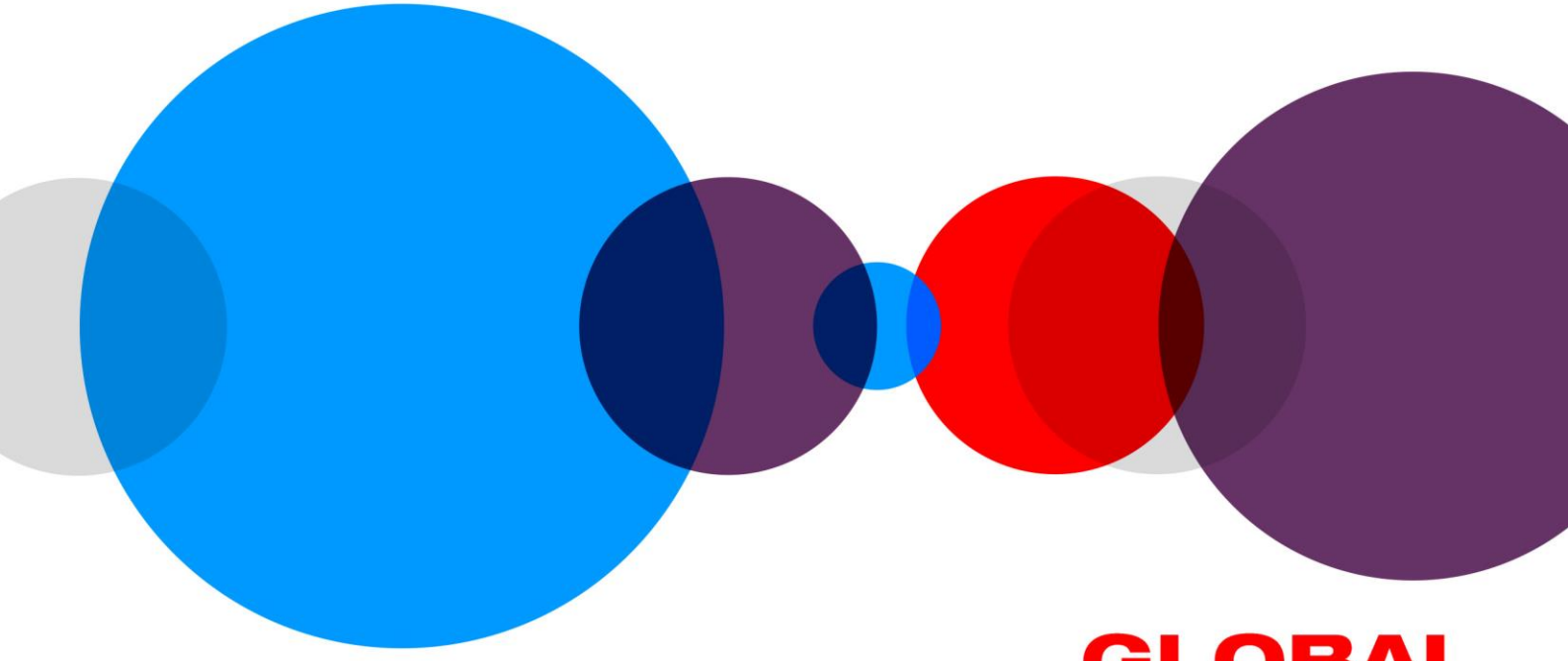
METHOD GUIDE 1

A framework for researching Global Kids Online

Understanding children's well-being and rights in the digital age



Sonia Livingstone
London School of Economics and Political Science, UK

November 2016

GLOBAL KIDS ONLINE

www.globalkidsonline.net

Table of Contents

GLOBAL KIDS ONLINE

Global Kids Online is an international research project that aims to contribute to gathering rigorous cross-national evidence on children's online risks, opportunities and rights by creating a global network of researchers and experts and by developing a toolkit as a flexible new resource for researchers around the world.

The aim is to gain a deeper understanding of children's digital experiences that is attuned to their individual and contextual diversities and sensitive to cross-national differences, similarities, and specificities. The project was funded by UNICEF and WePROTECT Global Alliance and jointly coordinated by researchers at the London School of Economics and Political Science (LSE), the UNICEF Office of Research-Innocenti, and the EU Kids Online network.

The preferred citation for this report is:

Livingstone, S. (2016) *A framework for researching Global Kids Online: Understanding children's well-being and rights in the digital age.* London: Global Kids Online. Available from: www.globalkidsonline.net/framework

You can find out more about the author of the report here: www.globalkidsonline.net/livingstone

ABSTRACT

This guide introduces the Global Kids Online research framework. It is recommended that this guide is read carefully to understand the aims, structure and contribution of the Global Kids Online project, toolkit, and emerging findings.

