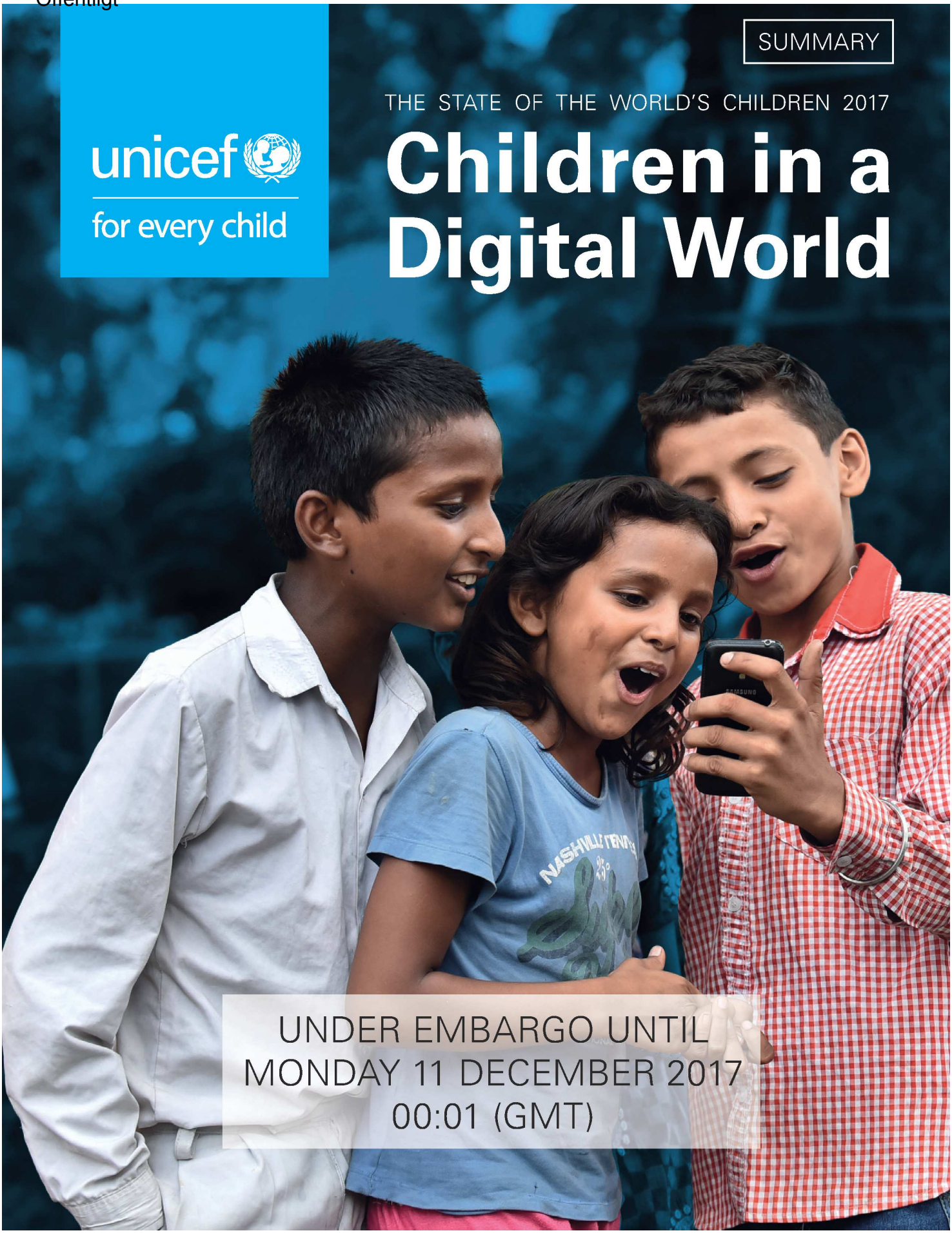
SUMMARY

THE STATE OF THE WORLD'S CHILDREN 2017

Children in a Digital World

unicef
for every child



UNDER EMBARGO UNTIL
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Front cover image: Children at St. Columba's School in Delhi, India, use a mobile phone. © UNICEF/UN036675/Sharma

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SUMMARY

THE STATE OF THE WORLD'S CHILDREN 2017

Children in a Digital World

The State of the World's Children 2017 examines the ways in which digital technology has already changed children's lives and life chances – and explores what the future may hold.

If leveraged in the right way and universally accessible, digital technology can be a game changer for children being left behind – whether because of poverty, race, ethnicity, gender, disability, displacement or geographic isolation – connecting them to a world of opportunity and providing them with the skills they need to succeed in a digital world.

But unless we expand access, digital technology may create new divides that prevent children from fulfilling their potential. And if we don't act now to keep pace with rapid change, online risks may make vulnerable children more susceptible to exploitation, abuse and even trafficking – as well as more subtle threats to their well-being.

This report argues for faster action, focused investment and greater cooperation to protect children from the harms of a more connected world – while harnessing the opportunities of the digital age to benefit every child.

Contents

Foreword

The State of the World's Children 2017 is about an extraordinary subject that increasingly affects almost every aspect of life for millions of children around the world and, indeed, for us all: digital technology.

As the influence of digital technology – and especially the internet – has increased, the debate about its impact has grown louder: Is it a boon to humankind, offering unlimited opportunity for communication and commerce, learning and free expression? Or is it a threat to our way of life, undermining the social fabric, even the political order, and threatening our well-being?

This is an interesting but essentially academic debate. Because for better and for worse, digital technology is a fact of our lives. Irreversibly.

For better:

The boy living with cerebral palsy, interacting online on an equal footing with his peers, for the first time in his life his *abilities* more 'visible' than his *disability*.

The girl who fled the violence in the Syrian Arab Republic with her family, recapturing her future guided by a teacher at the Za'atari refugee camp as she uses a digital tablet to learn.

The young blogger in the Democratic Republic of the Congo using the internet to report on the lack of safe water and sanitation and other serious issues in his community.

For worse:

The girl who is forbidden by the rules of her family or her society to go online, missing out on the chance to learn and connect with friends.

The teenager whose personal information is misused by marketers and shared online.

The boy whose video game habit has taken over his life, at least according to his parents.

And worse still:

A boy driven nearly to suicide by cyberbullying that follows him everywhere.

A 14-year-old girl whose ex-boyfriend created a social media profile featuring nude pictures he forced her to take of herself.

An eight-year-old girl in the Philippines forced to perform live-stream sex acts by a neighbour who operates a child sexual abuse website.

Beyond the harm to individual children that digital technology can enable or abet is its capacity to incite violence on a massive scale that affects the lives and futures of hundreds of thousands of children. We need look no further for confirmation of this grim potential than an insidious social media campaign in Myanmar this year that incited horrific violence against members of the Rohingya ethnic minority, which resulted in the killing and maiming of children and forced hundreds of thousands to flee towards uncertain futures.

The internet is all of these things, reflecting and amplifying the best and worst of human nature. It is a tool that will always be used for good and for ill. Our job is to mitigate the harms and expand the opportunities digital technology makes possible.

That's what this report is about. It surveys the landscape of digital opportunity as it relates to – and affects – children. It examines the digital divides that prevent millions of children from accessing through the internet new opportunities to learn and, someday, to participate in the digital economy, helping to break intergenerational cycles of poverty.

It also explores the undeniably dark side of the internet and digital technology, from cyberbullying to online child sexual abuse to dark web transactions and currencies that can make it easier to conceal trafficking and other illegal activities that harm children. It reviews some of the debates about less obvious harms children may suffer from life in a digital age – from digital dependencies to the possible impact of digital technology on brain development and cognition. And it outlines a set of practical recommendations that can help guide more effective policymaking and more responsible business practices to benefit children in a digital age.

