachs et al. (2015).

²³ See also the 2016 General Comment 20 that includes 18 references to the digital world, the 5Rights framework and a host of related initiatives by NGOs and child rights concerned with the digital environment.

²⁴ See UNSRSG (2016).

²⁵ See WeProtect (no date).

²⁶ See Council of Europe (2016).

diverse other information and communication technologies (ICTs), and also including more recent developments in artificial intelligence, robotics, algorithms and 'big data' and the 'internet of things'.²⁷

Digital media are globally networked, enabling extensive and rapidly scalable connectivity that can escape top-down control. Their contents enable creative or malicious re-editing, and leave easily searchable and permanent records of activity. **Digital media are no longer set apart from the realities of children's existence**, being merely 'virtual' or somehow 'unreal' but, rather, are thoroughly embedded in the infrastructures of all our lives, and this is set to increase dramatically.²⁸ So, while attention is often centred on the online context, the wider potential of digital media matters for all dimensions of children's experience.

Taken together, digital media are increasingly connected through a complicated, transnational value chain involving multiple companies with diverse interests and a complex web of legislative and other regulatory efforts.²⁹ As a result, in this report we also refer to 'digital environments'. Since they are heavily commercial, it is helpful in this context to refer to General Comment No. 18 on state obligations regarding the impact of the business sector on children's rights:

The Committee recognizes that duties and responsibilities to respect the rights of children extend in practice beyond the State and State-controlled services and institutions and apply to private actors and business enterprises. Therefore, all businesses must meet their responsibilities regarding children's rights and States must ensure they do so. In addition, business enterprises should not undermine the States' ability to meet their obligations towards children under the Convention and the Optional Protocols thereto.

However, the digital environment poses particular challenges that demand detailed attention:

- > **The internet is age-blind.** In the digital environment, it is generally the case that a particular platform or online service is unable to determine whether a user is a child. The consequence is that children are often treated as adults online, and it is difficult to provide particular protections appropriate to children's need or best interests.³⁰
- > **Online operations are increasingly opaque, even to business.** The complex interdependencies among companies providing digital media and networked services are largely unaccountable. Businesses increasingly embed value decisions into their operations through use of automated algorithms, which infer user characteristics – and the consequences (in terms of bias, discrimination, inaccuracy or even legality) are

²⁷ See, for example, Rose et al. (2015).

²⁸ See The World Bank (2016).

²⁹ See, for example, the resources available at Global Commission on Internet Governance at www.ourinternet.org/research and Internet Society at www.internetsociety.org/publications.

³⁰ Livingstone, Carr and Byrne (2015).

difficult to assess or adjust in relation to the public interest in general or child rights in particular.

- > **The internet is transnational.** There is no doubt that this poses difficulties for states, especially given the transnational nature of key companies and, more subtly, the entire digital ‘value chain’, challenging jurisdiction, impeding regulation, introducing unintended consequences of interventions and risking cultural conflicts.³¹ Yet children’s rights are increasingly at stake in digital environments.

The opportunities and risks associated with digital media are also profoundly impacted by wider social, economic and political factors. For children, the possibilities of digital media for enacting their rights are highly dependent on their social development, socio-demographic resources,³² cultural context and the ‘shared communication and familial conditions in which children and young people live and grow up.’³³ If not fully addressed, these circumstances easily become a source of deepening inequality rather than the means of realising rights in the digital age. In consequence, we observe that discussion of children’s rights in relation to digital media falls into three categories:³⁴

- > **Children’s uses of digital media:** questions of child rights here tend to prioritise the ‘right’ to (and barriers in accessing) digital media devices, content and services.
- > **Children’s rights in digital environments:** the focus here is on enhancing ways in which children can enact their rights in online spaces, and overcoming the ways in which their rights are infringed or violated in a host of digital, networked and online spaces.
- > **Children’s rights in the digital age:** here the most ambitious challenges arise, recognising that insofar as digital media are reshaping many dimensions of society, this raises new prospects for how child rights could be further enhanced or infringed in society.³⁵

Of course, all three intersect, building on each other to increase connections of all kinds, powerfully reshaping the conditions of and possibilities for children’s rights. **Note that we do not here address or advocate for the creation of new, so-called ‘digital rights’.** Rather, we urge recognition of the fact that ‘the digital’ is increasingly embedded in the infrastructure of society rather than something discrete and set apart; it is becoming a taken-for-granted environment for work, family, relationships, commerce, crime, government, and much more. Thus it is children’s fundamental human rights that are at stake in new ways in the digital age.

2.3 Report methodology

This case for a General Comment is carefully grounded in evidence. Fortunately, recent years have seen a growing body of research evidence examining children’s

³¹ Global Commission on Internet Governance (2016).

³² Livingstone et al. (2014).

³³ Swist et al. (2015).

³⁴ See Third and Collin (2016).

³⁵ See Lievrouw and Livingstone (2006); Livingstone and Bulger (2014); Livingstone and Third (2017).

experiences with digital media. Much of this is relevant to children's rights, although not all research is couched in those terms, and not all meets international standards of peer review. Although observers are often concerned that digital media change so fast that evidence quickly dates, social norms and practices change more slowly, and therefore **much evidence remains informative and much behaviour remains predictable**, even when particular incidences or percentages change over time. Published academic sources, often based on direct research with children, tend to focus on risk and safety in relation to digital media, partly as a result of research commissioning agendas.

As this report will show, the evidence illuminates the urgency of protecting children in and from digital environments. But it is also important to recognise that children are increasingly concerned to gain the full benefits of digital media, and frustrated at the barriers, restrictions and misunderstandings that they encounter. **To give substance to Article 12, the global research, policy and practice community must actively consult and work with children** to embed their insights and experiences at the heart of initiatives to enhance their rights in 'the digital age'.³⁶ In the next section, we integrate recent evidence from high-quality published research with the findings of a recent international consultation with children organised by RERights³⁷ to highlight the pressing issues relevant to children's experiences and rights in relation to digital and networked media.

We draw on the resulting insights to suggest a possible structure and content for a General Comment. Finally, **we consider the views of selected international child rights experts** to help us weigh the pros and cons of the case for a General Comment.³⁸ Interviewees were:

- > Guy Berger, Director for Freedom of Expression and Media Development, UNESCO
- > Hazel Bitaña and Amihan Abueva, Child Rights Coalition Asia
- > Sheila Donovan, Executive Director at Child Helpline International
- > Miguel Torres Garcia, President, INHOPE Foundation

³⁶ Usefully, recent years have seen a number of consultations with children and young people themselves, more often national than international, regarding their views on digital media, their perceptions of their rights and, notably, their readiness to undertake their responsibilities online. For example, see consultations by the ITU at www.itu.int/en/action/youth/Pages/pp14youth.aspx, Internet Governance Forum at www.youthigf.com/, EU Kids Online at <http://eprints.lse.ac.uk/48357/> and the Better Internet for Kids Programme at www.betterinternetforkids.eu/documents/167024/204250/YM_brochure.pdf/901fb70d-69ea-461c-8802-58dd9b48fe8e.

³⁷ RERights.org invites children aged 10-18 targeting 14- to 16-year-olds to identify the key topics they wish to discuss; participate in a series of interactive tasks designed to elicit their views via surveys, creative writing, photography, interviews with peers etc.; generate child-centred definitions of key concepts; and contribute to the analysis of the growing data set. Content received by the research team in languages other than English is translated and the research team works from English transcripts. Photo and audio-visual contributions are analysed using visual and discourse analysis methods, and the results are shared with the community of children, youth-serving organisations and policy-makers via infographics, blogs, social media and periodic industry reports. This process began in 2014 to inform the deliberations at the Day of General Discussion and, since then, has engaged over 250 children from 42 countries in sharing their views on their rights in the digital age; see Third et al. (2014).

³⁸ These were interviewed individually for between 30 and 60 minutes in person or by Skype during December 2016-February 2017. The interview guide examined the practical challenges and concerns, regional or contextual considerations, and priorities for the scope of what a General Comment would cover, as well as practicalities concerning steps to implementation. We are grateful to these experts for giving their time and views to inform the production of this report.

- > Marie-Laure Lemineur, Head of Programme Combating Sexual Exploitation of Children Online, ECPAT International
- > Indra Kumari Nadchatram, UNICEF Malaysia
- > Clara Sommarin, Child Protection Specialist Exploitation and Violence, UNICEF Headquarters
- > Jenny Thomas, Policy and Communications Manager, Child Rights International Network
- > Beeban Kidron, 5Rights.

3. What is the problem? Evidence from research and children

Recent literature reviews conducted by academics and international organisations generally concur that **the literature is growing fast in documenting how digital media adoption and use impacts on children's rights**. However, the evidence remains unbalanced in important ways:³⁹

- > Most available evidence relates to children and young people's digital media use in the global North rather than the global South.
- > Most, also, concerns young people rather than children, and little disaggregates them by gender, ethnicity, socioeconomic status or other demographic and vulnerability factors.
- > More research examines the incidence of online risks of harm, outweighing attention to online opportunities, and rarely following up to identify the later consequences of risks or opportunities.
- > More research examines the ways in which digital media use poses a challenge to children's rights than evaluating whether and how digital or other initiatives could enhance the realisation of rights.

Bearing in mind these and related limitations, we relate the available evidence, along with the views of children, to the relevant articles of the UNCRC, grouping these according to the six categories of the reporting guidelines established for states by the UN Committee on the Rights of the Child.⁴⁰

3.1 General principles

The general principles of the UNCRC – Articles 2 (non-discrimination), 3 (best interests), 6 (optimum development) and 12 (right to be heard) – relate to digital media as explained below.

As digital media – especially forms of mobile internet connectivity – spread throughout high, medium and, increasingly, low-income countries, considerable inequalities occur in who gains access to what, with what quality and cost of connection.⁴¹ In addition to inequalities in access to hardware and connectivity, there are inequalities in the provision of content (especially in poorer countries, among small language communities, and for ethnic or other minorities) and, crucially, inequalities in the skills and competencies to use and benefit from digital media.⁴²

Irrespective of their country or region, **the social, cultural and economic sources of inequality that differentiate children's life chances also shape their online opportunities and risks**. This has particular significance in relation to UNCRC Articles 22 (refugees), 30 (minority and indigenous groups), 34 (protection from sexual exploitation), 35

³⁹ See, among others, Livingstone et al. (submitted); Livingstone and Bulger (2013, 2014); Gasser et al. (2010); UNICEF (2012); Barbovschi et al. (2013); Livingstone and O'Neill (2014); Kleine et al. (2014).

⁴⁰ See Committee on the Rights of the Child (2015).

⁴¹ The World Bank (2016); ITU (2016); WEF (2015); UN ECOSOC (2015).

⁴² Kleine et al. (2014); The World Bank (2016); Livingstone et al. (2012); UNICEF (2013).

(protection from abduction, sale and trafficking), 36 (protection from other forms of exploitation) and 38 (protection from armed conflict).