The guide begins by identifying the global research challenge of researching children's internet and mobile use as more children go online around the world. A review of available statistics and research literature shows that the evidence based to date is uneven, with many gaps that urgently need to be filled. This is vital if stakeholders are to base their policy and practice on robust evidence regarding the online risks and opportunities as well as outcomes for children's well-being and rights.

The guide highlights the overarching research questions and defines the main terms used throughout Global Kids Online. It then provides a step-by-step rationale for the Global Kids Online model, showing how individual, social and country levels of explanation all contribute to analysing and measuring the influences on children's rights in the digital age. This effort poses a number of challenges for researchers, and these are identified and best practice solutions suggested.

KEY ISSUES

The fast-changing digital environment

Digital media environments increasingly mediate a host of activities and experiences important to children's cognitive, emotional and social well-being and, thereby, their rights to provision, protection, and participation. This report provides a guide to the Global Kids Online research framework. It begins by introducing the research context, key issues and findings in the literature. It then discusses the research questions and the model that underpins the research toolkit. It ends with a glossary of the main terms used.

Throughout human history, children's rights to protection, provision and participation have largely depended on what takes place through face-to-face communication with and around children in the same physical space. But now many of the same activities and experiences occur via online or mobile communication and they can reach children across vast distances. For sure, the twentieth century saw some activities and experiences mediated by audio-visual technologies and telephony, while print media have a much longer history, all raising questions about children's well-being and rights regarding mass media and media literacy. But the internet is transforming the scale, convenience, speed and cost of mediated communication in the twenty-first century, notwithstanding the strong continuities over decades or even centuries in the crucial dimensions of children's lives – family, school, community, friends, values, and difficulties.

> **"Digital media environments increasingly mediate a host of activities and experiences important to children's cognitive, emotional and social well-being."**

To examine common-sense view that 'everything' is changing – or getting worse – in the so-called 'digital age' and to underpin the development of informed, balanced and proportionate policy and practice to advance children's rights, a robust evidence base is vital. Specifically, research is needed to examine how children engage with the internet and, even more importantly, how they engage with the world through their use of the internet. In other words, we need to understand children's relationship with the internet and how this varies in and connects across contexts, and we need to understand how children's relations with their social worlds are increasingly dependent on and mediated by the internet.

As technology continues to be developed and distributed in innovative ways, social practices among children and families adjust creatively around them. So do institutional practices in schools, workplaces and communities. In parallel, academic theories, research methods and policy initiatives ranging from local to international levels all try to keep up. New phenomena call for attention, new 'generations' of young internet users and new cohorts of parents await study, and innovative methods (Barbovschi et al., 2013) are emerging to meet the challenges of analysing the fast-changing digital environment (Hasebrink, 2014).

Recent history shows that gaining internet access has often preceded an informed understanding of empowered yet safe use of digital technologies. Children and young people have often been the pioneers, heralded somewhat problematically as the 'digital natives' (Helsper & Eynon, 2010), but more realistically serving as the 'canaries in the coal mine' of the digital age. The risks and opportunities faced by children have stimulated the development of legislation, regulation and resources designed to support their well-being and rights in a digital age (Staksrud, 2013). Only a global evidence-base can securely guide future efforts at all levels from international governance, business and rights-based organisations down to individual parents, teachers and children themselves.

The global research challenge

Children's internet use is an increasingly global phenomenon; already widespread in high and many middle income countries and spreading fast through low-income countries (ITU, 2013). As the World Bank (2016) starkly observed, 'Among the poorest 20 per cent of households [in the world], nearly 7 out of 10 have a mobile phone. The poorest households are

more likely to have access to mobile phones than to toilets or clean water.' Meanwhile in many high income countries, children are growing up with multiple digital devices in their homes, including for their personal use. They enjoy the commonplace use of computers or tablets at school, and take it for granted that the internet will provide their first port of call for information, learning, games or communication with distant friends (Cortesi & Glasser, 2015). While yet to address the associated risks and opportunities already significant in children's lives, policy-makers must also anticipate a further set of socio-technological innovations including 'the internet of things', 'big data,' 'wearables', 'smart' homes and cities, and more.

"Research on children's experiences of internet use (and its consequences for their well-being and rights) is important for policies relating to children in particular and for welfare, education, economy and society in general."

Despite the significance of these developments for many dimensions of children's lives, in most countries we lack robust and representative statistics on internet use (even on such basics as how many children have internet access). Yet children hardly represent a marginal fraction of the population. Those aged from birth to 17 years old constitute up to 4 in 10 of the population in the least developed countries, and 3 in 10 of the global population (see Table 1). Nor are they a marginal fraction of internet users. Although it is not exactly known how many children in most countries are already internet users – which is why more research is urgently needed – it has been estimated that children constitute around one-third of the world's internet users (Livingstone, Carr & Byrne, 2015). This estimate recognises that, based on available data, children generally go online in roughly the same proportion as the adults in any particular country or locale (albeit that fewer very young children are online and more teenagers than adults are generally online; ITU, 2014).