Equally important, this report includes the perspectives of children and young people on the impact of digital technology in their lives – telling their own stories about the issues that most affect them.

Their voices matter ever more – and are louder than ever before – in a digital world. A world they are not only inheriting, but helping to shape.

By protecting children from the worst digital technology has to offer, and expanding their access to the best, we can tip the balance for the better.

Anthony Lake
UNICEF Executive Director

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The State of the World's Children — Children in a Digital World

Key messages

Digital technology has already changed the world – and as more and more children go online around the world, it is increasingly changing childhood.

- Youth (ages 15–24) are the most connected age group. Worldwide, 71 per cent are online compared with 48 per cent of the total population.
- Children and adolescents under 18 account for an estimated one in three internet users around the world.
- A growing body of evidence indicates that children are accessing the internet at increasingly younger ages. In some countries, children under 15 are as likely to use the internet as adults over 25.
- Smartphones are fuelling a 'bedroom culture', with online access for many children becoming more personal, more private and less supervised.

Connectivity can be a game changer for some of the world's most marginalized children, helping them fulfil their potential and break intergenerational cycles of poverty.

- Digital technologies are bringing opportunities for learning and education to children, especially in remote regions and during humanitarian crises.
- Digital technologies also allow children to access information on issues that affect their communities and can give them a role in helping to solve them.
- Digital technologies can deliver economic opportunity by providing young people with training opportunities and job-matching services, and by creating new kinds of work.
- To accelerate learning, information and communication technology (ICT) in education needs to be backed by training for teachers and strong pedagogy.

But digital access is becoming the new dividing line, as millions of the children who could most benefit from digital technology are missing out.

- About 29 per cent of youth worldwide – around 346 million individuals – are *not* online.
- African youth are the least connected. Around 60 per cent are not online, compared with just 4 per cent in Europe.
- Digital divides go beyond the question of access. Children who rely on mobile phones rather than computers may get only a second-best online experience, and those who lack digital skills or speak minority languages often can't find relevant content online.
- Digital divides also mirror prevailing economic gaps, amplifying the advantages of children from wealthier backgrounds and failing to deliver opportunities to the poorest and most disadvantaged children.
- There is a digital gender gap as well. Globally, 12 per cent more men than women used the internet in 2017. In India, less than one third of internet users are female.

DENNAR GARY ALVAREZ MEJIA, 19, SANTA CRUZ DE LA SIERRA, PLURINATIONAL STATE OF BOLIVIA

"One of the key challenges many young people are struggling with is the proper verification of sources. Even though technological innovations have accelerated the pace of life, it's important that we take our time to check the validity, credibility and overall quality of the sources of information that we use."

Digital technology can also make children more susceptible to harm both online and off. Already vulnerable children may be at greater risk of harm, including loss of privacy.

- ICTs are intensifying traditional childhood risks, such as bullying, and fuelling new forms of child abuse and exploitation, such as 'made-to-order' child sexual abuse material and live streaming of child sexual abuse.
- Predators can more easily make contact with unsuspecting children through anonymous and unprotected social media profiles and game forums.
- New technologies – like cryptocurrencies and the Dark Web – are fuelling live streaming of child sexual abuse and other harmful content, and challenging the ability of law enforcement to keep up.
- Ninety-two per cent of all child sexual abuse URLs identified globally by the Internet Watch Foundation are hosted in just five countries: the Netherlands, the United States, Canada, France and the Russian Federation.
- Efforts to protect children need to focus particularly on vulnerable and disadvantaged children, who may be less likely to understand online risks – including loss of privacy – and more likely to suffer harms.
- While attitudes vary by culture, children often turn first to their peers when they experience risks and harms online, making it harder for parents to protect their children.

The potential impact of ICTs on children's health and happiness is a matter of growing public concern – and an area that is ripe for further research and data.

- Although most children who are online view it as a positive experience, many parents and teachers worry that immersion in screens is making children depressed, creating internet dependency and even contributing to obesity.
- Inconsistent advice can be confusing for caregivers and educators, underlining the need for more high-quality research on the impact of ICTs on well-being.
- Researchers acknowledge that excessive use of digital technology can contribute to childhood depression and anxiety. Conversely, children who struggle offline can sometimes develop friendships and receive social support online that they are not receiving elsewhere.
- For most children, underlying issues – such as depression or problems at home – have a greater impact on health and happiness than screen time.
- Taking a 'Goldilocks' approach to children's screen time – not too much, not too little – and focusing more on what children are doing online and less on how long they are online, can better protect them and help them make the most of their time online.

VOICES OF YOUTH
Young bloggers speak out

Voices of Youth is UNICEF's digital platform for young people to learn more about issues affecting their lives. This vibrant community of youth bloggers from all over the world offers inspiring, original insights and opinions on a variety of topics.

Full articles by youth contributors featured in *The State of the World's Children 2017* can be found at: http://www.voicesofyouth.org/en/sections/content/pages/sowc-2017

EMMANUELLA AYIVI, 15, COTONOU, BENIN

"In Benin, a lot of young people and children do not have access to digital technologies and the internet. This lack of access to the digital world puts young people at a grave disadvantage. I have been in numerous situations where the lack of internet access was a serious problem."

The private sector – especially in the technology and telecommunication industries – has a special responsibility and a unique ability to shape the impact of digital technology on children.

- The power and influence of the private sector should be leveraged to advance industry-wide ethical standards on data and privacy, as well as other practices that benefit and protect children online.
- Governments can promote market strategies and incentives that foster innovation and competition among service providers to help lower the cost of connecting to the internet, thereby expanding access for disadvantaged children and families.
- Technology and internet companies should take steps to prevent their networks and services from being used by offenders to collect and distribute child sexual abuse images or commit other violations against children.
- Media stories about the potential impact of connectivity on children's healthy development and well-being should be grounded in empirical research and data analysis.
- And internet companies should work with partners to create more locally developed and locally relevant content, especially content for children who speak minority languages, live in remote locations and belong to marginalized groups.

***The State of the World's Children 2017* concludes with six priority actions to harness the power of digitalization while benefiting the most disadvantaged children and limiting harm to the most vulnerable.**

1. Provide all children with affordable access to high-quality online resources.
2. Protect children from harm online – including abuse, exploitation, trafficking, cyberbullying and exposure to unsuitable materials.
3. Safeguard children's privacy and identities online.
4. Teach digital literacy to keep children informed, engaged and safe online.
5. Leverage the power of the private sector to advance ethical standards and practices that protect and benefit children online.
6. Put children at the centre of digital policy.

Introduction: Children in a digital world

Like globalization and urbanization, 'digitalization' has already changed the world. The rapid proliferation of information and communication technology (ICT) is an unstoppable force, touching virtually every sphere of modern life, from economies to societies to cultures … and shaping everyday life.

Childhood is no exception. From the moment hundreds of millions of children enter the world, they are steeped in a steady stream of digital communication and connection – from the way their medical care is managed and delivered to the online pictures of their first precious moments.

As children grow, the capacity of digitalization to shape their life experiences grows with them, offering seemingly limitless opportunities to learn and to socialize, to be counted and to be heard.

Especially for children living in remote locations, or those held back by poverty, exclusion and emergencies that force them to flee their homes, *digital technology and innovation can open a door to a better future*, offering greater access to learning, communities of interest, markets and services, and other benefits that can help them fulfil their potential, in turn breaking cycles of disadvantage.

But millions of children do not enjoy that access, or their *access is intermittent or of inferior quality* – and they are most often the children who are already most deprived. This only compounds their deprivation, effectively denying them the skills and knowledge that could help them fulfil their potential and helping *break intergenerational cycles of disadvantage and poverty*.

Digital technology and interactivity also pose significant *risks to children's safety, privacy and well-being*, magnifying threats and harms that many children already face offline and making already vulnerable children even more vulnerable.