Research consistently shows that, for a variety of socio-structural reasons, some children (generally termed ‘vulnerable’ or ‘disadvantaged’⁴³) are less likely to benefit from online opportunities and more likely to experience harm as a consequence of exposure to online risks. Such groups include children living with chronic illness or disability; gender-diverse young people; First Nations children; refugees; newly arrived migrants; children experiencing homelessness; and children whose primary language is other than English. In short, those who are more vulnerable offline tend to be more vulnerable online, and efforts need to focus precisely on supporting them and fostering their abilities to take advantage of opportunities.⁴⁴

Engaging online can help disadvantaged children to access information and build communities of interest and broader support networks, thus improving their wellbeing and capacity to enact their rights. Gender-diverse young people, children living with disabilities, and children living in rural locations, among other marginalised or disadvantaged groups, all stand to benefit from the resources that online communities can provide, whether informal or enabled through targeted interventions.⁴⁵ As such resources are rolled out, this is a critical moment to ensure that disadvantage is not compounded by digital exclusion.

Such benefits are also anticipated for the wider population of children. Especially in the global South, young people outnumber the general population online by a factor of two or three, although figures for younger children are scarce.⁴⁶ It is commonly hoped that the deployment of ICTs can support children’s best interests and optimum development, both through the growth of general access to digital media and through the targeted use of digital media in programme interventions and public policy initiatives – including, for instance, in relation to health provision, environmental issues or disaster relief.

It is also increasingly recognised that digital media pose distinct risks of harm to children, through the contents and contacts they facilitate and the digital traces they create.⁴⁷ It is crucial that these hopes and fears, opportunities and risks, are addressed together, so that interventions are neither naïve nor one-sided.

While children are often vocal in the subject of their rights in relation to digital media, they often lack specific awareness of or capacity to enact their rights in the digital environments

⁴³ In making this claim, we must recognise the fact that ‘disadvantage’, ‘marginalisation’ or ‘vulnerability’ is not a straightforward predictor of vulnerability online. Indeed, there are some instances in which children who are classified as ‘vulnerable’ demonstrate exemplary levels of resilience in their use of digital applications, programs and services, and deploy digital media to benefit their wellbeing. The challenge is to better understand how such examples of resilience might be translated to larger numbers of children both within and beyond ‘vulnerable’ communities.

⁴⁴ Barbovski et al. (2013); Metcalf et al. (2013); Livingstone and Bulger (2013); Livingstone and O’Neill (2014); Kleine et al. (2014); Robinson et al. (2014).

⁴⁵ Third et al. (2014); Third and Richardson (2010); Robinson et al. (2014); Swist et al. (2015, p. 7); Burns et al. (2010); Collin et al. (2011); Alper (2017); UNHCR (2016); Mason and Buchmann (2016).

⁴⁶ ITU and UNESCO (2013); ITU (2016); Livingstone, Carr and Byrne (2015).

⁴⁷ Livingstone et al. (submitted); Gasser et al. (2010); Burton and Mutongwizo (2009); UNICEF (2012).

available to them.⁴⁸ However, **they are generally clear about the challenges they face regarding poor infrastructure and low quality connectivity:**⁴⁹

“I lack access most of the time.” (Boy aged 14, Kenya)

“There is not enough power so the computer is not working.” (Boy, Nigeria)

Yet however limited their access or outdated their technologies, children often display a high degree of inventiveness and creative workarounds, revealing their strong motivation and sense of ‘a right’ to the internet. Third et al.⁵⁰ report video footage submitted by a boy in Nigeria that shows him powering up a diesel generator in order to charge his computer and mobile phone. Children also report use of wind-up mobile phone chargers and similar workarounds to provide even the most basic access. No wonder, as Bob Hofman of the Global Teenager Project,⁵¹ states:

[Many children] think that having access to the internet is a basic right – food, water, health care and connectivity.... And whether it is students from Ghana or from Canada, they express [this] very clearly.⁵²

Yet while income and geography are key determinants of people’s access to digital media in general,⁵³ gender – among other factors – is already a key source of discrimination, even within populations that do have access. The growth of digital resources now threatens to compound and deepen gender discrimination.

Girls have much to gain from use of digital media – and are keen to optimise this⁵⁴ – but most research and programme evaluations show that their access and opportunities are far more restricted than those of boys.⁵⁵ Hence the value of targeted initiatives such as Regina Agyare’s Soronko Solutions and Tech Needs Girls:

The girls are learning to code, and once they are done they will get paid internships at a software company where they can start to economically empower themselves and be able to help pay for their own. We have also engaged with the community such that the parents see the value in educating their girl child.⁵⁶

⁴⁸ Third et al. (2014); Livingstone and Bulger (2014).

⁴⁹ See Kleine et al. (2014); Livingstone and O’Neill (2014); Third et al. (2014).

⁵⁰ Third et al. (2014).

⁵¹ The Global Teenager Project engages more than 20,000 students in over 42 countries in collaborative learning experiences. See www.ict-edu.nl/gtp/wat-is-gtp/ for more information.

⁵² Cited in Third et al. (2014, p. 65).

⁵³ See, for example, Banaji (2015); Walton and Pallitt (2012).

⁵⁴ See de Pauw (2011); Raftree and Bachan (2013).

⁵⁵ Girls are less likely to be given expensive devices; they have more domestic chores and so less disposable time; they are more vulnerable to sexual risks and gender-based violence; they are subject to gender discrimination and therefore have less access to education and employment; they have less freedom to seek information or opportunities for expression, and so forth; Livingstone et al. (submitted). See also UN (2011); UNCTAD (2014); UNICEF (2013); GSMA (2015); WEF (2015); Cortesi et al. (2015); de Pauw (2011).

⁵⁶ Cited in Third et al. (2014, p. 53).

Less research is available regarding other forms of inequality (such as ethnicity, religion, caste or language), although in the global North, children are shown to experience discriminatory behaviour or outright hostility based on their gender, ethnicity, sexuality or other factors.⁵⁷ Yet there is also evidence that **online spaces can – under the right circumstances – provide support and opportunities to explore identity and gain needed resources**, and that this can be of particular benefit to those who are vulnerable or discriminated against offline.⁵⁸ The challenge for policy-makers and professionals and organisations supporting children is to maximise the benefits without exacerbating existing vulnerabilities or exposing children to harm.

Several organisations have sought to harness the potential of digital media to amplify children’s voices and promote their right to be heard in matters that affect them (Article 12). Most well-known is UNICEF’s U-Report mobile text messaging platform for children – first in Uganda, and then also in other parts of Africa – to enable children to contribute information and suggestions to decision-making processes (on, for instance, sanitation, HIV/AIDS, youth unemployment and disaster management) that affect their communities.⁵⁹ Relatedly, on UNICEF’s ‘Voices of Youth’ platform, a community of youth bloggers and commentators from all over the world offer their insights on a range of topics affecting them.⁶⁰

But generally, the greater availability of digital media is not being used to include or amplify children’s voices in the design of interventions and decision-making processes, with considerable digital and cultural barriers to children being heard and responded to. UNICEF frames child participation as a right in itself and as a crucial path to other rights.⁶¹ But while a host of initiatives scattered around the world are experimenting with use of digital media to enable child participation, these tend to remain small-scale, unsustainable and too rarely evaluated for good practice to be shared. Child participation, even in an age of digital connectivity, is still more promise than reality, and both determination and guidance from states are sorely needed, especially given the considerable attention to risk-focused and protectionist – sometimes overly protectionist – approaches to digital media.⁶²

In short, the evidence suggests that, as digital media are adopted in more parts of the world, and as society increasingly relies on digital media for many functions pertinent to child wellbeing, children’s rights are being infringed. The adverse and discriminatory implications

⁵⁷ See Campos and Simões (2014); Dahya and Jenson (2015); Alper and Goggin (2017); Tynes (2015); Badaly et al. (2013); among others.

⁵⁸ See Coleman and Hagell (2007); Banaji and Buckingham (2013); ITU (2012); UNICEF (2013); WEF (2015); Robinson et al. (2014).

⁵⁹ UNICEF (2015); Kleine et al. (2014).

⁶⁰ See www.voicesofyouth.org/en/page-1.

⁶¹ See www.unicef.org/crc/files/Right-to-Participation.pdf; for the ‘ladder of participation’ and a critique of token inclusion, see www.unicef-irc.org/publications/pdf/childrens_participation.pdf, and for a resource guide for practitioners, see www.unicef.org/adolescence/cypguide/. Finally, see the Council of Europe’s framework and tool for assessing the effectiveness of child participation strategies at www.coe.int/en/web/children/child-participation-assessment-tool.

⁶² For instance, Internews Europe’s study of media reporting of child rights issues in Kenya found that a patronising attitude to children by journalists, news agencies and civil society organisations meant their voices are routinely excluded (Angle et al., 2014).

for the child's best interests and optimum development of both gaining and lacking access to digital media will increase unless specific and targeted efforts address children's rights.⁶³

Children themselves have high aspirations for a world facilitated by digital media, believing the internet enhances connection between individuals, communities and cultures, across national and international borders, and positioning technology as key to promoting a spirit of understanding, peace, tolerance, equality and friendship among all peoples, supporting their rights to non-discrimination:

"[If everyone had equal access to digital media] this would help various people in various parts of the world to learn about different cultures, about the people. This would help with the advancement of people and society." (Girl aged 16, Trinidad and Tobago)

"For me, it unites the world." (Boy aged 14, Argentina)

In short, children see accessing information as crucial to 'becoming responsible citizens who are able to form their own opinions and participate in their community and they explicitly connect the idea that digital media enable their right to information with their right to participation.'⁶⁴

"I don't know what I would do without it because I was born in the internet era.... I cannot imagine a life without the internet because I use it every day, for my studies, I use it for all my needs. And ... I need it very much." (Boy aged 16, Malaysia)

3.2 Civil rights, freedoms and privacy

To balance the justified concern with risks – including violence, abusive, sexual, commercial and privacy-related risks – research⁶⁵ and policy⁶⁶ has also begun to document the benefits for children of participating online, all particularly relevant to UNCRC Articles 13 (freedom of expression), 14 (freedom of thought), 15 (freedom of association), 16 (privacy) and 17 (right to information). As the former UN Special Rapporteur on Freedom of Expression, Frank La Rue, put it, the internet is:

An important vehicle for children to exercise their right to freedom of expression and can serve as a tool to help children claim their other rights, including the right to education, freedom of association and full participation in social, cultural and political life. It is also essential for the evolution of an open and democratic society, which requires the engagement of all citizens, including children.⁶⁷

⁶³ It is worth noting that the move towards digital media is substantially led by commercial developments rather than those framed in terms of children's best interests: 'The global corporate players through new gadgets, schemes, and advertisement, as well as the government, through rhetoric and development schemes, are raising normative expectations to be part of global markets that are impossible to meet in their rural location with infrastructural limitations' (Pathak-Shelat and DeShano, 2014, p. 998); see also Ferraretto et al. (2011); Mackey (2016).

⁶⁴ Third et al. (2014, p. 38).

⁶⁵ See Swist et al. (2015).

⁶⁶ O'Neill et al. (2013).

⁶⁷ La Rue (2014, p. 16).