Research on children's experiences of internet use (and its consequences for their well-being and rights) is important for policies relating to children in particular and for welfare, education, economy and society in general. Such research has so far been pursued more in developed countries, with their already high proportion of internet users, than in less developed countries (Table 1). But many more people live in the global south – this includes two thirds of the world's nearly 3 billion internet users as well as most of the future growth in internet users. So it is time for the research and policy agenda to expand and rethink its premises to become truly global.[1]

While Global Kids Online focuses on the nature and consequences of internet use, the changing situation for non-users is also important. As society increasingly embeds digital networks and services into its fundamental infrastructure, the consequences of the digital environment are becoming ubiquitous as powerful institutions and processes adjust to and harness the potential of global digital networks, reshaping their policies and practices in ways that also affect those who do not or cannot access the internet (Lievrouw & Livingstone, 2006). As more relatively wealthy people go online, it appears that societal infrastructure adjusts, thereby marginalising or excluding non-users (who are, generally, already relatively disadvantaged; LSE Enterprise, 2013). This in turn has consequences for children's well-being in all parts of the world (OECD, 2011a), as well as for child rights and social justice globally.

1 For this reason, Global Kids Online (GKO) has been established as an international research collaboration between the London School of Economics and Political Science, UNICEF Office of Research-Innocenti and the EU Kids Online network, funded by WeProtect. It has developed a global research toolkit for researchers around the world, building on the one developed by EU Kids Online, and tested the toolkit in countries on four continents to learn from their experiences and revise the toolkit. The toolkit is publicly available as a flexible new resource for researchers and research users as they seek to gather evidence on children's online experiences across diverse social contexts so as to understand the consequences for their well-being. Such evidence can guide recommendations for policy and practice to advance children's rights in the digital age.

Table 1: Global population figure estimates by age, 2015 (in 000s)[2] and percentage of individuals using the internet[3]

Age	Global	More Developed	Less (including least) developed	Least developed
0–4	642,161	69,065	573,096	126,597
5–10	726,250	79,943	646,307	135,023
11–17	834,777	98,909	735,869	136,511
Total children 0–17	2,203,188	247,916	1,955,272	398,131
Total population	7,324,782	1,259,588	6,065,192	940,125
Children as % of total population	30.07	19.68	32.23	42.35
Internet users (all ages) as % of total population	44	82	35	10

The emerging research agenda

Two overarching research questions guide the Global Kids Online project:

- When and how does use of the internet (and associated online, digital and networked technologies) contribute positively to children's lives, providing opportunities to benefit in diverse ways that contribute to their well-being?
- When and how is use of the internet (and associated online, digital and networked technologies) problematic in children's lives – amplifying the risk of harms that may undermine their well-being?

The focus here is on uses of the internet by individuals and institutions, rather than on the internet's 'impact' on children's lives. This signals an effort to avoid a technologically determinist approach that sees technology as somehow external to society, obscuring the ways in which societies invent, build, govern and make use of the technologies that, as part of a complex dynamic, have consequences for society.

> **"While Global Kids Online focuses on the nature and consequences of internet use, the changing situation for non-users is also important."**

The focus is also on children's well-being, despite the fact that the term 'well-being' is contested both as a goal and in terms of measurement. Our preference for it here is that it encompasses all the outcomes –

2 Source: UN Department of Economic and Social Affairs (n.d.), Data represent 2015 population estimates at medium variant.
3 Source: ITU (2015). Note that ITU regional categories differ slightly from the UN's, being: Developed, Developing, Least Developed. Percentages have been rounded to whole numbers.

positive and negative – that matter for children. This broad focus on well-being is helpful precisely for its inclusiveness: it invites researchers and policy makers to consider all the possible ways in which children's internet use might impact on their well-being. We can further distinguish questions of well-being (involving empirical evidence about outcomes for children) from normative questions of children's rights (involving judgments of what the outcomes for children could and should be, and whether their rights are being supported or infringed, in the digital age).