Even as ICT has made it easier to share knowledge and collaborate, so, too, has it made it *easier to produce, distribute and*

share sexually explicit material and other illegal content that exploits and abuses children. Such technology has opened new channels for the *trafficking of children* and new means of concealing those transactions from law enforcement. It has also made it far easier for children to access inappropriate and potentially harmful content – and, more shockingly, to produce such content themselves.

Even as ICT has made it easier for children to connect to one another and share experiences online, it has also made it easier to use those *new channels of connectivity and communication for online bullying*, with a much greater reach – and thus potentially greater risk – than offline bullying. Similarly, it has increased opportunities for wider misuse and exploitation of children's privacy, and changed the way children regard their own private information.

Even as the internet and digital entertainment have spurred tremendous creativity and expanded children's access to a wealth of enriching and entertaining content, they have also raised questions of *digital dependency*, and 'screen addiction', among children. And even as such technologies have greatly enlarged platforms for the free expression of ideas, they have also broadened the distribution of hate speech and other negative content that can shape our children's view of the world – and of themselves.

Some of the impacts of digitalization on children's well-being are not universally agreed. Indeed, some are the subject of *growing public debate among policymakers and parents* alike. And while the potentially equalizing power of digitalization on children's chances in life cannot be denied, that promise has yet to be realized.

These challenges will only intensify as the reach and range of digitalization expands and its many opportunities continue to be exploited commercially and otherwise. More digital devices, online platforms and application will be available for children's use. The Internet of Things, artificial intelligence and machine learning are here to stay, creating new opportunities but also new challenges.

What can governments, international organizations, civil society, communities, families and children themselves do to help limit the harms of a more connected world, while harnessing the opportunities of a digital world to benefit every child?

First and foremost, we need to *identify and close the gaps*: in access to quality online resources, in knowledge about how children use the internet and children's knowledge of how to protect themselves online, and in both policymaking and regulatory frameworks that have not caught up with the pace of change.

Despite the rapid spread of access to digital and online experiences around the world, there are still *wide gaps in children's access to digital and communications technology*. Access to ICTs – and the quality of that access – has become *a new dividing line*. For example, children whose access is limited to a small range of local content services viewed via inferior devices with a slow connection are missing out on the full range of content and opportunities their better-connected peers enjoy. These disparities mirror and potentially exacerbate those already affecting disadvantaged children offline.

Gaps in our knowledge about children's lives online, including the *impact of connectivity on cognition, learning and social emotional development*, make it more difficult to develop dynamic policies that get ahead of issues by addressing risks and making the most of opportunities. Gaps in our understanding about *how children feel* about their experience of connectivity – including their perceptions of risks – further limit us.

There are also clear gaps in *children's* knowledge about risks online, and despite rapidly increasing usage among children

The State of the World's Children 2017 provides a timely review based on prevailing and new data sources of children's lives in a digital world – examining the evidence and exploring key controversies, as well as proposing principles and concrete recommendations.

and adolescents, many lack digital skills and the critical ability to gauge the safety and credibility of content and relationships they experience online. This reflects a need for much more widespread *digital literacy opportunities* that can both safeguard and empower children.

Finally, and crucially, all these gaps both reflect and produce *lags in policymaking*: regulatory frameworks for digital protection, digital opportunity, digital governance and digital accountability are not keeping pace with the rapidly changing digital landscape, and are overlooking *the unique impact digital technologies have on children*. If left unclosed, those regulatory gaps will quickly be exploited. There is no shortage of principles and guidelines for digital policymaking; what is lacking is *consistent coordination and a commitment to tackling common challenges* with children's interests at the fore.

Especially now, as the world works to realize the *2030 Agenda for Sustainable Development*, ICTs and the internet can be powerful enablers, helping realize the promise of the Sustainable Development Goals (SDGs) to *leave no one behind*. But action – by governments, international organizations, civil society, academia, the private sector, and families, children and young people – must match the pace of change.

The State of the World's Children 2017: Children in a Digital World provides a timely review based on prevailing and

The constant churn of new technologies, such as virtual reality – enjoyed here by 12-year-old Mansoor in the Za'atari refugee camp, Jordan – is making it hard for policy to keep up.

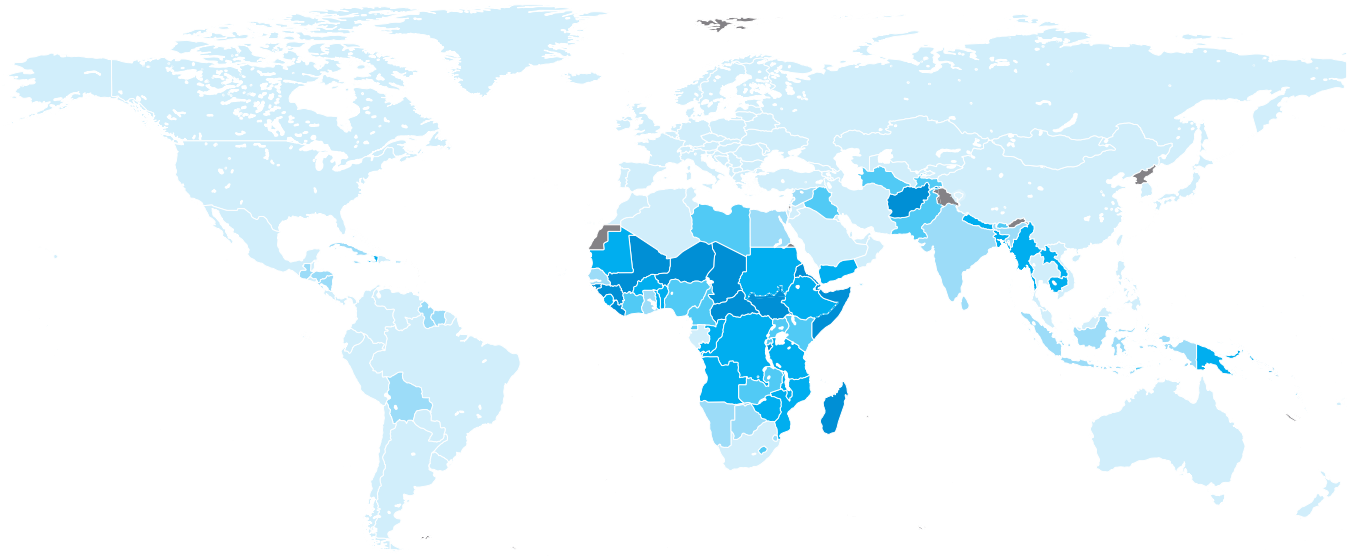
new data sources of children's lives in a digital world – examining the evidence, discussing the issues and exploring some of the key controversies, as well as proposing principles and concrete recommendations.

Throughout, the report presents the perspectives of industry leaders and digital activists, and includes the views of children and young people, gleaned through adolescent workshops carried out in 26 countries, a specially commissioned U-Report poll that asked adolescents in 24 countries about their digital experiences, commentary by youth bloggers from UNICEF's Voices of Youth, and analysis drawn from the pioneering Global Kids Online Survey.

The report concludes with *priority actions and practical recommendations* for how society can harness the power of digitalization to benefit the most disadvantaged children and limit the harms to protect those children who are most vulnerable. These actions and recommendations underscore the need to provide all children with *affordable access to high-quality online resources; protect children from harm online; safeguard children's privacy* and identities online; *teach digital literacy* to keep children informed, engaged and safe online; *leverage the power of the private sector* to advance ethical standards and practices that protect and benefit children online; and *put children at the centre of digital policy*.

Despite the rapid spread of access to digital and online experiences around the world, there are still *wide gaps in children's access to digital and communications technology*.