Children, too, believe that digital media broaden their horizons and enable them to know about and connect with other cultures and people, and they value this enormously. They report that ‘digital media enable them to be informed citizens of the world who are better prepared to participate meaningfully in the lives of their communities.’⁶⁸ Children also note that digital media provides new ways for them to exercise their rights to freedom of expression. Children demonstrated an eagerness to join the conversation about matters that concern them, to participate as fully engaged citizens and to access information:⁶⁹

“The internet gives the access to children to explore new things.” (Girl aged 17, Malaysia)

“Many blogs or sites ask for people’s stands and opinion on all sorts of matter and there are ways to raise awareness about some things and create movements and target groups.” (Girl aged 16, Serbia)

“Nowadays it is possible to express oneself on the internet and social media.... Our words can reach much further, sometimes worldwide.” (Girl aged 14, France)

When asked to rank which of their rights is most positively impacted by technology, children judge the right to access information as most important.⁷⁰ For example, ‘researching what’s happening in other parts of the world’ was one of the main benefits cited by children in Ghana; they talked about how they had learned about the Ebola virus, and conflicts in the Gaza Strip and Mali via online sources. Information is vital for many reasons, and children have the right both to receive and to contribute information.

Children believe that access to information underpins a wide range of other rights. For example, by engaging with digital media, they “have access to politicians who can play a significant role in the community” (girl aged 16, Trinidad and Tobago), thus supporting their right to contribute to discussions about matters that concern them, and to participate as fully engaged citizens.⁷¹

However, children face challenges of ‘information overload’, ‘fake news’ and the need for critical information literacy, resulting in growing calls for digital media education to support children in their civil rights and freedoms, along with guidance on how public and private sector organisations might best provide it. Such education is also important insofar as access to current affairs via digital media has its downsides.

⁶⁸ Third et al. (2014, p. 30).

⁶⁹ RErights.org (2016a).

⁷⁰ When asked, unprompted, to tell researchers of the rights that are important overall in the digital age, children named 1: Freedom of expression; 2: Privacy; and 3: Protection/safety from cyberbullying, cyber-crime, exploitation. Access to information was the right seen as most positively impacted by digital media, followed by freedom of expression, while privacy followed by protection from violence were the rights most negatively impacted by digital media, as children told the RErights consultation.

⁷¹ For those who have no or less frequent access to digital media, the inability to access information and current affairs, whether for reasons of finance, connectivity or censorship, is seen as a major disadvantage. Indeed, some children expressed a sense of access to the internet as key to ‘information justice’: “If the internet disappeared, we would not be able to do research on the internet for school projects, we would have to go to the library and that is a problem because some people don’t have a library in their village so it is a lot more difficult, especially since there are libraries that do not have a lot of books on specific topics or don’t have the money to buy more” (France, girl, 10).

Experts on children's right to civic and political information are clear that the risks of exposure to distressing news, for example, can be managed and do not outweigh the value of such access.⁷² Children often concur, although they recognise the difficulties of the conflict between the right to information and protection:

"You're going to learn about more gruesome things and the harsh realities of the world younger... I've had to learn about things I wouldn't have wanted to know by going on BBC and CNN." (Boy aged 15, USA)

This highlights the importance of working to develop balanced and child-centred approaches to information provision and protection from potentially harmful media. Ensuring that news corporations and other commercial entities prioritise children's rights would be greatly improved by child rights guidance for commercial entities that provide public and civic resources for 'the general population'. This could both encourage provision specifically for children and also for the many children that are, and have the right to be, present in spaces for the general population.

Civil rights and freedoms depend on privacy. It is noteworthy that most children identify privacy as one of the three most important rights in the digital age.⁷³ **Privacy can be infringed by:**

- > known others in the child's social environment (parents, teachers, others – whether well-meaning or potentially abusive)
- > the state (via surveillance mechanisms blind to age, via law enforcement or censors)
- > commercial players providing digital services that exploit children's data.

In the case of commercial data protection, most research suggests that children (and adults) are less concerned about commercial uses of their data, increasingly aware that this is the only 'deal' on offer if they are to gain 'free' services. But this does not mean that child rights and privacy experts concur – witness Europe's present efforts to update its data protection regime to protect the digital data of its citizens, with special protections for children (for instance, by preventing the 'profiling' and targeting of children by commerce and marketing).⁷⁴

Arguably privacy and data protection regimes are bedding down globally, and we have a limited window of opportunity to centre children's rights before systems, processes and industry practices sediment. Here, crucially, it is timely and important to assert states' obligations to ensure that businesses bear their responsibilities regarding children's rights.

In the case of the state, there are growing concerns that schools, health providers and other public bodies increasingly collect and use personal and transactional data from children in ways that are little understood by the public (or parents), and that do not always observe robust standards of privacy, transparency, security or redress. The use by public bodies of commercial systems for data collection and information management compounds

⁷² Angle et al. (2014); Council of Europe (2016).

⁷³ Along with freedom of expression and protection/safety; see the RErights consultation, Third et al. (2014).

⁷⁴ EU Regulation 016/679, 2016; Macenaite (2012); Lievens (2017); Madden et al. (2013). See also WEF (2017).

the problem of determining whether children's privacy and identity rights are protected. **In facing these challenges, there is insufficient guidance about the legalities, complexities and unintended consequences of uses of children's digital data records.**⁷⁵

Teenagers are increasingly aware that their privacy can be infringed by uses of digital technology.⁷⁶

"[The] internet collects private data that can expose people's personal information that they want to keep private." (Girl aged 16, Serbia)

"Some of the websites that [ask for] my name and identity card numbers don't really make sure that my info is secured." (Girl aged 17, Malaysia)

"You can post a photo on the internet but then everybody can see it and it is difficult to remove it. It can go anywhere in the world and this can be an issue for some people.... There is the issue of photos or documents that cannot be deleted." (Girl aged 10, France)

Privacy from known adults is also a challenge with which many children, families and schools are currently struggling. This particularly affects children's right to information (Article 17) they wish or need to keep private from parents – consider children living in abusive families who need access to helplines, children exploring their sexuality or sexual identity in families or communities that endorse hostile religious or discriminatory views, or children's right as they grow older to take responsibility for their own maturation and experimentation.⁷⁷

It is also at present unclear whether those **minors who engage in civil or political protest** – and often it is the young who engage most vigorously in the world's struggles – have their rights protected in subsequent legal proceedings. At present the specific rights of young activists or protesters are rarely heard in relation to controversies over the rapid increase in digital surveillance or state demands for commercial digital records of communication and assembly.⁷⁸

3.3 Violence against children

The UNCRC addresses violence against children through Articles 17 (protection from harmful media), 19 (protection from violence, abuse and neglect) and 34 (all forms of sexual exploitation and sexual abuse including child pornography). See also Articles 35, 36, 37 and the UNCRC Optional Protocol on the Sale of Children, Child Prostitution and Child Pornography.

The more children gain access to the internet and mobile technologies, seeking opportunities to benefit, the more they also tend to encounter risk of harm of various kinds. This has been found in research from Europe, Chile and Bahrain, among many other

⁷⁵ Sources, for example, the question of parents' rights over children's privacy, and regarding contested uses of school data. See Common Sense Kids Action (no date); Shapiro (2014); Berson and Berson (2006); Lwin et al. (2008); see also Singer (2014); Goh et al. (2015).

⁷⁶ Young contributors to the RErights platform do not always reveal their gender.

⁷⁷ Aroldi and Vittadini (2017); Ybarra and Mitchell (2004); Albury (2017); Dinh et al. (2016).

⁷⁸ Khalil (2017); Banaji and Buckingham (2013).

countries.⁷⁹ This is primarily because more use increases online exposure to a range of online experiences, although in some country contexts the effort to gain access can itself put children at risk.⁸⁰ As a 2012 UNICEF literature review concluded,

Children from low- and middle-income countries are less likely to use the Internet from home, and are more likely to go online from cybercafés, where they are at greater risk of encountering inappropriate images and online and offline solicitation. Lack of parental awareness and knowledge, difficult economic conditions and under-developed regulatory frameworks can further exacerbate potential risks and the likelihood of harm.⁸¹

Moreover, the more that children gain digital footprints via their school, parent or medical or welfare databases of various kinds, the more their safety can be at risk even if they themselves lack access to digital media.⁸² The risks range widely from new safety risks associated with the rise of ‘hackable’ ‘Internet of Toys’ or forms of algorithmic bias to long-established forms of bullying, harassment and sexual abuse now extending online; they also vary in severity from upsetting but manageable hostilities to persistent victimisation or life-threatening sexual abuse.⁸³

Research in the global South is beginning to complement that already available and compelling in the global North.⁸⁴ For example, in South Africa, Samuels et al. found that girls and those who live ‘in metropolitan and urban areas are significantly more likely to experience some form of online violence than those living in rural areas.’⁸⁵

Many of the risk factors for face to face or traditional violence were also found to be significantly associated with online violence, highlighting a huge overlap between these two forms of violence. Specifically, exposure to family and community violence, interactions with delinquent peers, access to alcohol, drugs and weapons, knowledge of criminality, as well as parental and sibling criminality were all strongly related to both the victims and perpetrators of online violence.⁸⁶

⁷⁹ See Ólafsson et al. (2013); Livingstone et al. (2011); Mascheroni and Ólafsson (2014); Davidson and Martellozzo (2010, 2012); Berríos et al. (2015); OCED (2011); UNICEF (2012).

⁸⁰ For example, mobile phones are widely used in many countries to share and ‘normalise’ the experience of viewing often extreme or violent pornography, and also because children seek access in internet cafes where abusive adults may prey on children in unsupervised circumstances (Cook et al., 2012; Livingstone et al., submitted; Berríos et al., 2015; Cook et al., 2012; Samuels et al., 2013).

⁸¹ UNICEF (2012, p. 95).

⁸² For instance, ECPAT International (2015) has argued that ‘many of the children who are at highest risk of being subjected to sexual exploitation online are not connected to the Internet.’ See http://ecpat.de/fileadmin/user_upload/Arbeitsschwerpunkte/Sexuelle_Gewalt_in_online_Situationen/20150313_Statement_ECPAT_International.pdf.

⁸³ Holloway and Green (2016); Lupton and Williamson (2017); Livingstone (2014); Bannink et al. (2014); Rallings (2015); Bhat et al. (2013); see also BEUC (2017).

⁸⁴ See Internet Safety Technical Task Force (2008); ITU (2010); Webster et al. (2012); UNSRSG (2016); OECD (2011); Rallings (2015); Livingstone, Mascheroni and Staksrud (2015); among others.

⁸⁵ Samuels et al. (2013, p. 32).

⁸⁶ Samuels et al. (2013, p. 36).