While well-being and rights are the outcomes that we prioritise in Global Kids Online, achieving these outcomes depends on the opportunities and risks they encounter. These too are significantly linked, even though opportunities and risks are often addressed separately by different groups of researchers and by different stakeholder and policy communities. On the one hand, it is important to document the array of opportunities and risks that influence children's well-being. On the other hand, making a clear distinction between opportunities and outcomes, especially in the digital age, is problematic insofar as both the design and use of the internet and mobile technologies blur this distinction. Empirical findings show that more online opportunities are associated with more online risks, and vice versa (Livingstone & Helsper, 2010; Livingstone, Haddon & Görzig, 2012. Most simply, the more one does online, the more risks one will encounter – as with riding a bicycle, for instance – and so, possibly, the more resilient one may become. Also, online situations can be ambiguous – a child may seek the opportunity of making new friends online while to their parents such an activity risks inappropriate influences or even a meeting with an abusive stranger (Livingstone, 2013).

Separating policies and practices for online risks and opportunities is also problematic for policy and practice, because efforts to minimise risks can have the consequence, unintended or not, of reducing opportunities. For example, many schools ban the use of mobile phones because they can be distracting or enable bullying, even though mobile phones could be used to enhance personalised learning in the classroom. Conversely, many families have acquired internet access to support their children's learning and communication only to find that this results in unwanted access to pornography and violent content.

> **"Much research finds that the problems children face in the digital age are neither new nor specific to the internet."**

To gain a holistic view of children's online experiences and their consequences, this research framework encompasses a range of online risks and opportunities, relating these to the specific conditions of internet access and use and the wider conditions of children's lives. These conditions vary considerably within and between countries and cultural contexts, shaping the outcomes of internet use for children's well-being in ways that are yet to be studied and understood. Given the many factors that shape children's lives, including differential access to and use of the internet and related digital technologies, the research framework draws on multiple research literatures from across the social sciences, as well as a range of institutional and practical knowledge from educational, welfare, health, legal and other areas of professional expertise.

An emerging research literature

In the global North there is already a considerable body of theory, evidence and expertise regarding children's online experiences. But it is important to acknowledge that this may not apply to children's experiences in the global South (Livingstone & Bulger, 2013; UNICEF, 2012; OECD, 2011b, 2012).[4] In consequence, the effort to frame and conduct research relevant to children's well-being and rights in a digital age must be a dynamic and internationally collaborative enterprise. The application of knowledge from any one time, place or culture to another must be carefully considered and critically appraised, and researchers must remain open to continual revision or

4 According to the UN, 'The term "North" refers to the more developed regions or developed countries and the term "South" refers to the less developed regions or developing countries. The more developed regions include Europe and Northern America plus Australia, New Zealand and Japan. These terms are used for statistical convenience and do not necessarily express a judgment about the stage reached by a particular country or area in the development process.' (United Nations, 2012, p.4).

even radical rethinking of their guiding assumptions and accumulating knowledge base.

It is possible that, as internet access spreads, children's experiences of risks and opportunities are becoming intensified – with greater risk of harm, and with inequalities widening in terms of who benefits from online opportunities. Research in Latin America, Africa and elsewhere, finds that the internet provides opportunities for youthful socialising, self-expression, learning and entertainment. But it also records children reporting disturbing, violent or pornographic content online, and mentioning reputational damage committed by peers or offline meetings with people they first met online (Barbosa, 2015; Beger & Sinha, 2012; Gigli & Marles, 2013).

"When children do go online at home in many medium- and low-income countries, they are less likely to have a digitally-experienced parent present."

Further research will help in assessing whether internet use results in enhancement or infringement of children's rights. However, it must also be said that much research finds that the problems children face in the digital age are neither new nor specific to the internet. For example, familiar barriers to children's take-up of digital opportunities include lack of financial resources, parental knowledge, teacher training and locally relevant material (Kleine, Hollow & Poveda, 2014). Gender inequalities long familiar offline now also affect children's online opportunities, especially in the global South (Biggs & Zambrano, 2013). Girls in Ghana, Bolivia, Indonesia and the Philippines describe feeling unsafe traveling to and using internet cafés, and also report that their families are more likely to support boys than girls in accessing mobile technology (De Pauw, 2011).

When children do go online at home in many medium- and low-income countries, they are less likely to have a digitally-experienced parent present: in Brazil, far more children live in homes where no adults use the internet, and believe themselves more capable than their parents, compared with Europe (Barbosa et al., 2013; Livingstone & Byrne, 2015).

As Livingstone & Bulger (2014) noted, informal observations from educators and NGOs tend suggest that children find workarounds or creatively re-appropriate the resources at hand to gain access, connect with others and share digital resources despite practical limitations of hardware, connectivity, electricity or data.

For example, children and young people in Kenya, being highly motivated to seek online opportunities, report using fake names for profiles, burying content in folders, or using mobile phones after their household is asleep to avoid parental oversight; they also report frequent sharing of pornography and a willingness to meet strangers in exchange for minutes on their mobile (Gigli & Marles, 2013).