YOUTH IN LOW-INCOME COUNTRIES ARE LEAST LIKELY TO CONNECT
PROPORTION OF YOUTH (15–24) WHO ARE NOT USING THE INTERNET (%)



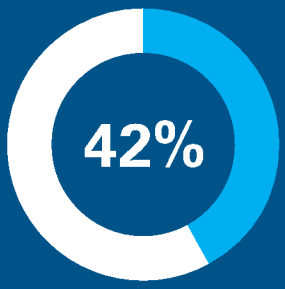
Note: This map does not reflect a position by UNICEF on the legal status of any country or territory or the delimitation of any frontiers. The dotted line represents approximately the Line of Control in Jammu and Kashmir agreed upon by India and Pakistan. The final status of Jammu and Kashmir has not yet been agreed upon by the parties. The final boundary between the Sudan and South Sudan has not yet been determined. The final status of the Abyei area has not yet been determined.
Source: International Telecommunication Union estimates, 2017.

What do adolescents and youth think of life online?

As part of the research for *The State of the World's Children 2017*, U-Report – an innovative social messaging tool used by nearly 4 million young people around the world to share their views on a range of common concerns – sent four questions to U-Reporters worldwide. The poll garnered a total of 63,000 responses. Data highlighted here reflect the responses of adolescents and youth (ages 13–24) from 24 countries.*

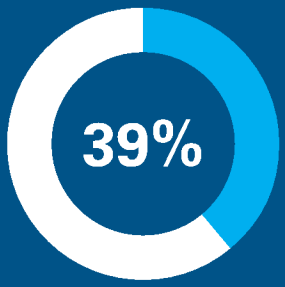
How did you learn to use the internet?

Learned on their own



69% of young people in Honduras said they learned on their own compared to 19% in the Central African Republic (CAR).

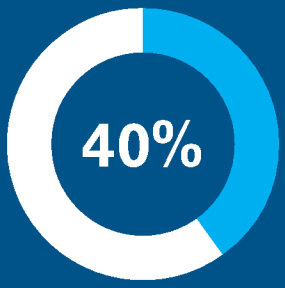
Learned from friends or siblings



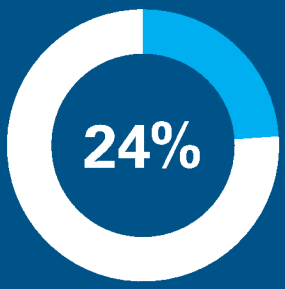
Reported more often by those in low-income countries.

What do you like about the internet?

Learning things for school or health

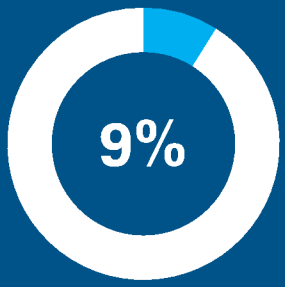


Learning skills I can't learn at school



"Learning skills that I can't learn at school" was especially important to those in Indonesia (47%), Burundi (35%) and Brazil (34%).

Read about politics and/or improving my community



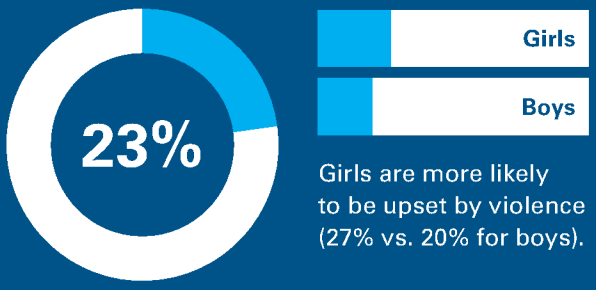
More popular among older age groups.

Report
VOICE MATTERS

https://ureport.in

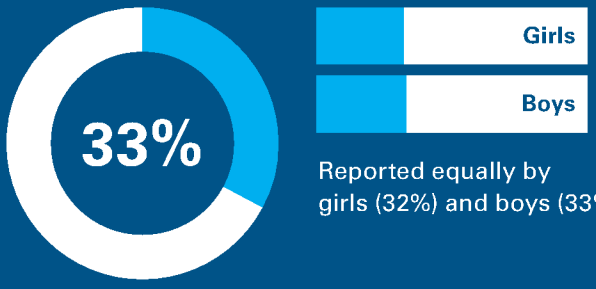
What do you dislike about the internet?

Violence



Girls are more likely to be upset by violence (27% vs. 20% for boys).

Unwanted sexual content



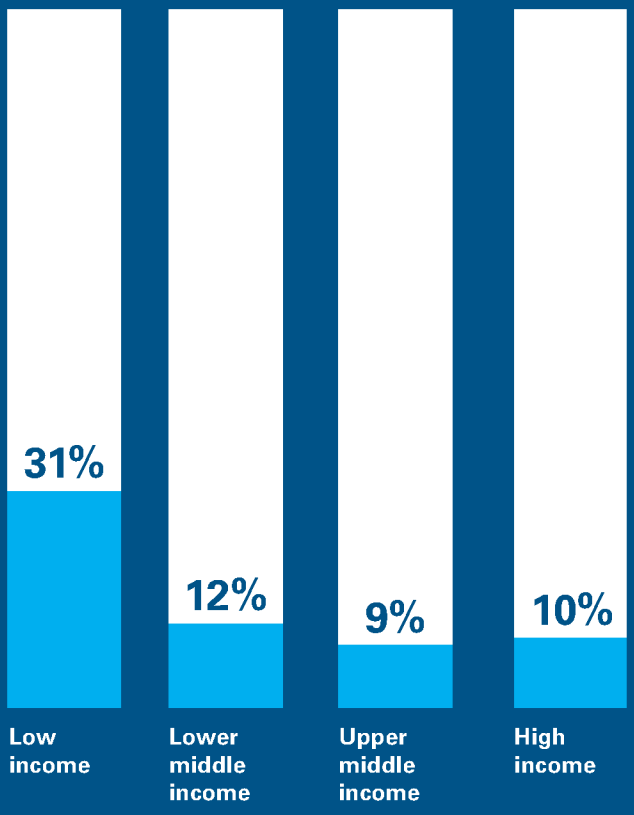
Reported equally by girls (32%) and boys (33%).

Young people in low-income countries are more likely to be upset by unwanted sexual content (42% vs. 16% in high-income countries).

"There is nothing I dislike about the internet."

What would make the internet better for you?

Young people from low-income countries were 2.5 times more likely to ask for greater access to digital devices



* Only countries with a minimum of 100 respondents each were included in the 'country' category analysis, namely: Algeria, Bangladesh, Brazil, Burkina Faso, Burundi, Cameroon, Central African Republic, Chad, Chile, Côte d'Ivoire, El Salvador, Guatemala, Honduras, India, Indonesia, Liberia, Malaysia, Mexico, Mongolia, Pakistan, Peru, Philippines, Thailand and Ukraine.

01

Digital Opportunity: The promise of connectivity

CHAPTER 1: KEY POINTS

- Digital technology has enormous potential to extend the reach and improve the quality of education – but what is wrong with education cannot be fixed by technology alone. To improve children's learning, digital tools must be supported with **strong teachers, motivated learners and sound pedagogy**.
- Connected children and youth are making their voices heard through blogs, videos, social media, magazines, cartoons, hashtags, podcasts and other forms. They recognize **the potential of digital tools to help them access information and seek solutions to problems affecting their communities**.
- **The digital economy** is opening up new markets and creating job opportunities, including for youth without specialized skills.
- Digital technologies are increasingly being used to help one of the world's most vulnerable groups: children caught in humanitarian situations. ICTs are being used to **enhance communication and information sharing, facilitate digital cash transfers and generate new forms of data** that can benefit children and families in emergencies.