From pilot data in South Africa, Argentina, the Philippines and Serbia, Byrne et al.⁸⁷ found that:

- > Between a fifth (of 9- to 17-year-olds in South Africa) and three-quarters (of 13- to 17-year-olds in Argentina) reported feeling upset about something that happened online.
- > One third of 9- to 17-year-olds in Serbia reported being treated in a hurtful way by their peers, online or offline, although in South Africa and the Philippines only a fifth said this had happened to them.
- > In qualitative research, children mentioned a wide range of problematic issues that concern them in relation to digital media, including internet scams, pop-up adverts that were pornographic, hurtful behaviour, unpleasant or scary news or pictures, discrimination, harassment (including sexual harassment by strangers) and people sharing too much personal information online.
- > About a third of 9- to 17-year-old internet users in the Philippines and up to twice that number in Argentina and Serbia had seen online sexual content, while a small minority reported some kind of online sexual solicitation – being asked for sexual information, to talk about sex or to do something sexual.

Children interviewed in those countries report on a range of upsetting experiences online.⁸⁸

“Racism, xenophobia and killings.” (South Africa, open-ended survey question)

“Frequently having older strangers inviting me, seeing nude adverts.” (South Africa, open-ended survey question)

“I once experienced a stranger asking for ‘my price’ – meaning, how much would it cost the stranger for them to have a sexual activity.” (Boy aged 15-17, the Philippines)

“I experienced being bashed by my classmates on Facebook and it hurt a lot!” (Girl aged 12-14, the Philippines)

“A stranger once tried to chat with me asking for my photos and sending his own nude photos to me.” (Girl aged 12-14, the Philippines)

“[My friend] typed free xxx porn dot com, entered into something. He told me, ‘Close your eyes, turn around, it will be something, you’ll see a surprise’. When I turned around he started it and women started screaming.” (Boy aged 11, Serbia)

“A man sent me a message on Facebook saying: ‘Hello [name], I hope you have Skype so we can talk and do some stuff.’ I think that man is gay.” (Boy aged 13, Serbia)

⁸⁷ Byrne et al. (2016).

⁸⁸ See Byrne et al. (2016).

Children do not always see threats in the same terms that adults do – European research shows children to be particularly upset by online cruelty to children or animals, as well as being worried by online kidnappers, viruses and a wide range of other concerns.⁸⁹

As has also been found elsewhere,⁹⁰ online risks are correlated and can compound the resulting harm.⁹¹

The relationship between sexting and cyberbullying becomes most apparent when the consequences of failing to comply with requests for photos are explored. Failing to concede to such requests could result in other forms of bullying.⁹²

As Livingstone et al.⁹³ conclude in their recent review of research in the global South,

While the correlations across risks, and across victim and perpetrator positions, complicate the interventions needed, they serve to remind of the complexities that can surround experiences of risk in children's lives; thus simplistic or decontextualised interventions must be avoided.

That same review also charted ways in which digital media are being used to intervene in or work to alleviate children's exposure to risk. For example, the Child Protection Partnership (CPP), a project of the International Institute for Child Rights and Development (IICRD), advocates for a Circle of Rights process within programme implementation; see also Moraba, an award-winning mobile game designed for UN Women to educate young audiences in a South African township about gender-based violence.⁹⁴

Children are clear that more should be done to protect them:

"Kids these days have easy access and there's a lot of inappropriate things out there that they should not be seeing." (Girl aged 16, Australia)

"Radio stations or televisions [should] reduce their broadcasting of explicit videos with sexual content and vulgar words." (Boy aged 17, Malaysia)

"We do not have protection from various forms of violence in the virtual internet network especially when we talk about cyberbullying." (Girl aged 14, Brazil)

"Because bullying spreads outside the school yard through cyberbullying." (Boy aged 16, France)

⁸⁹ See Smahel and Wright (2014); also Livingstone, Kirwil, Ponte and Staksrud (2014).

⁹⁰ Livingstone, Haddon and Görzig (2012).

⁹¹ Relatedly, a Turkish study by Erdur-Baker (2010, p. 121) of 14- to 18-year-olds, found that 'regardless of gender differences, the relationships between being a cybervictim and cyberbully are significant and much stronger than the relationships between cyber and traditional bullying. This result suggests that the same adolescents who are victims are also bullies in cyber-environments.'

⁹² Samuels et al. (2013, p. 35).

⁹³ Livingstone et al. (2017).

⁹⁴ Broadband Commission for Digital Development (2015).

In the RErights consultation, children talked knowledgeably about the range of risks they might potentially encounter online.⁹⁵ The risk of seeing inappropriate content was often expressed in relation to violent content or disturbing footage from real-life situations such as scenes of war, schoolyard fighting, poverty and starvation. For example, a 14-year-old boy from Thailand reported that, “a challenge is violent content.”⁹⁶

Other children also express concern at seeing adult content, and more specifically, violence and pornography, and often they call for adult support in strengthening their own coping strategies rather than for outright bans or imposed restrictions.⁹⁷

In sum, in many countries there is growing evidence of children’s risk of privacy-related, violent and sexual harms on digital networks and platforms. No wonder that **there is a growing clamour for educational, regulatory and parental intervention to reduce the risk of harm children face online.**

It is presently unclear how much the evidence suggests that ‘offline’ risks are now occurring online or, instead, that there is a genuine increase in the overall incidence of harm to children. Many experts believe digital environments are primarily a new location for risk rather than a means of exacerbating it significantly.⁹⁸ It also seems likely that, since digital environments record and enable the rapid distribution of records of many human activities, the harms long experienced by children have become newly visible, thereby demanding attention and redress. In this respect, the digital may have a key role to play in regulating forms of abuse that have previously been difficult to identify, let alone address.

But there is no doubt that a host of professionals including law enforcement, helplines, medical services and digital media providers themselves are grappling with online risk of harm to children on a scale that they lack the resources to cope with.⁹⁹ A coherent framework identifying the key roles to be played by different actors is greatly needed and increasingly called for. But often this focuses only on protection and safety, making it all the more vital that consideration is given to children’s rights in a holistic manner. Equally vital is that children’s own voices shape the framework developed:

The dominance of risk and safety discourses in children’s thinking about their digital practice raises the question of whether or not children are being given adequate opportunity to develop the alternative ways of thinking about digital media that are necessary for children to be able to conceptualise their rights not only in terms of protection, but also in terms of participation. Children must be allowed to formulate and express their own (collective) framings of technology and its impacts on both their everyday lives and the social world more broadly.¹⁰⁰

⁹⁵ See also Smahel and Wright (2014).

⁹⁶ Quoted in Third et al. (2014, p. 40).

⁹⁷ Third et al. (2014); Livingstone, Haddon and Görzig (2012); Byrne et al. (2016).

⁹⁸ Finkelhor et al. (2015).

⁹⁹ Finkelhor et al. (2015); Dinh et al. (2016); Aoyama and Talbert (2010); UNSRSG (2016); Inhope.org (no date); Virtual Global Task Force (no date).

¹⁰⁰ Third et al. (2014, p. 42).

3.4 Family environment and alternative care

Most research on how digital media are used and managed by families has been conducted in the global North where – albeit to varying degrees – the heterosexual, nuclear family is the dominant family structure. **There is an urgent need for guidance that can support uses of digital media to support the rights of children living in a diverse array of family structures.** This is relevant to UNCRC Articles 5 (parental responsibilities and evolving capacities of the child), 7 (parental care), 18 (state assistance to parents), 20 (alternative care) and 40 (juvenile justice).

Evidence suggests that many families fear the risks that digital media pose to their children. At the same time, parents hold out considerable hopes that digital media will deliver opportunities they may otherwise struggle to provide, helping to overcome disadvantage or generally preparing their children for a digital future. Parental ambivalence and anxiety can result in inconsistent, privacy-invading or overly restrictive parenting practices, especially given the widespread conviction (not necessarily supported by evidence) that children are more digitally literate than adults, seemingly able to challenge, transgress or evade parental controls.¹⁰¹

Children themselves are often quick to point to a generation gap that impedes family communication about digital media:

“The biggest challenge is that adults don’t trust us.” (Boy aged 16, Malaysia)

“A generation gap prevents teenagers to communicate effectively with parents and grandparents.” (Girl aged 16, Trinidad and Tobago)

“It’s harder for parents to guide their children because they can do things on the internet without the awareness of the parents.” (Girl aged 17, Belgium)

There is, therefore, a need for evidence-based guidance about digital media for families, and for professionals who support children and their families, especially guidance that eschews a heavily protectionist for an empowering approach.¹⁰² Research is beginning to identify optimal parental mediation strategies to maximise online opportunities and minimise risk, but these are yet to inform the awareness of most parents.¹⁰³ As a result, digital media frequently become a site for the contestation of intra-familial power relations, seen as a hindrance to, rather than a support for, strong family ties and wise parenting in children’s best interests.

In the global North there is evidence that, **with increasing institutional and government support for awareness-raising initiatives over time, parents and carers are increasing**

¹⁰¹ Children and young people are commonly understood as leading the charge vis-à-vis the adoption of digital media globally and their digital practices are often perceived to unfold outside adult authority and ‘push back at existing structures of power and authority’ (Ito et al., 2008, p. ix).

¹⁰² Livingstone and O’Neill (2014); OECD (2012); Green (2012); Powell et al. (2010); CRIN (no date); also see Carlsson (2006); CRIN (2014); Hashish et al. (2014).

¹⁰³ Hasebrink et al. (2009); Livingstone et al. (2011); McDonald-Brown et al. (2017); Livingstone and Helsper (2008).

their efforts to support their children online in ways that are beneficial.¹⁰⁴ In response, as parents shift from punitive to constructive responses to reports from their children of experiences of online risk, relations of trust are improving.¹⁰⁵ This, in turn, strengthens the ability of states to rely on parents to foster their individual child's best interests online in ways appropriate to their evolving capacity, as long as states and industry provide the needed tools, mechanisms and other resources to parents and in their regulation and monitoring of the digital environment.¹⁰⁶

On the other hand, such provision is often lacking, even in wealthy countries.

Moreover, it is in such countries that the leading edge of technological innovation may infringe children's rights in ways that the public (parents, experts, welfare professionals, the state) is inevitably slow to anticipate, recognise or redress. In relatively wealthy countries, too, we often see the leading edge of social innovation – very young internet users, highly immersed users, parents sharing images of children online – again, in ways that society lacks resources to evaluate or intervene in.

In consultation, **children note that digital media can be crucial for maintaining their relationships with family – both nuclear and extended.** This is particularly the case for children living in diasporic communities or, although evidence is sparse, among migrants and refugees:¹⁰⁷

“Using Skype so I can contact my family overseas, in Malta, and be able to talk to them and keep them updated with what's happening in our country and what's going on in theirs.” (Girl aged 15, Australia)

Yet some consider that digital media may impede meaningful time spent with family:

“When my family gets together for dinner there is no communication. We're all on tablets, phones. This is a problem.... We don't talk much as much as we do before.” (Boy aged 17, Malaysia)

While parents and carers are struggling to manage digital media in the lives of their children, the situation for children living outside the biological nuclear family can be particularly challenging. **For 'looked-after' children living in care homes or institutions, regulations often prevent children from accessing digital media for their own safety, notwithstanding the cost to their social integration.** For children without parents or adequate alternative forms of care, digital media may be yet more elusive, isolating them from their peers or sources of confidential help.¹⁰⁸ For children living in abusive or violent homes, digital media may even become part of the problem rather than the solution.