However, there are also some commonalities shared by children living in different parts of the world. For example, although their report highlights some key cross-cultural differences, the Groupe Special Mobile Association's 2014 survey of 8–18–year–olds' mobile phone use finds that in Algeria, Egypt, Iraq and Saudi Arabia, just as in Europe or North America, children have increasing access to and enjoyment of a range of apps and social networking services, while their parents worry about their child's privacy and safety, especially as more children make new 'friends' online.

"It is possible that, as internet access spreads, children's experiences of risks and opportunities are becoming intensified."

We therefore suggest that there are sufficient commonalities in children's experiences across contexts to frame some shared concepts and hypotheses according to a common model and drawing on the best available cross-national research and expertise. Even where there are differences, and of course there are many, it may still be possible to research these by adapting the model and research toolkit in ways that permit meaningful comparisons across contexts. Faced with what is, at present, a highly partial, often dated or weakly-based body of evidence from researchers scattered across the world, Global Kids Online aims for a partnership approach which allows for a coordinated sharing of existing expertise combined with a necessarily distributed approach to researching diverse and distinctive

contexts. The benefits should flow in both directions, optimising support for evidence-based policy and the sharing of informed best practice locally and globally.

Mapping evidence onto a child-rights agenda

The United Nations Convention on the Rights of the Child (CRC), (1989) establishes the basic standards that apply without discrimination to all children worldwide and specifies the minimum entitlements that governments are expected to implement:

- The CRC spells out that human rights (e.g. to freedom of expression, assembly and privacy) also apply to children, a point easily overlooked.
- It calls for specific child-focused mechanisms to ensure that these rights are respected and not infringed (over and above those human rights instruments designed primarily for adults who can, for instance, bear full responsibility for their actions or seek independent redress).
- It includes rights that apply especially or only to children, such as the right to development (Article 6), play (Article 31) and the care and protection necessary for their well-being (Article 3, see also 18 and 20).

> **"How, if at all, is internet use – by children and adults, individuals and institutions – reconfiguring children's rights?"**

Although formulated in the pre-digital era, the CRC is now being debated and actively applied in relation to digital domains and activities. Working with the CRC means that we talk of children's rights in the digital age rather than specifically 'digital rights' (e.g. the 'right to remove' or 'right to be forgotten'), although the latter may be relevant to the implementation of children's fundamental rights (e.g. to privacy or expression) in the digital age. This is primarily because our concern goes far beyond children's experiences with (and rights regarding) the internet to encompass their wider rights in society, given the changing means to achieve these in the digital age. The question of responsibility for children's rights is also changing. While the CRC is addressed primarily to states, given the nature of the transnationally networked and heavily commercial internet, research on children's rights in the digital age is also relevant to international organisations, industry/business and other non-governmental bodies (Livingstone, Carr and Byrne, 2015).

How, if at all, is internet use – by children and adults, individuals and institutions – reconfiguring children's rights? The articles of the CRC include several important and overarching principles: that all decisions relating to the child should be in the best interests of the child (Article 3) so as to support their survival and development (Article 6), and that rights should be implemented without discrimination (Article 2) and with the participation of children in matters that affect them (Article 12).

> **"Even where there are differences, and of course there are many, it may still be possible to research these by adapting the model and research toolkit in ways that permit meaningful comparisons across contexts."**

Further articles are commonly grouped in terms of 3 Ps – the right to protection, to provision and to participation (e.g. Alderson, 2000). Table 2 maps these 3 Ps onto a range of topics of concern in relation to children's online experiences and well-being, showing how children's rights must be newly examined and researched in the digital age. The table also shows how empirical research on a range of internet-related topics is relevant to efforts to empower children in terms of their rights.

Table 2: Mapping child rights onto research on child well-being in the digital age