This chapter looks at the opportunities digitalization offers to children everywhere, but especially children disadvantaged by poverty, exclusion, conflicts and other crises. For example, ICTs are bringing education to children in remote parts of Brazil and Cameroon and to girls in Afghanistan who cannot leave their homes. ICTs are also enabling child bloggers and reporters in the Democratic Republic of the Congo to advocate for their rights. They're increasingly supporting children and their families in emergencies. And they're literally giving a voice to children with disabilities: "The day I received an electronic notepad connected to the internet, my life literally changed," Ivan Bakaidov, an 18-year-old with cerebral palsy, writes in this report.

There are countless stories and examples of how children around the world are capturing opportunities to learn and enjoy themselves online and to shape their own paths into adulthood. These opportunities must be considered alongside the reality that they are not available to millions of children, as well as the risks of life online and the potential impact of connectivity on children's well-being. But they provide an exciting glimpse of what is already happening and a sense of what could happen in the future.

The idea that digital connectivity could transform education has attracted global interest and opened up new possibilities, as development organizations, commercial software and hardware producers and educational institutions develop, pilot and try to scale up new digital products and services in the education sector. ICTs are already expanding access to high-quality educational content, including textbooks, video material and remote instruction, and at a much lower cost than in the past. They can potentially increase student motivation by making learning more fun and relatable. And they have the potential to create opportunities for personalized learning, helping students to learn at their own pace and helping educators with limited resources provide students with better learning opportunities.

How well are digital technologies fulfilling this promise? Without question, they have opened access to learning opportunities for children around the world, especially those in remote regions. They have allowed children to participate in e-learning and to access a wide range of educational and learning content that was unavailable to previous generations of children.

But when it comes to whether or not digital technologies are accelerating learning in the classroom, the picture has up to now been much more mixed. ICTs have already opened avenues for children to develop, learn, participate and improve themselves and their situation. However, these benefits are far from equally shared – and the benefits and opportunities emerging for children do not necessarily look the same in all parts of the world.

Assessing the extent to which these opportunities can expand, and the actual benefits they bring for children, is challenging. This underscores the need for more research and evaluation to better understand how children are availing themselves of opportunities in the digital age and, especially, to understand why some children benefit more than others.

To transform opportunities into real benefits for children in a digital age, especially

Digital technology could be the great game changer of our time if it is used to give all children a fair chance, starting with those most left behind.

for learning, participation and social inclusion, it is critical to understand the context of children's digital experiences and provide adequate guidance and support, especially for children on the move, excluded children and those living with disabilities.

Technology is still at the service of human capacities and human constraints. In education, these would include student motivation, teacher capability and sound pedagogy. Evidence suggests that technology has benefits where positive human forces for learning are already in place. A digital tool cannot fix dysfunctional bureaucracies or decrease educational inequality where these are not being addressed by the larger society.

To truly benefit children, especially the most disadvantaged, the design process for digital products must begin by considering children's specific needs – using the principles of Universal Design as a guiding reference, for example.

Connected children see digital connectivity as an overwhelmingly positive part of their lives. Their enthusiasm, fascination and motivation to connect is a reflection of the clear power and potential these tools have to offer – not just to improve their everyday lives but also to expand their chances for a better future. This power and potential fully needs to be supported, in particular by bringing connectivity to as many children as possible and giving them the skills to maximize the benefits of life in the digital world.

Voices from *The State of the World's Children 2017* workshops

"My sister made a video call from Spain and filled my family with joy."
BOY, 16, PERU

"I will use technology to change the world. Use it to design better stuff, create new things, and make education more interesting through technology."
BOY, 17, FIJI

"I will use technology to advocate to people about health issues."
GIRL, 15, NIGERIA

"I learned coding through YouTube. I watched so many videos about coding."
GIRL, 17, BANGLADESH

"If we do not use the computer, if we do not know computer, then we do not know anything, including … good things for our lives."
GIRL, 14, TIMOR-LESTE

Primary-school-age children from the Central African Republic attend class in a UNICEF-supported temporary learning space at the Danamadja refugee camp in southern Chad. Despite unreliable service in the area, mobile phones help older children and young people in Danamadja keep in touch with relatives and friends at home – and even further their education. “I use the internet to do research, especially in biology,” says one 16-year-old boy. “There is no library in the camp.”

02

Digital Divides: Missed opportunities

CHAPTER 2: KEY POINTS

- Basic internet connectivity still remains a challenge for children in the poorest countries and in rural areas. But **'second-level' divides – which go beyond access and relate to how children use the internet – are increasingly key** to closing the digital divide.
- Factors such as education, user skills, device type and the availability of local language content all impact how children use the internet, what they do when they are online and **how they can maximize online opportunities.**
- Right now, **unconnected children are missing out** on educational resources and access to global information, as well as opportunities to learn digital skills, explore friendships and develop new forms of self-expression.
- As children emerge into adulthood and the world of work, connectivity in the digital age will increasingly mean the difference between **young people's ability to earn a livelihood** or not.

This chapter examines the data on who is being left behind and what it means to be unconnected in a digital world. The top-line numbers are striking: In Africa, 3 out of 5 youth (ages 15 to 24) are offline; in Europe, the proportion is just 1 in 25. But digital divides go deeper than connectivity alone. In a world where 56 per cent of websites are in English, many children cannot find content they understand or that's relevant to their lives. Many also lack the skills, as well as the access to devices like laptops, that would allow them to make the most of online opportunities. If these digital divides are not bridged, they will deepen existing socio-economic divisions.

Digital divides mirror broader socio-economic divides – between rich and poor, men and women, cities and rural areas, and between those with education and those without. For example, 81 per cent of people in developed countries use the internet, more than double the proportion in developing countries (40 per cent), which, in turn, is more than double the proportion in least developed countries (15 per cent).

But digital divides do not merely separate the connected and the unconnected. They go deeper, concerning *how* people – including children – use ICTs, as well as the *quality* of the online experience. Both of these can vary greatly, reflecting factors that include the level of users' skills and education, the types of devices they use, family income and the availability of content in their own language. Some children going online for the first time find themselves in a digital space where their language, culture and concerns are notable by their absence.

Why does all this matter? Regardless of whether they are fully online, partly online or completely unconnected, every child today is growing up in a digital world powered by technology and information. In the immediate term, children who are unconnected are missing out on rich educational resources, access to global information and online opportunities for learning; they are also forgoing ways to explore new friendships and self-expression.

For disadvantaged children, such as those living with disabilities, connectivity can mean the difference between social exclusion and equal opportunity. For children on the move, it can mean a safer journey, the chance to remain in touch with family members and a better chance to find work and educational opportunities in a foreign land.

As children reach adulthood and enter the world of work, connectivity will increasingly mean the difference between their ability to earn a living or not. Those with access to digital technologies and the skills to make the best use of them will have the advantage over those who are unconnected and unskilled. Evidence from adult populations shows that the benefits of digital technology go to those with the skills to leverage it.

According to data from the world's wealthiest countries, ICT experience has had a large impact on participation in the labour force and on wages in countries like Australia and the United States. Adults without ICT experience, even if employed, were likely to earn less than those with ICT skills. Other studies of adult populations in countries such as India and Tunisia reflect similar findings.

Digital connectivity is not only the 'new necessity of our times'; it offers the potential to break intergenerational cycles of disadvantage.

The risk that connectivity can become a driver of inequity, not an equalizer of opportunity, is both real and immediate. Consider mobile technology, which has become embedded in every aspect of daily life – and at a singular pace. As the World Bank's *World Development Report 2016: Digital dividends* points out, "More households in developing countries own a mobile phone than have access to electricity or clean water, and nearly 70 per cent of the bottom fifth of the population in developing countries own a mobile phone."

Connectivity via mobile may have a long way to go to shrink the divide. However, as smartphone adoption skyrockets in many countries, including emerging economies, it is easy to imagine how central access will be or is already.