For example, consider the impact of digital media on adopted children and their families, where traditional efforts at protecting children's privacy rights from their sometimes-abusive

¹⁰⁴ See Helsper et al. (2013).

¹⁰⁵ Livingstone et al. (2017); Lwin et al. (2008).

¹⁰⁶ See OECD (2012).

¹⁰⁷ Also see www.enacso.eu/news/migrant-minors-and-the-internet-a-report-by-save-the-children-italy/.

¹⁰⁸ Wilson (2016).

or problematic birth parents have become highly confused and almost impossible to implement. This is, in part, because children themselves may use digital media to exercise their right to know and contact their birth family, and because the courts and social workers that have long sought to oversee children's best interests have been disintermediated by digital networks.¹⁰⁹

3.5 Disability, basic health and welfare

With particular relevance for UNCRC Articles 23 (children with a disability), 24 (right to health) and 39 (recovery from trauma), in the global North the potentially negative impacts of media on children's rights to a healthy life have long been debated by policy-makers, practitioners and researchers. These unfold in the context of broader concerns about the adverse effects of sedentary lifestyles on growing rates of obesity and associated health risks. **The concern is that, the more time children spend online, the less time they have to engage in activities that promote exercise and healthy eating and sleep patterns, undermining their capacity to establish lifestyle behaviours early in life that promote both their immediate and long-term right to a healthy life.**¹¹⁰

In addition, a sizeable body of research, policy and practice has addressed the potentially addictive qualities of digital media – framed primarily as a mental health risk – centring in particular on children's gaming and social media practices.¹¹¹ Also of longstanding concern is the effect of exposure to advertising on diet and other consequences for children's wellbeing,¹¹² including the evidence (albeit contested) of the influence of violent media contents on children's aggression and fear,¹¹³ and of sexual/pornographic contents on children's sexual development, self-esteem and the formation of sexual norms (e.g. regarding consent, respect or sexual practices).¹¹⁴

In parallel, emerging research demonstrates that digital media can powerfully support children's health and wellbeing. An emerging evidence base suggests that, under certain circumstances, digital media – and in particular, biometric devices – can foster positive approaches to eating, exercise, sleep, and a range of other physical and mental health practices¹¹⁵ as can online social support and forms of therapy support those with mental health difficulties.¹¹⁶

Digital media are also playing a role in protecting children's rights to a healthy life in the face of major health epidemics in the global South. For example, UNICEF's text messaging platform, U-Report, has played a key role in enabling children to access much-needed sexual health information in settings where cultural taboos prevent them from seeking such

¹⁰⁹ See Aroldi and Vittadini (2017).

¹¹⁰ Such concerns have recently prompted game developers and technology providers to develop initiatives that integrate digital media use with physical activity. The recent Pokemon-augmented reality phenomenon is one recent case in point. However, the positive impacts of this initiative on children's health are far from clear.

¹¹¹ See resources from Center on Media and Child Health at <http://cmch.tv/>.

¹¹² Castro and Osório (2013); Polak (2007).

¹¹³ See Strasburger et al. (2012); Gentile et al. (2004); Bartholow and Anderson (2002); Ostrov et al. (2006); Ybarra et al. (2008).

¹¹⁴ See Wolak et al. (2007); Brown and L'Engle (2009); Peter and Valkenburg (2006).

¹¹⁵ See, for example, Cummings et al. (2013).

¹¹⁶ Burns et al. (2013).

information from parents and carers. Evidence shows that this platform is building awareness and promoting healthy sexual practices in countries where HIV is an ongoing population health challenge.

More simply, as children gain access to digital media, they seek all kinds of information, including health information, relishing the immediacy and confidentiality that the internet can provide. The Global Kids Online project found, for instance, that:

Around a fifth of 12- to 14-year-olds and 43% of 15- to 17-year-olds in South Africa looked for health information online at least every week (rising to over two-thirds in Argentina and some other countries). Much of the available research on online opportunities to gain health information concern adolescents' preferred means of learning, asking whether they want to receive health information through digital media. Less research evaluates whether they actually learn from online sources, let alone whether what they learn is positively beneficial.¹¹⁷

Indeed, as Livingstone et al.'s review shows¹¹⁸, many efforts to provide health information to children in poor countries struggle or fail because of insufficient attention to the information children actually seek or need, because of an often state-led preference for providing basic medical information without child-centred interpretation or attention to the social contexts of young people's lives.

Nonetheless, despite such opportunities, the potential for digital media to support children's right to a healthy life across a range of contexts and settings has been inadequately explored and acted on to date. As Burns et al. argue:

There is an urgent need to capitalise on technologies to promote access to online self-directed wellness management and the development of best-practice models that provide seamless and continuous support and care across online and offline services.¹¹⁹

Researchers are currently evaluating a range of apps and biometric devices for their benefits for both physical and mental health.¹²⁰ Once the evidence is in, it will be important to promote the health benefits and to engage children in developing initiatives to encourage children globally to exercise their right to a healthy life. At present, children tend to reflect the negative perceptions they hear from adults and the mass media:

"Health may deteriorate if too much time is spent in front of computers, tablets or smartphones." (Girl aged 15, Malaysia)

"[If digital media disappeared], I would be healthier because I would get outside more often." (Girl aged 16, Australia)

¹¹⁷ Livingstone et al. (2017).

¹¹⁸ Livingstone et al. (2017).

¹¹⁹ Burns et al. (2013, p. 5).

¹²⁰ Hides et al. (2014).

“When we get addicted to our digital devices, we tend to stay up all night playing a game, watching movies, chatting with friends or simply listening to music, and that is really bad for our health.” (Girl aged 14, Malaysia)

While children do not explicitly connect digital media with benefits for their mental health and wellbeing, they say that, ‘by engaging with digital media they learn new skills and develop their talents; they become informed citizens of the world who can contribute meaningfully to their communities; and they foster friendships, family ties, and a sense of community and belonging’,¹²¹ all of which is critical to their resilience and wellbeing.

Digital media provide opportunities for more isolated, marginalised or non-dominant children to be included by engaging in peer relations and social life on their own terms. The ‘Growing Up Queer’ project found that digital media provide a vital source of information and support for LGBTQI young people who, due to entrenched social stigma and practices of discrimination, are more likely to develop long-term mental health difficulties and engage in alarming rates of suicidal ideation.¹²² The work of the Young and Well Cooperative Research Centre (www.youngandwellcrc.org.au) demonstrates that digital media can powerfully support a diverse range of children’s mental health and wellbeing.¹²³

Research also shows that digital media can play a particularly powerful role in connecting children who live with disability, serious illness or chronic disease with their peers, minimising their social isolation, enabling them to develop the necessary social and technical skills to engage with the social world,¹²⁴ and fostering their economic participation in ways that give substance to the fuller expression of their rights.

Digital media can provide such children with continuity through periods of absence from school or social activities, yielding benefits for their educational and other rights: “If you’re sick, you can get homework.... So you don’t really miss a day at school, because of technology you can just ask a friend or even a teacher” (girl aged 16, Trinidad and Tobago). These ideas are supported by the stories of children like Kartik Sawhney,¹²⁵ and the practice-based knowledge of youth-facing organisations such as Soronko Solutions in Ghana and Livewire.org.au in Australia, suggesting that organisations working in the disability and chronic illness support sectors should be encouraged to work with such children to further explore how to implement digital media initiatives that enhance their rights.

However, such claims about the possibilities for digital media to foster strength, resilience and wellbeing in children must be weighed against a body of research that demonstrates that some children encounter serious challenges to their wellbeing online. As noted earlier, research shows that those children who are most vulnerable offline are often those who are most vulnerable online.¹²⁶ This calls for careful, proportionate and holistic assessment of the

¹²¹ Third et al. (2014, p. 9).

¹²² See Robinson et al. (2014); Cole and Griffiths (2007); Subrahmanyam and Greenfield (2008).

¹²³ Lala et al. (2014).

¹²⁴ Third and Richardson (2010).

¹²⁵ Quoted in Third et al. (2014, p. 69).

¹²⁶ See, for example, Livingstone, Görzig and Ólafsson (2011).

need for protections and supports, as well as for tech-savvy training and awareness on the part of the specialist organisations that work with children with special needs.

It is vital that states target resources for specifically vulnerable groups rather than spreading them (too) thinly across entire populations or, worse, applying safety-led restrictions to the majority even though they are really for the intended benefit of a minority. As Samuels et al. conclude from their research on cyberbullying and sexual harassment in South Africa:

Interventions aimed at reducing levels of online violence should target at-risk youths in general and not simply those who frequently make use of social and digital media.¹²⁷

As with online opportunities, the consequences of online risks in terms of actual harms are heavily dependent on the child's maturity and resilience on the one hand, and on their circumstances and resources on the other.¹²⁸ In relation to digital media, too little attention is paid to children's best interests and evolving capacity, with both public and private bodies tending to treat 'children' or, worse, internet 'users' as if all the same in relation to their rights and needs in the digital environment.

3.6 Education, leisure and cultural activities

Children around the world see digital media first and foremost as a pleasurable and valued form of leisure, and as a resource of huge potential for learning. Learning, here, includes both formal and informal education, whether in or out of school, to supplement school provision or to compensate for its limits or absence, to support a given curriculum or to learn something interesting or valuable for the child that is entirely unrelated to school, in support of developing them to their full potential. See, especially, UNCRC Articles 28 (education), 29 (educational goals, including in relation to rights), 31 (leisure, play and culture) and 42 (knowledge of rights).

But, as the prominent failures of such high-profile initiatives as the One Laptop per Child amply illustrate, **providing access to digital media alone is not enough.**¹²⁹ Not only are digital media vital for many child rights, but their provision must also be accompanied with digital literacy education and training for children, teachers and parents, along with a host of related forms of support and expertise.

Several recent evidence reviews assert the growing importance of digital media for children's learning and education.¹³⁰ The challenges for states can be summarised as follows:

- > Incorporate digital media within schools constructively, wisely, and with appropriate curriculum development, teacher training and technical support.¹³¹

¹²⁷ Samuels et al. (2013, p. 36).

¹²⁸ Livingstone et al. (2011, 2012).

¹²⁹ James (2010); Kraemer et al. (2009).

¹³⁰ Byrne et al. (2016); OECD (2012b); Frau-Meigs and Hibbard (2016).

¹³¹ See Third et al. (2014); Frau-Meigs and Hibbard (2016).

- > Embed critical digital media education across school subjects to create a 'digital thread' throughout the process of learning.¹³²
- > Use digital media to overcome rather than reinforce barriers or misunderstandings between home and school, and formal and informal learning sites.¹³³
- > Ensure that digital media in education are used fairly, including to transcend or compensate for or work around traditional forms of discrimination, to alleviate inequalities and exclusions.¹³⁴
- > Persuade established educational authorities to rethink how digital media can support interest-driven learning to suit the motivation, needs and best interests of each child.¹³⁵
- > Conceive of digital literacy (or digital citizenship or digital media) education broadly, to include imaginative, critical, civic and creative skills and literacies that include, but go far beyond, e-safety.¹³⁶
- > Conduct independent evaluations of digital media interventions so that best practice can be shared and mistakes learned from rather than perpetuated.