United Nations Convention on the Rights of the Child (CRC) *(articles selected and paraphrased)*	**Sources of evidence relevant to the application of the CRC to the online domain** *(indicative research topics only)*
Protection against all forms of abuse and neglect (Art. 19), including sexual exploitation and sexual abuse (Art. 34), and other forms of exploitation prejudicial to the child's welfare (Art. 36). Protection from 'material injurious to the child's well-being' (Art. 17e), 'arbitrary or unlawful interference with his or her privacy, family, or correspondence, nor to unlawful attacks on his or her honour and reputation' (Art. 16) and the right of child to preserve his or her identity (Art. 8).	• Sexual grooming, sexual exploitation and abuse • Creation and distribution of child abuse images • Online dimensions of child trafficking • New threats to privacy, dignity, identity and reputation online • Exposure to (diverse, extreme, illegal) pornography • Personal data exploitation, misuse, unwarranted sharing or tracking in digital environments • Hostility, hate, harassing and bullying content, contact and conduct online • Inappropriate information and persuasion regarding self-harm, violence, suicide, pro-anorexia, drugs
Provision to support children's rights to recreation and leisure appropriate to their age (Art. 31), an education that will support the development of their full potential (Art. 28) and prepare them 'for responsible life in a free society' (Art. 29), and to provide for 'the important function performed by the mass media' through diverse material of social and cultural benefit to the child (including minorities) to promote children's well-being (Art. 17).	• Availability and distribution of formal and informal learning resources and curricula • Wealth of accessible and specialised information • Opportunities for creativity, exploration, expression online and with digital media • Digital, critical and information skills and literacies • Digital means to counter or circumvent traditional inequalities or to address special needs • Expanded array of entertainment and leisure choices online • Access to/ representation in/ response to content relating to own culture, language and heritage
Participation: this includes the right of children to be consulted in all matters affecting them (Art. 12); also the child's right to freedom of expression (Art. 13) and to freedom of association (Art. 15).	• Take up of enhanced connections and networking opportunities • Scalable ways of consulting children about governance • User-friendly fora for child/youth voice and expression • Child-led initiatives for local and global change • Peer-to-peer connections for entertainment, learning, sharing and collaboration • Recognition of and provision for child/youth rights, responsibilities and engagement online

Case study: Children's understanding of their rights in a digital age

An international participatory project consulted 148 children aged 6–18 in July/August 2014 (Third et al., 2014). They came from 16 countries (Argentina, Australia, Brazil, Colombia, Egypt, France, Ghana, Italy, Kenya, Malaysia, Nigeria, Philippines, Thailand, Trinidad and Tobago, Turkey and United States of America) and spoke eight different languages. The research showed that children from many parts of the world are already convinced of an indelible and positive connection between rights and the internet. In sum, they believe that:

Access to the internet and mobile technologies is a basic right.

The internet and mobile technologies represent the means through which children now exercise their rights to information, education and participation.

Literacy (print, media, digital, information etc.) is fundamental to accessing and using the internet and thus to exercising rights in a digital age.

With rights come responsibilities, and children wish to be involved in the policy deliberations that affect them.

In addition to the CRC, other human-rights instruments consider children's rights on a regional basis – for instance the African Charter on the Rights and Welfare of the Child,[5] Council of Europe recommendations[6] – and internationally.[7]

5 See http://pages.au.int/acerwc/documents/african-charter-rights-and-welfare-child-acrwc

6 These include: Recommendation CM/Rec (2014) on a Guide to human rights for Internet users; Recommendation CM/Rec (2012) on participation of children and young people under the age of 18; Recommendation CM/Rec (2012) on the protection of human rights with regard to social networking services; Recommendation CM/Rec (2008) on measures to promote the respect for freedom of expression and information with regard to Internet filters.

7 Notably, the UN Optional Protocol on the sale of children, child prostitution and child pornography, and the Universal Declaration on Human Rights.

MAIN APPROACHES

Access to the internet and mobile technologies: implications for children's well-being

Global Kids Online adopts a child-centred approach to research (Christensen and James, 2008), asking first and foremost about children's experiences, circumstances and outcomes, and emphasising what can be learned by doing research with children directly. A child-centred approach begins with children themselves, recognising that their agency and experiences are shaped by their identities (for example, their age, gender or ethnicity, perhaps their personality or interests or capabilities). Their identities, in turn, are shaped by the material and/or symbolic resources available to them. This means that research should consider the full array of psychological, social and cultural factors that potentially influence children's well-being, whether positively or negatively.

To map these factors, this framework draws on the prior work of EU Kids Online, building on its model and findings as summarised in Livingstone, Mascheroni & Staksrud (2015; see also Livingstone et al., 2012). In what follows, the model is presented step by step, for clarity and explanation.

> **"Access has implications for who can go online, how they can go online and the conditions (of privacy, autonomy, skill, surveillance or risk) with which they can go online."**

Specifically, for an individual child one may hypothesise that, depending on their identity and the resources available to them, particular outcomes can be predicted – as sketched in Figure 1. These outcomes are most importantly captured by their well-being and – separately but relatedly – their rights. These are separate insofar as well-being refers to an empirical state of affairs while rights refer to a normative ideal. But understanding the relation between digital technology use and a child's well-being, stakeholders are empowered to advocate for interventions to support (or remove infringements of) their rights. In the model, the outcomes will in turn influence a child's identity and resources: thus the top arrow in the model is bidirectional, indicating a dynamic, transactional relation between a child's circumstances and outcomes over time.