Digital connectivity is not only the 'new necessity of our times'; it offers the potential to break intergenerational cycles of disadvantage from which the poorest children may not otherwise be able to break away.

Voices from *The State of the World's Children 2017* workshops

"I need to share the iPad with all my family so I use it just a little bit."
GIRL, 15, REPUBLIC OF MOLDOVA

"Sometimes I want to go online but there is no one to help me and show me."
GIRL, 12, CENTRAL AFRICAN REPUBLIC

"No availability of technology."
BOY, 15, JORDAN

"Slow connection – it's always shutting down and all my tabs get lost."
GIRL, 16, TUNISIA

"We have computers and a computer lab. We can use it whenever we want."
GIRL, 16, BHUTAN

In early 2017, Waibai Buka, a young girl from the Far North region of Cameroon, was able to use the internet for the first time ever through the UNICEF-supported Connect My School project. Schoolchildren from the region – which has been deeply affected by the Lake Chad humanitarian crisis – gained access to satellite internet equipment and tablets through the project, and UNICEF asked them to tell stories about their daily life through pictures and video.

03

Digital Dangers: The harms of life online

CHAPTER 3: KEY POINTS

- **ICTs have amplified traditional dangers (bullying, for example) and created new forms of child abuse and exploitation**, such as made-to-order child sexual abuse material, self-generated content and the broadcasting of live sex abuse.
- **Cryptocurrencies, end-to-end encrypted platforms and the Dark Web** facilitate the escalation of live streaming and present real challenges for law enforcement.
- **Children are disproportionately affected by online dangers**, including loss of privacy. They are less likely to understand the risks and more likely to suffer the harms. This particular vulnerability sheds light on when risk turns into actual harm for children.
- Since 2012, an estimated 100 million children, most from Africa and South-East Asia, have connected to the internet for the first time. Without proper safeguards, **the world's most disadvantaged children will face even greater risk** when exposed to the online risk of harm.

This chapter delves into the digital dark side and the risks and harms of life online, including the internet's impact on children's right to privacy and expression. ICTs have amplified some of the traditional dangers of childhood: Once confined to the schoolyard, the bully can now follow victims into their homes. But they have also created new dangers, such as expanding the reach of predators, fostering the creation of 'made to order' child sexual abuse material, and broadening the market for the broadcasting of live sex abuse. As one child victim of online streaming said, "When the foreigner says, 'get naked,' then we undress." And then there are the dangers that many children and parents are unaware of – the threats to children's privacy and identity, for example, from the industrial-scale data processing that the internet has now made possible.

No child who is online is entirely safe from online risk, but the most vulnerable are those most likely to suffer the harms.

In Madagascar, a 17-year-old girl was asked by her teacher for the equivalent of about US$300 in exchange for a passing grade. Desperate to find the money, she reached out to a man she'd been in contact with online for six months. "He kidnapped me and kept me locked in his house for two months. He raped me repeatedly," she says. After her rescue by a new cybercrime police unit, she received medical attention, advice and psychological support at a One-Stop Service Centre managed by the government with support from UNICEF. The man and teacher were both arrested. "I'm doing OK now. I've gone back to school," she says. "I wish I had had some guidance. My parents didn't know I was talking to strangers."

For most parents and caregivers, the girl's story represents their worst nightmare of what can happen when a child goes online. Although her experience represents an extreme example of online harms, it goes to the heart of widespread concerns about the threats facing children on the internet: Namely, that going online can dismantle the traditional protections most societies try to place around children, exposing them to unacceptable content, unacceptable behaviour and potentially dangerous contacts with the outside world.

These risks are not entirely new – children have long bullied and been bullied, have often been exposed to, or sought out, violent and sexual material, and have always been at risk from sexual offenders. But most parents probably feel it was easier to protect previous generations from such risks. The front door was once a barrier to schoolyard bullies; now, social media allows them to follow their victims into their homes.

Researchers now typically organize the wide range of risks encountered online into three categories – content, contact and conduct risks.

Content risks: Where a child is exposed to unwelcome and inappropriate content. This can include sexual, pornographic and violent images; some forms of advertising; racist, discriminatory or hate-speech material; and websites advocating unhealthy or dangerous behaviours, such as self-harm, suicide and anorexia.

Contact risks: Where a child participates in risky communication, such as with an adult seeking inappropriate contact or soliciting a child for sexual purposes,

No child is safe from online risk, and it has never been easier for bullies, sex offenders, traffickers and those who harm children to target the most vulnerable.

or with individuals attempting to radicalize a child or persuade him or her to take part in unhealthy or dangerous behaviours.

Conduct risks: Where a child behaves in a way that contributes to risky content or contact. This may include children writing or creating hateful materials about other children, inciting racism or posting or distributing sexual images, including material they have produced themselves.

These risks must be seen in context. All children face the possibility of encountering harm as a result of internet technologies. But for most children, the possibility remains just that – a possibility. Understanding why risk translates into actual harm for certain children, and not for others, is crucial. It opens our eyes to the underlying vulnerabilities in the child's life that can place him or her at greater risk. By understanding and addressing these vulnerabilities, we can better protect children both online and offline, and enable them to enjoy the opportunities that come from being connected in a digital world.

Voices from *The State of the World's Children 2017* workshops

"I … posted a photo on Facebook and I received a comment that threw me into a panic."
BOY, 14, SENEGAL

"I get upset when my mom posts a photo of mine without my permission."
GIRL, 15, PARAGUAY

"I am careful to avoid privacy invasion."
GIRL, 17, BRAZIL

"I take care of my privacy, I make sure not everyone can see what I share, my pictures and status."
BOY, 15, GUATEMALA

"I worry that one might publish bad things in my name if my account is hacked."
GIRL, 16, BURUNDI

Angeline Chong, 17, walks to lunch with school friends in Kuala Lumpur, Malaysia. A past victim of cyberbullying, Angeline was inspired to join a youth journalism platform called R.AGE after seeing a report about its 2016 undercover investigation of sexual predators who use mobile chatting apps to prey on underage girls. According to the Malaysia police sex crimes unit, children aged 10–18 made up 80 per cent of victims raped by an internet acquaintance in 2015.

04

Digital Childhoods: Living online

CHAPTER 4: KEY POINTS

- Whether and how much children benefit from digital experiences has much to do with their **starting points**. Children with strong relationships use the internet to bolster these, while children experiencing depression, stress or problems at home may find that their digital experience compounds their existing difficulties.
- Not using digital media at all and excessively using digital media tend towards negative effects, **while moderate use has positive effects**.
- **Are children addicted? According to science, no**. Using addiction terminology in relation to children's everyday tech use – including in media coverage of these issues – is unhelpful and at times harmful.
- Parents' and educators' concerns about excessive screen time should not be discounted but need to be addressed in the context of **many other factors affecting children's well-being** – from family functioning and school dynamics to physical activity and diet.

This chapter explores some of the ways digitalization is changing childhood, for better and for worse. ICTs have changed how children form and maintain their friendships, allowing them to maintain almost-constant contact with their peers. They have also transformed how many children spend their leisure time, providing them with a constant feed of videos, social media updates and highly immersive games. Many adults fear these changes are not all for the better, and worry that excessive screen time is isolating children from their families and surroundings, fuelling depression and even making children obese.

Video games. Television. Comic books. Radio. A Google search on societal – and parental – worries about the impact of technology on children's well-being makes clear that such concerns are nothing new.

Radio was blamed for sleeplessness. Comic books for making children 'criminal and promiscuous'. Television for social isolation. And video games for offline aggression.

As far back as the sixteenth century, some feared writing would increase forgetfulness, because people would no longer rely on memory for information. They also worried that books and the printing press would lead to what today we would call information overload.