It is clear from the evidence that children seek to use digital media to support their education, but there remain many barriers. For example, the Global Kids Online study, including research in Argentina, Serbia, South Africa and the Philippines, found that children in countries where access to the internet is limited for reasons of connectivity or cost are less confident in their digital skills, especially younger children and those from poorer countries. They also receive less support from parents and carers since these, too, lack skills (e.g. parents and carers in South Africa are as skilled as children aged 12-14).¹³⁷

Just what should be taught is often unclear. Leung and Lee found even in their study of 9- to 19-year-olds in Korea that:

In information literacy, they were generally very competent with publishing tools but were not social-structurally literate, especially in understanding how information is socially situated and produced.¹³⁸

Some years ago, based on a literature review and case studies in China, India and Vietnam, Lim and Nekmat concluded that:

The acquisition and transmission of media literacy skills can have significant effects beyond merely equipping people with the skills to consume and produce media content. Vested with these skills, the youths trained in these programmes became considerably more empowered in their ability to express themselves, raise societal awareness about issues that concerned them, and also found themselves growing and developing as individuals ... media

¹³² Hobbs (2011); NCCA (2007a); see also NCCA (2007b); Davidson and Goldberg (2009).

¹³³ See Buckingham (2006).

¹³⁴ See Sinclair and Bramley (2011); Mardis (2013); Henderson (2011); Greenhow and Lewin (2015).

¹³⁵ See Vickery (2014).

¹³⁶ Myers et al. (2013).

¹³⁷ See Byrne et al. (2016).

¹³⁸ Leung and Lee (2012, p. 130).

literacy programmes that focus on empowerment and democratic participation are arguably more sustainable than those that focus only on skills. Such programmes will be more appealing to participants, and given the focus on nurturing the complete individual, participants are also more likely to be committed to the programme.¹³⁹

A host of initiatives around the world now seek to rise to these challenges, some community-based rather than top-down, some incorporating strategies to respond to local needs as well as government imperatives, a few independently evaluated so as to learn from past mistakes and share good practice.¹⁴⁰

Ironically, the more states invest in technology to support education, the more excluded or discriminated against become those children who lack access to education, educational technology or digital literacy education. Those with access are clear about the benefits; those who lack access are clear about the problem, looking to their government for redress:

“The government should provide communication devices at our school.” (Boy, Egypt)

“Digital media contributes to education.... Imagine all that is there in front of you on the net, to research, to learn.” (Girl, Brazil)

The RErights platform, along with other international projects, seeks not only to promote children’s discussion of their rights, but also their awareness of their rights, the ability to articulate these, and the competencies to enact them. In other words, an important part of education is to learn about their rights (Article 42), and digital media can also help here:

“Because of the internet children can now look up what their rights are.” (girl aged 17, Belgium)

“From the digital technology children and children can form an organisation e.g. UNICEF to discuss of our rights as children.” (Girl aged 17, Malaysia)

“[The] right to access information online to complete my homework is an important right in the digital age.” (Girl aged 17, Malaysia)

However, children also note that many schools block websites – in particular, social media sites – suggesting that educational institutions are far from making the most of digital media, with efforts to ensure protection conflicting with and often undermining efforts to promote provision and participation rights.

In the UK the 5Rights initiative has engaged children in innovative deliberative discussions to debate their rights online and to contribute to finding solutions to their infringement.¹⁴¹

Children’s pleasure in digital media is often regarded negatively by adult society, despite children’s right to leisure and play as part of living a full life and developing their full potential. Given that evidence shows that children’s digital leisure time activities

¹³⁹ Lim and Nekmat (2008, pp. 273-4).

¹⁴⁰ Nethope Solutions Center (2015); AkiraChix (no date); Rijdsdijk et al. (2011); GSMA (2014).

¹⁴¹ Coleman et al. (2017).

enhances their skills base and exposes them to a wider variety of opportunities,¹⁴² it is critical that children's rights are foregrounded within popular and policy debates to shift adult thinking. In short, despite the various pitfalls and a history of struggling or failed initiatives, digital media can support education and education can support digital media engagement, but evidence-based guidance is greatly needed to ensure investments are well-founded.

During leisure time, children use the internet to expand their learning beyond the school curriculum, in ways that research shows can open up new learning pathways, support skills, engage the disaffected and support wider inclusion:¹⁴³

"I have learnt how to bake, various baking techniques." (Girl aged 16, Trinidad and Tobago)

"I learnt to make these clay dolls on YouTube." (Boy aged 8, Colombia)

"I like creating apps, what I like is that we can create new things." (Boy aged 16, Malaysia)

"There are numerous games and contents for kids to play and use in their spare time." (Girl aged 16, Serbia)

In line with trends in user-generated content, some children reported engaging in creative content production in their leisure time, highlighting their right to expression. By providing an avenue for children to create content and share with others, digital media may be seen to be fostering their right to expression. Yet:

Although digital access and literacy is growing apace, the evidence shows that many of the creative, informative, interactive and participatory features of the digital environment remain substantially underused even by well-resourced children.¹⁴⁴

This is partly a problem of digital media literacy. However, it is also problematic that there are few incentives for services to host and support children's content, to do so in the public interest rather than for profit; and the wider adult society often does not value or attend to children's contributions in the digital environment.

¹⁴² Livingstone and Helsper (2007); Ito et al. (2009, 2013).

¹⁴³ See Ito et al. (2013); Third et al. (2014); Cilesiz (2009); Walton (2009); among others.

¹⁴⁴ Livingstone et al. (2014, p. 4).

4. The case for a General Comment: expert views

We invited the interviewed experts to consider the case for and against a General Comment. They were clear in impressing on us their view that states are calling for guidance, and that this is the time to act. They were also ready with practical suggestions about what a General Comment should include, and aware of the realities they are facing around the world regarding children's rights in the digital environment.

4.1 The need for an authoritative interpretation of the UNCRC in the digital age

A General Comment, experts agreed, serves as an authoritative and efficient point of reference to which child rights organisations can point governments and other actors for the principled identification, definition and interpretation of the key issues.

“There's no document like that. We are coming out with ours. But if the CRC Committee comes out with something, it does have a different status.” (Clara Sommarin, UNICEF)

“It's not just any old wish list, it is authoritative.” (Guy Berger, UNESCO)

“The internet is a transnational technology. Individual nation states can make advances but children's rights in the digital environment must be set out clearly and established on an international basis. A General Comment on the CRC is the necessary first step to protecting children's rights in the 21st century.” (Beeban Kidron, 5Rights)

Clearly, General Comments have wide value in general:

“From an NGO perspective, they are very useful for our advocacy work. We draw on general comments all the time in submissions to the UN and to governments.” (Jenny Thomas, Child Rights International Network)

But interpretation is particularly and urgently needed in relation to digital media. The experts emphasised that it is by no means clear to all states that child rights apply online as offline, although “we can't separate any longer our on and offline lives, and children even less than we can” (Sheila Donovan, Child Helpline International).

Children's rights can be affected by a range of policies – for example, the outsourcing, at a national level, of educational technology or school information management systems or the privatisation of medical records and health information systems – in which child rights considerations (e.g. in relation to privacy) easily and often go unrecognised unless specific measures are taken to ‘mainstream’ child rights within policy and practice.¹⁴⁵

Indeed, technological developments can reshape children's rights in a host of ways as yet little understood – for example, what are the implications for children's freedom of expression or safety of encrypted or anonymous digital services? Where such technological

¹⁴⁵ See www.consilium.europa.eu/en/meetings/fac/2017/03/st06846_en17.pdf/.

developments are examined in terms of their human rights implications or in relation to internet governance processes, there is often little or no recognition of child-specific issues. Practical approaches to child rights in digital environments are often based on setting minimum ages, but this tends to treat all children as reaching levels of maturity at the same ('average') age, which doesn't address their individual best interests well, and can even be detrimental for some.

Moreover, some child rights are particularly relevant to the digital age and should be newly interpreted: for example, Article 17, the right to information, is easily subsumed into the right to education, but its importance should now be explicated and facilitated (e.g. children's right to sexuality and health information and their positive right to communicate online).

This is not, however, to advocate new, so-called 'digital rights'. Rather, echoing the argument of former UN Special Rapporteur on Freedom of Expression, Frank La Rue, Jenny Thomas (Child Rights International Network) suggests of internet access, "I would not frame it as a right in itself but a way of implementing other rights."¹⁴⁶

Crucially, at present strategies to manage the public – including children's – engagement with digital environments are often not strongly rights-focused, and especially may not recognise the full range of children's rights; a General Comment would require states to report on compliance, and enable the Committee to monitor states' compliance in relation to digital media.

4.2 A General Comment is urgently needed

This is the right time for a General Comment in a fast-changing digital environment, and there will be costs to missing the moment, as the experts pointed out. They recognise that digital media "will continue to be a kind of moving target. I don't think things are going to settle necessarily in the next 20 years. I think we're in an epoch of continued evolution and so one needs ongoing guidance" (Guy Berger, UNESCO). But they also conveyed a clear sense that it would be wrong to wait and, equally wrong to offer fixed and soon-to-date guidance:

"The world evolves. Problems evolve. They take a different shape. I mean, maybe the name is the same but the shape is different. And the societies evolve, and so do the solutions, especially when you link that to the digital world. So there is need for a constant thinking, rethinking and questioning of what's going on, to look at this in a different way. I mean that's an obligation we have." (Marie-Laure Lemineur, ECPAT International)

In addition to recourse to the principles underlying the UNCRC, **a careful grounding in evidence should help to navigate between the general and the particular**, weighing

¹⁴⁶ She makes a parallel argument regarding digital literacy – not as a right, but as an increasingly vital enabler for achieving rights that embeds crucial value commitments: 'Digital literacy needs to be framed as well, as the set of skills that children require to use an open internet rather than an internet that is defined by corporations', a position variously developed by the work of UNESCO. See its ROAM framework (Rights, Openness, Accessibility, Multi-stakeholder) at www.unesco.org/new/en/communication-and-information/resources/publications-and-communication-materials/publications/full-list/principles-for-governing-the-internet/ and the Council of Europe's Guidelines on Internet Governance at www.coe.int/en/web/freedom-expression/igstrategy.

what's important, identifying trends and continuities as well as cultural diversity in terms of the contexts of children's lives: "if you come with a General Comment that is not research-informed, I think it could be out of touch with the practical effect and practical relevance of the world out there" (Guy Berger, UNESCO).

Several experts therefore recommended a 'technologically neutral', principled approach, insofar as possible, rather than tying recommendations or policies to very particular technologies or social practices that will soon change.¹⁴⁷

"I think it's always a tricky thing actually for lawyers. If you remain very general, it means that it remains like that, and if there's a new incrimination, offence, it's quite difficult to say it could be in this category. If you want to be too detailed, you're not up-to-date after six months. So we have to find a middle way, so we have some text but it should be quite general." (Miguel Torres Garcia, INHOPE Foundation)

4.3 The need for an integrative approach to the full range of child rights

As important as the need for an authoritative statement is the need to encompass the full range of children's rights in a single document. A General Comment should not "exclusively look at the opportunities, benefits, or risks for harm of children being online", but it should also embrace all the ways in which "technology can be used to deliver on children's rights" (Indra Kumari Nadchatram (UNICEF Malaysia).