In the digital age, a new route has emerged to underpin or undermine children's well-being. Through various and fast-changing techno-social means, many children have gained access to an online domain where they engage in a range of activities. It is worth pausing on the question of access here, as the nature and quality of children's access includes many subtleties (such as access of which parents are unaware, or technologies which are out of date or dysfunctional). At stake is the common sense that the long-standing dynamic between identity and well-being is being newly mediated in ways that must be understood. This leads to the research questions asked at the outset – does use of the internet alter outcomes for children, whether by mediating opportunities or risks, and if so, how? Note that it is possible to answer these questions in the negative: in other words, even though children may embrace digital media and spend considerable amounts of time online, this may in practice result in no appreciable benefit or harm to their overall well-being.

> **"The nature and quality of children's access includes many subtleties."**

In the interests of parsimony, and to avoid moral panics about technological change, if the answer is to be affirmative, the evidence must be strong. In other words, the research question is, at heart, whether the 'online' box in the centre of the model is really needed: does it change the ways in which children's identity and resources affect their well-being and rights in significant ways? We can put the question another way also: is there really a difference between online and offline experiences of, for example, learning or gaming or bullying? Thus far the jury is still out over whether online educational resources really alter children's learning processes and outcomes, beyond the important ways in which they extend opportunities to

learn across time and space, often fairly cheaply (Selwyn, 2013). Equally the jury is still out over whether cyber-bullying is really distinct from (and worse than) face-to-face bullying offline. Although it seems compelling to argue that cyber-bullying extends the harm across time and space, considerably amplifying the number of witnesses, bystanders and potential new perpetrators, evidence also suggests that it is the combination of bullying and cyber-bullying that children find most upsetting (Sabella, Patchin and Hinduja, 2013).

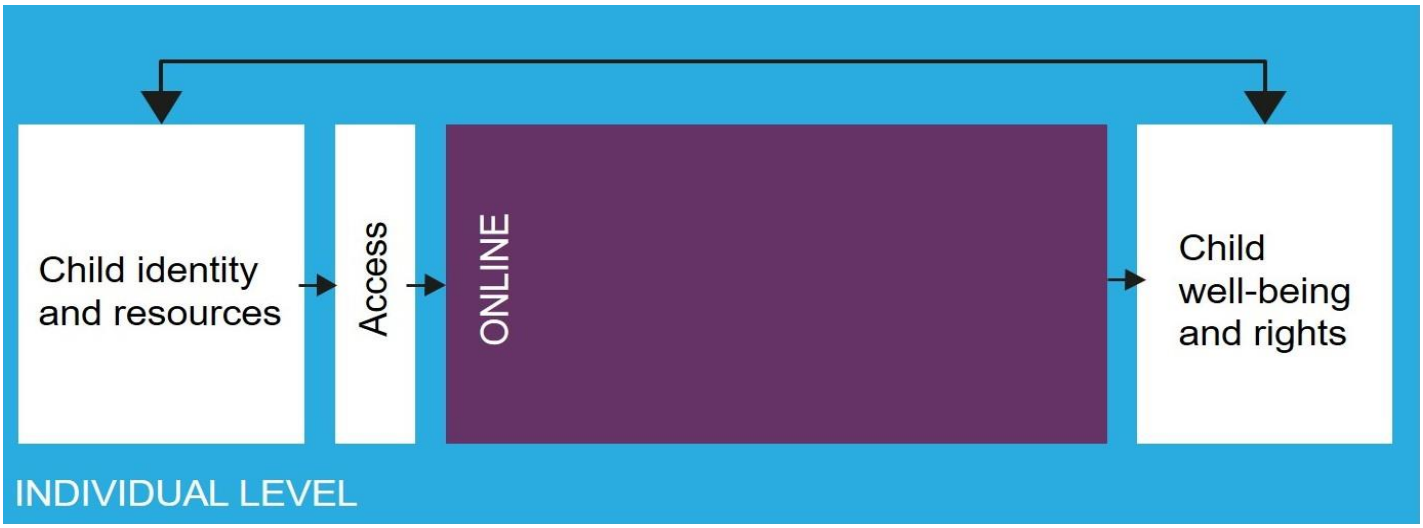
To ask what difference the online, or the digital, makes to children's well-being, the nature of access must be considered. For access has implications for who can go online, how they can go online and the conditions (of privacy, autonomy, skill, surveillance or risk) with which they can go online. Initially, questions of access were conceived primarily in terms of inequality – the so-called 'digital divide' debate; but as internet access spreads, it is increasingly recognised that access is itself a complex phenomenon (Frau-Meigs & Hibbard, 2016). Many people, still, lack any kind of access whatsoever. Many others have insufficient or unreliable access, whether because of limited access to the hardware, software or connectivity (World Bank, 2016). This, in turn, may be due to financial, political, social or cultural factors, all of which must be addressed by research, policy and practice if social and digital exclusion are to be overcome.