Yet, compared with its innovative predecessors, the internet – and how children use it – raises concerns of a different magnitude. Connectivity and interactivity are harder to take away or turn off. Their use by children is harder to monitor. And while children access entertainment, information or social networks via a connected device, those devices gather information on them too.

Questions about the impact of connectivity and interactivity abound among parents, educators, policymakers and industry leaders. Is digital engagement a threat to children's well-being? Are they spending too much time at it? Who is most at risk? What can parents and caregivers do to allow children space to explore and develop independently while also providing enough oversight?

Whether and how much children benefit from digital experiences has much to do with their starting points in life. While those with strong social and familial relationships are likely to use the internet to bolster these relationships – leading to improved well-being – children experiencing loneliness, stress, depression or problems at home, for example, may find that the internet compounds some of these existing difficulties. Conversely, children who struggle with their social lives offline can sometimes develop friendships and receive social support online that they are not receiving elsewhere.

Questions of screen time for connected children, while still debated, are increasingly obsolete. This is because there is no clear agreement on *when* time spent on digital technology shifts from moderate to excessive; 'how much is too much' is highly individual, dependent on a child's age, individual characteristics and broader life context. And many children in high-connectivity contexts find it difficult to estimate how much time they spend with digital technology, because they are more or less using it *all of the time*.

Parents and teachers struggle with conflicting messages that they should limit screen time on the one hand, or get the latest device – so their children can keep up – on the other.

As these issues are debated and studied, some basic truths seem to be emerging. Rather than restricting children's digital media use, more attentive and supportive mediation by parents and educators holds the most promise for enabling children to draw maximum benefit and minimum risk from connectivity. More attention should be given to the content and activities of children's digital experiences – what they are doing online and why – rather than strictly to how much time they spend in front of screens. Finally, future research and policy should consider a child's full life context – age, gender, personality, life situation, social and cultural environment and other factors – to understand where to draw the line between healthy and harmful use.

To improve children's well-being, it is important to take a holistic approach and focus on other factors known to have a stronger impact than screen time, such as family functioning, social dynamics at school and socio-economic conditions, while also encouraging the moderate use of digital technology.

Voices from *The State of the World's Children 2017* workshops

"I got on bad terms with my mom for spending too much time with digital devices and not spending enough time on school studies."
GIRL, 13, REPUBLIC OF KOREA

"There have been so many devices around since childhood and it is so easy to get addicted."
BOY, 15, JAPAN

"My teacher was scared that I am not going to do homework that she gave me and then I am going to waste time online."
BOY, 17, MALAYSIA

"I am afraid of my school performance being worse."
GIRL, 16, THAILAND

"I think that the internet brought us closer to those who are far away and pulled us away from those who are close by…."
GIRL, 16, DEMOCRATIC REPUBLIC OF THE CONGO

In Porumbeni village near Chisinau, Republic of Moldova, Gabriela Vlad, 17, uses a cellphone to chat with her mother as her foster mother looks on. An estimated 21 per cent of Moldovan children under 18 have at least one biological parent living abroad to pursue economic opportunities and send money home to their families. Digital technology provides a communication lifeline to help children, adolescents and adults cope with the 'parent drain' phenomenon.

05

Digital Priorities: Harness the good, limit the harm

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There is no doubt that the futures of a rapidly growing number of children will be increasingly affected by digital technology. Children already account for a substantial percentage of the global networked population, and their share will only increase in the near future as internet penetration reaches ever further into regions with the most rapidly growing share of children and young people. More digital devices and online platforms, not fewer, will be available for their use. ICTs will continue shaping children's lives, for better and for worse, just as emerging technologies like the Internet of Things and artificial intelligence help transform the digital landscape at a global scale.

The way children will continue to experience these transformations varies widely in ways that reflect the way they also experience 'the real world'. Not surprisingly, the most disadvantaged and marginalized are most likely to be excluded from reaping the benefits of the internet and connectivity and most likely to experience harm from the negative aspects of technology. Other critical factors – including gender, education status, traditional norms, language and location – all play a role in the impact digital technologies have in children's lives, for better and for worse.

There is no shortage of international instruments, guidelines, agreements and principles that deal with issues such as internet freedom, openness, net neutrality, accessibility and respect for human rights. What is needed are not more guidelines, per se, but agreed principles and priority actions that recognize the responsibility we share to protect children from the perils of a digital world and to help every child benefit from the promise of connectivity.

This is not only in the best interests of children. In a digital world, it is also in the best interests of their societies, which can only benefit from children who are digitally literate, able to navigate among the myriad opportunities and risks of connectivity and chart a course to more productive futures.

The action points outlined here are by no means exhaustive, but together, they reflect a core principle that should guide policymaking and practical action in the digital sphere: *Respect and protect the child.*

1. Provide all children with affordable access to high-quality online resources

Digital access is increasingly a determinant of equal opportunity for children, enabling them to benefit from access to information, knowledge, employment opportunities, community participation and social engagement. However, children face a range of barriers to accessing the internet and, if they do manage to get online, making the best use of online resources.

***The State of the World's Children 2017* calls for the following actions to expand children's access to high-quality online resources:**

Bring down the cost of connectivity. Market strategies that foster innovation and competition among service providers can help lower the cost of connecting to the internet. Integrating fibre-optic cables into existing infrastructure can also lower the cost of expanding connectivity. And providing tax and other incentives for the telecom industry to bring down the

Opposite: Adolescent workshop participants in Timor-Leste use icons to illustrate barriers to online access.

A 17-year-old girl in the state of Minas Gerais, Brazil, holds up her phone showing the mobile application Proteja Brasil (Protect Brazil). UNICEF Brazil and partners developed the app to facilitate the reporting of violence against children and adolescents, including online violence and sexual exploitation.

cost of connectivity for disadvantaged communities and families could make a significant difference.

Invest in public-access hotspots. Public access points in schools, libraries, community centres, parks and shopping centres can dramatically increase access for unconnected children. In low-income neighbourhoods, mobile units such as buses with Wi-Fi access can similarly boost connectivity.

Promote the creation of content that is relevant to children and in their own languages. Both the public and the private sectors should work to create more locally developed and locally relevant content, especially in minority languages and targeting remote areas with low population density.

Break cultural, social and gender barriers to equal online access. Training programmes that provide girls with opportunities for safe internet use and enhance their digital skills can both build girls' confidence in using digital technology and help address family concerns. Promoting community dialogue can help dispel myths around girls' use of technology and the internet. Assistive technologies and internet platforms can enable children living with disabilities to communicate more easily, support them in learning, and help them be more independent.

Provide children on the move with access to digital devices and connectivity. Governments, aid agencies and the private sector should provide public internet access in refugee camps, immigration centres and other public spaces frequented by children on the move to help them stay in touch with families and friends. Aid agencies should also consider working with the private sector more closely to include data services and digital devices as part of their overall aid packages.

2. Protect children from harm online

The digital age has amplified existing risks to children, and created new ones. Child abuse, exploitation and trafficking online are still prevalent, not only on the Dark Web but also on mainstream digital platforms and social media. In addition, children face a range of other online risks, including cyberbullying and exposure to unsuitable materials such as pornographic or gambling sites. While most children navigate these latter risks successfully, for some the impact can be devastating and life-changing.

***The State of the World's Children 2017* calls for the following actions to protect children from existing and emerging risks online:**

Support law enforcement and child protection efforts. The private sector, and particularly technology firms, have a vital role to play in sharing digital tools, knowledge and expertise with law enforcement agencies to protect children online.

Adopt and implement the WePROTECT Global Alliance strategic framework. Designed to combat sexual exploitation online, the WePROTECT Global Alliance framework has already been adopted by 77 countries. The model sets out a coordinated response, with recommendations for action across a range of areas.