In short, experts were clear that it is important both to protect children and respect their privacy, and also to support their empowerment, but without clear guidance on managing conflicting rights and attending to positive rights, policies can quickly revert to a focus only on protection which, important as it is, can at times be at the cost of other rights. Children's rights in relation to digital media cannot be addressed piecemeal, for thereby conflicts and unintended adverse consequences arise.

Issues associated with digital environments tend to be cross-cutting, not falling neatly into the domain or expertise of one particular ministry or regulator, and thus calling for an integrated approach:

"I think it's very important, because child rights are quite huge, you know, so it's not just access to information, there can be all sorts of ramifications in terms of health rights, cultural rights.... There are so many aspects of a child's life where the internet can also be a tool. I think it would be useful to have a General Comment that would provide guidance for governments ... how to make the best use of the internet while protecting children from the dangers." (Hazel Bitaña, Child Rights Coalition Asia)

"Digital influences almost all spheres of children's everyday lives. It is broad and pretty much all-encompassing that it is impossible to focus only on a few specific issues." (Indra Kumari Nadchatram, UNICEF Malaysia)

¹⁴⁷ For instance, although the Budapest and Lanzarote Conventions already update the UNCRC as regards technological means of sexual and other crimes against children, certain practices, for example, live streaming of abuse via a webcam, are omitted, so a technologically neutral overarching document would be valuable.

A General Comment would bring attention to important issues that might otherwise be neglected or passed from one ministry to another (including, possibly, ministries of justice, education, family welfare, telecommunications, and more). In addition to the risk of children's rights in digital environments falling between different ministries, there is also the practical difficulty that they may not be understood:

“The problem is that, in general, governments, especially the older civil servants, are not that familiar with the internet, and so their thinking about the Internet might actually be quite outdated.” (Amihan Abueva, Child Rights Coalition Asia)

States have a key role to play in leading the way to ensure child rights are underpinned in digital environments, and the Committee has a key role to play in bringing these issues to their attention. One difficult boundary is that between the state and parents in adjudicating, in turn:

“... with respect to the boundaries between parental responsibilities to protect children vis-à-vis the child's evolving capacity to make decisions about in what way they interact with the internet.” (Amihan Abueva, Child Rights Coalition Asia)

In addition, “while parents have valid concerns (about their children's safety online), they could also unwittingly be the people who put their own children or even their children's friends at risk, [for example] when they share images on social media” (Indra Kumari Nadchatram, UNICEF Malaysia).

Alongside guiding parents on their responsibilities, and also respecting the rights of children when these conflict with their parents, states must also consider potential conflicts between adult freedoms and child rights more generally. On occasion, child rights issues are hailed problematic as a justification for introducing censorship or surveillance; here a General Comment should guide states in order that child protection does not violate other rights.¹⁴⁸

The sheer range of child rights issues relevant to the digital environment is undoubtedly challenging:

“Why the Committee developed General Comments is because there are issues that have arisen when they review the reports [from states, necessitating the] comprehensive interpretation of provisions in the convention. So when it comes to children and the digital age, a General Comment would need to address the whole range of rights that are relevant.” (Clara Sommarin, UNICEF)

This could, however, also be seen as a strength, asserting children's rights in the digital age in terms of the common grouping of provision, protection and participation rights, and in relation to the four principles of the UNCRC. In this way, children's development to their full potential would remain the overarching goal, ensuring that efforts to protect do not inadvertently exclude other rights to provision and participation. Rather, an integrative approach would ensure that all child rights are advanced in the digital age.

¹⁴⁸ See La Rue (2014).

4.4 A General Comment could stimulate new legislative instruments and standards

Effective implementation of child rights depends substantially on national legislation, and states could lead the way in terms of ethical, rights-respecting treatment of children's data (e.g. birth registration, case management, government records), setting standards by which to raise expectations for other stakeholders.

The relations among states are also challenging in relation to the digital environment, making international coordination and cooperation vital. For instance, increasingly child protection depends on the availability of and jurisdiction over forms of digital evidence, so a General Comment could serve to prioritise the effort to manage and share evidence in and across digital platforms and national boundaries.

Without a General Comment, one wonders how states can insist to industry that child rights in relation to their services are paramount:

“The feeling is that, you know, these big companies are much bigger than the states, and I think the other dilemma as well is that the technologies are developing so fast that the legislation is oftentimes not able to keep pace with the development of technology.” (Amihan Abueva, Child Rights Coalition Asia)

Too often, it was felt, states find themselves playing ‘catch-up’ when problems could be better anticipated and addressed proactively through technological or policy design that respects children's rights.

The relevance of General Comment No. 16 (2013) on state obligations regarding the impact of the business sector on children's rights¹⁴⁹ is clear, but this makes mention only of the internet in relation to child sexual risks, and leadership is now also needed in relation to further rights, notably, privacy, information and freedom of expression.

Most important, states need guidance on how to address the fact that digital media are heavily commercial, involving both major corporations and a multitude of small and medium-sized businesses, often fast-moving start-ups, often led by young developers, and often with little expertise in or even awareness of child rights issues or of safety or privacy by design.

Experts also agreed on the value of linking and structuring the General Comment according **to the requirement on states to address child rights according to the Committee's reporting guidelines**. In this way, it would be a valuable tool to ensure states address the issues raised by the digital environment, also enabling child rights organisations to raise issues of digital media with states, and encouraging states to develop new legislative instruments and standards as needed:

“A General Comment is a useful guide for those of us who are working at the regional and country levels because it helps us to push governments. When the reporting time comes, if we have General Comments, we can take them to task, or we can challenge

¹⁴⁹ See

http://tbinternet.ohchr.org/_layouts/treatybodyexternal/Download.aspx?symbolno=CRC%2FC%2FGC%2F16&Lang=en.

them to make sure that policies are in place or make sure that programmes are implemented.” (Amihan Abueva, Child Rights Coalition Asia)

In short, a General Comment helps hold the state accountable to what they have to deliver to children.

4.5 Legitimacy of the UNCRC in the digital age

Several raised **the question of the legitimacy of the UNCRC**, since it was written before the spread and significance of the internet could be anticipated:¹⁵⁰

“The Convention was created in a time when digital technology was not yet that well known or not yet that advanced, so it would be the General Comment that can provide guidance on how to apply these rights in the age that we have right now.” (Hazel Bitaña, Child Rights Coalition Asia)

A General Comment would provide a defence against those who say the UNCRC is out of date, unable to address the new challenges of digital media, by explaining its continued relevance and bringing it clearly into ‘the digital age’. More importantly, once this is achieved, it would render the UNCRC the right instrument for addressing child rights in relation to digital media – important in the absence of alternatives but also, surely, optimal, even if alternatives are forthcoming.

Put simply, a clear statement is needed to convince states and stakeholders that the UNCRC is still fit for purpose in the digital age. Such a statement would support those child rights advocates already working in relation to digital environments:

“One of the things that we’re doing is raising awareness among child helplines, especially in the global South where internet penetration is much less, of the opportunities and dangers, threats, etc., of internet being available to more and more people, with really exponential growth. So having some observation from the Committee on the digital world and children – the opportunities, wonderful technology and the dangers involved in that – for us would be really, really good because it would help us to raise awareness among our members as well... It would mean that countries that don’t have legislation in place or if they do it’s not enforced, would be then somehow put on the spot to either implement existing legislation or enact legislation, and to enforce the legislation ... [the Committee] has moral persuasion influence and it probably is the only one that does.” (Sheila Donovan, Child Helpline International)

¹⁵⁰ We are aware that rights offline also exist online, that the Optional Protocol on child pornography makes explicit mention of the internet, and that the latest General Comment 20 on adolescence makes several references to the digital environment. But this is insufficient to meet the perceived need for an authoritative explanation of how child rights apply in digital environments, disaggregated both by rights and by digital media services, or for principled guidance on implementation in supporting children’s rights and redressing their infringement in the digital age.

5. A possible structure for a General Comment on children's rights and digital media

This section suggests a possible structure and content for such a General Comment, seeking a balance between depth and breadth, and focusing on the principles, framework and recommendations for state action and international cooperation. We build on the discussion and recommendations of the DGD in 2014, and relevant recommendations in other General Comments published by the Committee on the Rights of the Child. It is proposed as an initial basis for reflection and review, and to illustrate the far-reaching implications of digital media on the exercise of children's rights, in full knowledge that rigorous consultation would be vital to develop this structure further.

5.1 Rationale and background

This section in the General Comment could elaborate the emerging recognition of the far-reaching implications of the digital media for the realisation of children's rights, a development recognised in a number of other recent General Comments including, for example, those on adolescence, play, best interests, violence, and street children. The work undertaken by the Committee to date indicates the need for a more detailed and focused analysis of the UNCRC and the Optional Protocol on the Sale of Children, Child Prostitution and Child Pornography than has previously been undertaken. It could draw attention to the imperative for addressing the interface between empowerment and protection in digital media, and the need for children's active engagement in the development of strategies to manage that balance. The digital world is not going to disappear, so it is vital that all necessary measures are taken to enable all children to benefit fully from the opportunities it offers without exposure to harm.

Because the drafting of the UNCRC preceded the emergence of the internet, mobile technology and social media, it is throwing up new challenges that need to be interpreted in light of the significant impact these phenomena are having on the lives of children globally. It could draw attention to the wide-ranging impact of the internet and social media across the rights in the UNCRC, and in respect of the Optional Protocol on sexual exploitation, as well as its relevance in the context of achieving the goals of Agenda 2030. Overall, the General Comment, while linking closely with other relevant General Comments – especially No. 16 on business responsibilities – could provide more comprehensive and integrated guidance on the scale and nature of the issues arising in the digital media in respect of children's rights.

5.2 Objectives

The General Comment would seek to achieve the following objectives:

1. Raise awareness of states parties of the scope of opportunities, risks and challenges experienced by children in the digital media
2. Provide analysis of the implications of the digital media on the realisation of children's rights

3. Develop guidance on the measures required in order to respect, protect and fulfil children's rights in the context of the digital media.

5.3 Overview of the key issues

An overview of the most recent data on levels, ages and modes of usage in different regions could be provided to highlight the extent to which children now inhabit an integrated online/offline existence, together with a brief summary of some of the critical opportunities, risks and challenges that the digital environment poses for children.