Tailor protections to reflect children's evolving capacities. Strategies to promote children's safety online should take account of a child's age and maturity. Younger children are likely to need a great deal of support and guidance from parents, teachers and other trusted adults. But older children are likely to have greater agency and a desire to sometimes take risks. Within reason, such risk-taking is necessary for children to learn how to adapt and to develop resilience.

Support the people who can support children. Evidence-based programmes and policies can guide us to develop strategies for parents and other caregivers to develop the skills they need to positively mediate – rather than simply restrict – children's use of ICTs. In addition, peer mentoring programmes can help children help each other more effectively.

3. Safeguard children's privacy and identities online

In a world where every digital move can be recorded and content can reach vast audiences with a single click, children face new risks to their privacy, reputation and identity. Data generated through their use of social media, for example, can be used for inappropriate advertising and marketing, profiling and surveillance. In addition, toys connected to the internet can transmit the thoughts and feelings of even very young children to toy manufacturers and, potentially, other adults.

***The State of the World's Children 2017* calls for the following actions to protect children's privacy and identities:**

Put safeguards in place to protect children's privacy, personal information and reputation. Governments, businesses, schools and many other institutions handle an increasing amount of data related to children that are either collected or stored online. All actors need to put in place safeguards to protect these data in accordance with international and ethical standards.

Set children's privacy settings at maximum by default. Maximum privacy protection should be the basic setting for digital tools and platforms used by children, and privacy should be included in the design of all new technologies from the outset. In addition, social media and other platform companies should write their terms and conditions and privacy policies in clear language that children can understand and provide them with easy ways to report breaches of privacy or other concerns.

Don't exploit children's personal data for commercial gain. Businesses should not seek to monetize children's personal information, such as through targeted advertising. They should develop ethical protocols and implement heightened scrutiny and protection for the full range of data concerning children.

Respect encryption for child-related and children's data. Given children's potential vulnerabilities, additional layers of protection and privacy should be used to safeguard their data. Decisions to decrypt children's data to aid law enforcement agencies investigating online crimes such as child sexual abuse and grooming should be guided by the best interests of the child.

4. Teach digital literacy to keep children informed, engaged and safe online

Today's children are digital natives, but that doesn't mean they do not require guidance and support to make the most of connectivity. Similarly, they do not automatically understand their vulnerability to online risks, or their own responsibility to be good digital citizens.

***The State of the World's Children 2017* calls for the following actions to improve digital literacy and make better use of ICTs in education…**

Teach digital literacy in schools. With children going online at ever younger ages, schools – and especially public schools – need to incorporate digital literacy programmes from the earliest grades.

Provide children with access to proven online education opportunities. The somewhat disappointing track record of ICTs in education underscores the need to pilot and test various models that really improve learning outcomes and can widen access to effective education opportunities.

Develop opportunities to learn ICT skills in non-formal education. Disadvantaged children who have slipped outside, or were never part of, formal education systems frequently have the most to gain from online learning opportunities. Providing digital access in vocational training centres may be their only chance to engage with ICTs.

Support the development of teachers' own digital skills and literacies. Teachers need to be able to develop their own skills and knowledge to support their students' use of ICTs and to help them develop an understanding of safe internet use beyond the classroom.

Support the establishment of online libraries. Online libraries, such as the Library for All, can open up a world of resources – including digital books and textbooks, videos and music – to children who would otherwise lack such access.

…and these actions to teach children about keeping themselves safe online and respecting other users:

Understand the risks of content creation and sharing. Children need to be taught that everything they post online – from social media comments to videos – can no longer be considered private. Equally, children need to be made aware that self-generated content, such as sharing sexually explicit images, opens them up to the risk of extortion and may well end up being exchanged by strangers online.

Learn how to protect privacy and personal data online. Children need to be taught how to control their privacy settings to protect their personal information – and understand the danger that if such data are made public it may lead to identity theft and data mining.

Strengthen the teaching of online tolerance and empathy. Children need to be helped to understand the ways in which communicating online – with its lack of verbal and facial clues to meaning and its potential for anonymity – is different from traditional communication. Socio-emotional learning and the teaching of empathy can develop children's online resilience and help diminish online abuse and hateful language.

Be good digital role models for children. It's not just children who are fascinated by digital technologies. Parents and other adults need to offer children models of responsible and respectful use of ICTs.

5. Leverage the power of the private sector to advance ethical standards and practices that protect and benefit children online

The private sector has been a key driver of the digital revolution. As providers of internet access, producers and providers of content and other digital goods, and purveyors of online goods and services, businesses are now increasingly integrated into children's lives. As gatekeepers controlling the flow of information across the networks, they also have access to vast amounts of children's information and data. These roles provide businesses with considerable power and influence – and with these come heightened responsibilities.

***The State of the World's Children 2017* calls for the following actions to advance ethical business practices that protect and benefit children online:**

Prevent networks and services from disseminating child-abuse material. Technology and internet companies should take steps to prevent their networks and services from being used by offenders to collect and distribute child sexual abuse images. Continuously monitoring the greatest threats to children, and working with law enforcement and other stakeholders to find innovative solutions to online criminal activities, can help keep children safer online and off.

Promote non-discriminatory access. Companies can do more to provide children, particularly those in underserved areas, with access to the internet. They should also uphold shared principles such as net neutrality, especially when these enable children to access a wide variety of sources and information.

Develop ethical standards for businesses and technologies. Businesses should work with policymakers and child rights advocates to develop minimum ethical standards for their services, and embrace the principle of 'safety by design', incorporating safety, privacy and security features into their products.

Offer parents the tools to create an age-appropriate online environment. Businesses should offer parents a fuller range of easy-to-use tools – such as password protection, block/allow lists, age verification and filtering – that will allow them to create a safe online space for their children, especially younger children. Businesses should commit to constant monitoring and evaluation of these tools.

Participants gather at *The State of the World's Children 2017* adolescent workshop in Malaysia, one of 26 countries where such sessions were held to add youth perspectives to the report.

6. Put children at the centre of digital policy

Despite estimates that children account for one third of internet users, current international and national internet policies fail to take sufficient account of children's distinctive needs and rights. Policies related to cybersecurity, artificial intelligence and machine learning, net neutrality and internet openness look first and foremost at the adult user. On the other hand, broader national policies that deal with children's rights and welfare, health and education have yet to universally embrace the power of digital technologies to help meet sectoral goals.

The State of the World's Children 2017 **calls for the following actions to put children's rights, views and well-being at the centre of digital policy:**

- **Give children and young people a voice in the development of digital policies that affect their lives.** Children's and young people's distinctive needs, experiences and perspectives should inform digital policy development, and policymakers should engage with institutions and organizations that promote children's rights and serve the needs of disadvantaged children, and children themselves, to deepen their understanding of these issues. More broadly, government and civil society should encourage children to use digital platforms to share their views with policymakers.

- **Track disparities in, and barriers to, access.** To track the impact of internet access on equity and opportunity, it is vital to invest in the collection of data on children's connectivity. Data should be disaggregated by wealth, geography, gender, age and other factors to spotlight disparities in access and opportunity and to target programmes and monitor progress. Evidence should be used to guide policymaking, monitor and evaluate the impact of government policies and strategies, and support the international sharing of best practices.

- **Integrate child- and gender-specific issues into national policies and strategies.** The legitimate needs and concerns of children should be integrated in all policies concerning ICTs and other emerging technologies such as artificial intelligence. Policies should be guided by international standards and should seek to safeguard children's rights and guard against discrimination and the restriction of children's freedoms.

Given the chance – and provided with the skills – children will make the most of connectivity. Millions of children around the world are already using the internet to learn, socialize and prepare themselves to take their place as adults in the workplace – and to make their mark upon the world.

They are eager for that chance – and they deserve it. It is up to all of us to see that every one of them gets it.

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Wherever he lives.
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