5.4 General principles

This section could **elaborate on how the general principles need to be understood and applied in the context of the digital world**, both as substantive rights, and also as principles to inform the implementation of all other relevant rights:

- > **Article 2, non-discrimination:** All children have equal rights to both access to the opportunities afforded by the internet, mobile technology and social media and to protection from the potential harm that it can cause. This paragraph could elaborate the obligations on states parties to take all necessary measures to promote equity and non-discrimination in these emerging environments and point to some of the specific groups that will require particular measures to ensure compliance with Article 2, for example, girls' empowerment, children with disabilities, refugees and asylum-seekers, children in extreme poverty and children in institutions (more detailed exploration of different groups would be developed throughout the text).
- > **Article 3, best interests:** The obligation to ensure that the best interests of the child is a primary consideration in all actions concerning the child needs to extend to the digital world. Accordingly, the General Comment would elaborate the need for targeted measures to introduce the principle of best interests, for example, in respect of regulation of the media industry, provision of appropriate protection, interpretation of confidentiality and privacy rules, and addressing the balance between rights to protection and participation.
- > **Article 6, optimum development:** Closely linked with Article 3, the obligation to promote children's optimum development requires that children are able to benefit positively from the experiences of the digital media safely and without detriment to their wellbeing. The digital lives of children afford them significant opportunities for personal growth and development. The General Comment could highlight these issues and the measures required to ensure compliance with Article 6.
- > **Article 12, right to be heard:** The right of every child capable of forming a view to express their views and have them taken seriously has significant implications in the digital context. The General Comment could detail the implications of Article 12 in respect of, for example, promoting digital citizenship, engaging with children in the development of legislation and policy with regard to digital participation and protection, use of digital means of consulting and collaborating with children in the wider policy domains, promoting opportunities for social and educational participation, and enabling and

empowering children to participate in wider political citizenship online and through social media.

5.5 States parties' obligations

This section could provide **a detailed overview of specific obligations across the UNCRC**. In so doing, it would exemplify the extent to which the digital world has increasing levels of impact in respect of all aspects of children's lives. It is proposed that sections could be organised in accordance with the Committee's reporting guidelines, as relevant:

(a) Articles 4, 42 and 44, para. 6, General measures of implementation:

- > Ratification of the Optional Protocol on the Sale of Children, introduction of relevant legislation and policy.
- > Introduction of a coordinating mechanism with a clear mandate and sufficient authority to coordinate all activities related to children's rights and digital media and ICTs at cross-sectoral, national, regional and local levels and to facilitate international cooperation.
- > Importance of data collection, for example, on how children are using and engaging in digital media, what platforms, ages of users, frequency, numbers, challenges, opportunities, barriers experienced and risk factors for specific groups of children. Research and data collection should always involve children as key partners and should be disaggregated by age, sex, geographic location, socioeconomic background, disability, membership of minority and/or indigenous group or ethnic origin.
- > Provision of training for all professionals working with and for children to raise awareness and improve technical skills.
- > Appropriate budgetary allocation to ensure digital protection and access.
- > Systems in place to ensure regular monitoring and evaluation of measures to promote equity of access and adequate protection, involving children themselves.
- > Importance of appropriate international assistance and development aid to be used to ensure appropriate digital protection and access.

(b) Articles 13, 14, 15, 16 and 17, Civil rights and freedoms:

- > Overall focus on empowerment as the key strategy for promoting safe digital engagement.
- > Freedom of expression: respecting and promoting opportunities in the digital media for expression of views and identity.
- > Freedom of association: respecting and promoting the digital environment as a space for children to meet, organise, network and socialise.
- > Privacy and confidentiality: support for children to understand the nature of privacy online in order to promote the capacity to make safe choices, elaboration of the implications of the digital environment for children's privacy rights, development of appropriate legislative and policy frameworks to balance rights to privacy with the need for protection, raising

awareness of the nature of privacy and its breaches online, and the introduction of regulatory frameworks for the industry, including through international bodies. Consideration of growing potential for surveillance, including by parents, on privacy rights of children.

- > Information: measures to respect the obligation to promote opportunities for all children to access the digital media and guarantee access to the widest possible sources of child-friendly information – including legislative, policy training and other measures that would be required to enhance equality and scope of access as well as protection from harmful media. Guidance in managing, mediating the scale and evaluating the nature of the information received through digital media.
- > Measures to reduce barriers to access for particular groups, for example, children with disabilities, children from minority communities, children in institutions.

(c) Articles 19, 34, 37(a) and 39, Violence against children:

- > Cyberbullying: legislation and policy to provide appropriate protection, policies and training for schools, as well as positive measures to engage children in strategies to raise awareness and engage as partners in addressing online violence. Measures to address the additional vulnerability of particular groups such as LGBTI children, children with disabilities and children from minority religious or ethnic groups.
- > Sexual abuse and exploitation: legislative and policy frameworks to define abuse, provide protection, promote law enforcement, enable identification of victims, remove images, including bilateral and international collaboration.
- > Reintegration and recovery: development of training and services to provide effective opportunities for sensitive psychological recovery and reintegration.
- > Measures to mitigate risk: filters and firewalls, user-friendly guidance for both children and adults through tutorial videos, chat rooms and information for classroom teachers, accessible, safe, confidential, age-appropriate, child-friendly and effective reporting channels, such as child hotlines, for reporting violations of children's rights in relation to digital media and ICTs and safe, child-friendly and confidential points of contact for children to report self-generated sexual content to a relevant authority.
- > Importance of partnerships with, as well as regulatory framework for, all aspects of the ICT industry, as well as encouraging child rights due diligence.
- > Throughout, the General Comment would need to be cognisant of the gender dimensions of online violence, abuse and exploitation.

(d) Articles 5 and 18, Family environment and alternative care:

- > Legal frameworks need to respect the evolving capacities of the child, recognise the transfer in exercise of rights from parent/caregiver to children as they reach adolescence, and the growing importance of peer group and consequent significance of digital media in adolescence. It is important to ensure frameworks that provide adequate protection for younger children while not prohibiting appropriate access for older children.

- > Obligations to provide information and awareness-raising for parents and caregivers to enable them to provide appropriate guidance to support children's digital engagement and enable them to make safe choices.
- > Measures to acknowledge that families may be the source of sexual exploitation online, and the need for measures to address this abuse.
- > Training for childcare professionals to raise awareness of children's digital lives and their role in providing both opportunities and protection.
- > Addressing intergenerational gaps in levels of digital engagement between parents/caregivers and children.
- > Measures to address both the vulnerabilities of/access for children in institutions and alternative care.

(e) Articles 23 and 27, Disability, basic health and welfare:

- > Recognition of the potential impact of digital media, both positive and negative, on the physical and mental health of children and the need for research into the nature of the impact and the introduction of appropriate measures to respond effectively.
- > Potential role of digital media in providing access to health information, particularly in respect of sexual and reproductive health rights.
- > Recognition of particular issues for children with disabilities in respect of both equity of access and opportunities afforded by digital media, as well as potential exposure to abuse and exploitation, and the necessary legislative and policy framework, as well as resources needed to address these issues.
- > Implications of digital access as a dimension of the right to an adequate standard of living in the modern world, and the need for measures to provide greater equity of opportunity in order to promote opportunities, for example, for economic development, future employment and gender equity.

(f) Articles 28, 29 and 31, Education, leisure and cultural activities:

- > Investment in infrastructure to extend online access in schools for all children.
- > Inclusion of digital information in the school curricula – promoting digital citizenship, awareness and knowledge.
- > Use of digital technologies to promote educational access for children with disabilities and those requiring remote learning opportunities.
- > Training and awareness for teachers to equip them to provide the necessary learning to guide and support children in the digital environment.
- > Ensure opportunities for children to have access to digital media for recreational use, games, access to music, culture and the arts.

(g) Articles 22, 30, 32, 34, 35, 37, 38 and 39, Special protection (Optional Protocol on the Sale of Children, Child Prostitution and Child Pornography could also be addressed here):

- > Implications for refugees and asylum-seekers: importance of access in transit, in camps and on arrival in countries of destination as a means of promoting protection, accessing sources of help and information and linking with family members. Also need for measures to address potential risks of exploitation, as well as exposure to radicalisation.
- > Minority groups: implications for recognition of language, culture and identity.
- > Children in street situations: role of social media in sensitisation and tackling stigmatisation.
- > Children at risk of exploitation: sexual exploitation and trafficking, use of images, real-time sexual exploitation, internet cafés, grooming.
- > Children in armed conflict: online recruitment, recovery and social reintegration.

5.6 International cooperation

This section could highlight the need for states parties to seek technical cooperation from the United Nations Children's Fund (UNICEF), United Nations Educational, Scientific and Cultural Organisation (UNESCO), the International Telecommunications Union (ITU) and the Office of the United Nations High Commissioner for Human Rights (OHCHR). It could also address **the imperative for multilateral and bilateral agreements to tackle the need for international mechanisms for to strengthen law enforcement.**

5.7 Dissemination

This section could stress **the importance of widespread dissemination** of the General Comment, translation into local language and the development of a child-friendly version.

6. Conclusions

Digital media are set to be of growing significance in the future, with likely dramatic consequences both for today's children as they grow up and for children yet to be born. It is vital that the power of the digital is harnessed to deliver sustainable development goals for the broadest population possible, maximising opportunities for children both in the here-and-now and as future adults while preventing the infringement to their rights, again, both in the present and in the future. It is equally vital that children's voices are heard in the expert debates that too often unfold 'above their heads'.

The difficulties for states include coordinating the multiple relevant stakeholders across the public, private and third sectors, and the fact that digital media have consequences across the full range of children's rights. Both the physical and informational infrastructures that underpin digital environments are proprietary, owned significantly by powerful multinational corporations whose interests are commercial and which, while not beyond the law, are difficult for individual states to regulate. Even in relatively privileged countries in the global North, uncertainties, problems and confusions are accumulating about how to ensure (or even recognise) the best interests of the child as they apply in relation to digital media and the wider world now being shaped by digital and networked media.

The pressing challenges confronting the global policy and practice community include:

- > How can the digital be mobilised to support (and not infringe) the full range of children's rights, for all children globally, including the most vulnerable or disadvantaged?
- > How can we foster children's protection from harm online while simultaneously empowering them to maximise the opportunities of growing connectivity?
- > What is the role of states in ensuring children's rights in the digital age, and how can they work with other stakeholders in this task?

If society is to support children to better realise their rights using digital media, this will require a concerted effort. The time is right for the global policy and practice community to address these questions and to meet the challenges of children's rights in relation to digital media and to meet the demands of a future in which 'the digital' will play an ever more integral role in the lives of children and adults around the world.

A General Comment developed by the UN Committee on the Rights of the Child would constitute a significant positive step to advancing global debate in this field and setting the agenda for policy and practice into the future, building on its DGD and related efforts. It could inspire much-needed vision, policy and coordinating action to ensure that the opportunities for children are maximised and the risks minimised. And it could support states with an authoritative interpretation of the UNCRC in relation to digital environments, strengthening their capacity to respond in a manner consistent with their obligations to protect children's rights.

The coming decade is likely to be crucial in the global public and commercial shaping of digital environments. **At stake is identifying, anticipating and addressing the global**

relevance of the UNCRC in ‘the digital age’, by and across geographic regions, and encompassing all dimensions of children’s lives. If society can seize the opportunities, digital media will surely constitute a powerful tool for delivering on the promise of the Convention. If society fails in this effort, digital media threaten to undermine children’s rights on a significant scale. We suggest attention to both the opportunities and risks for children’s rights is of critical urgency.

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