Questions of access, inequality and inclusion have long preoccupied research and policy in the global North, and are now proving challenging in the global South. The nature of these challenges cannot be generalised from North to South or from the last decades to the present and coming decades. Notably, while internet access is frequently centred on the home (and to a lesser degree the school) in the global North, unsupervised public access in cybercafés or other community settings is common across the global South, and these are often popular among teenagers with limited mobile and home internet access (for instance, in Mexico and Peru; Garcia de Diego, 2012).

"A child-centred approach begins with children themselves, recognising that their agency and experiences are shaped by their identities."

Also important is the fact that mobile phones are, for children in the global South, the most likely way that they will first gain access to the internet, and that it is common to share mobile phones in developing countries (Barbosa et al., 2014; Groupe Special Mobile Association, 2014). This contrasts with the North, where first access has generally been via a computer, and where the trend is towards personal ownership of connected devices. Now, perhaps, the tendency everywhere is for 'mobile first', but caution is still needed when making generalisations, as the conditions of access and use vary widely (World Bank, 2016).

Figure 1: Individual influences on child well-being and rights in the digital age



Being online: how experiences shape children's well-being

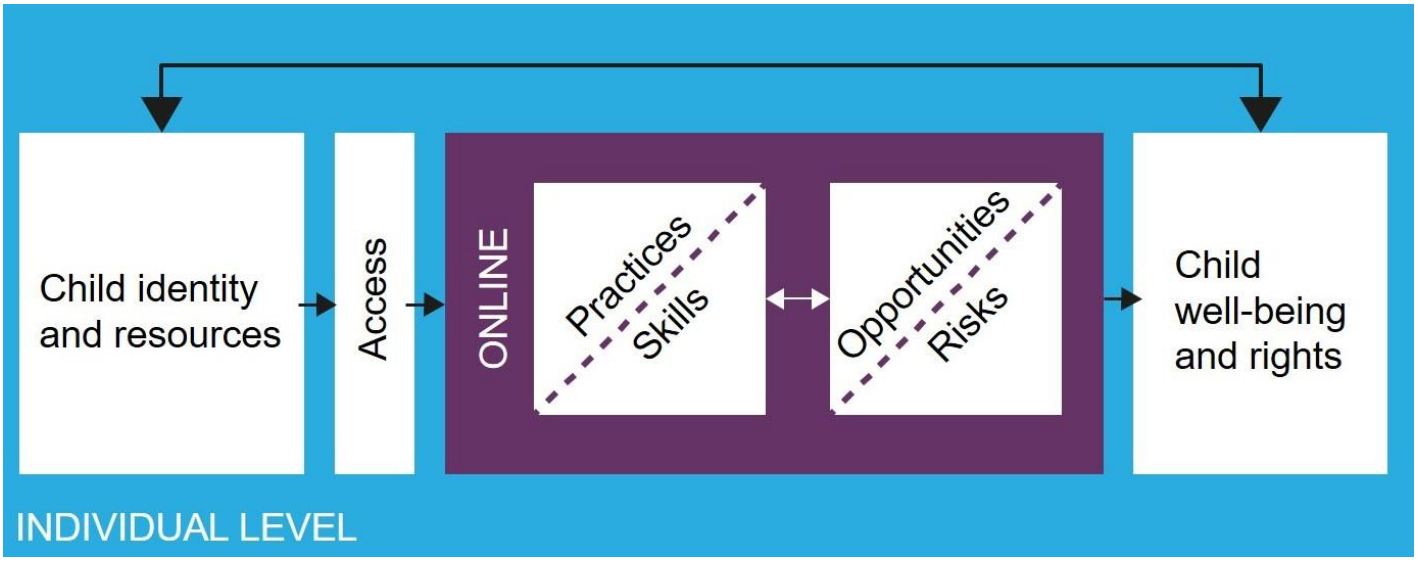
Increasingly, researchers are exploring what happens within the box marked 'online' (Livingstone, Haddon & Görzig, 2012). How should online activities be conceived of and measured? The emerging consensus is that what matters is a combination of practices (what users actually do) and skills (what users know how to do). Both practices and skills are multi-dimensional, and both are shaped by a wide range of factors.[8]

Practices and skills can more easily be separated in principle than in practice. For example, if a child edits a video and uploads it to YouTube, this represents a set of digital practices, but it also requires – and thus provides evidence for – a set of digital skills. Surveys reveal that they are positively correlated – more practices build skills, more skills encourage practices (van Deursen, Helsper & Eynon, 2015). But the correlation is not perfect: one may undertake practices for which one lacks the skills; and one may know how to do things but not actually do them in practice. So the distinction remains, even though in everyday life they are strongly connected. In Figure 2, this interrelation is represented by a diagonal dotted line dividing but linking practices and skills.

What about the nature of online experiences? A straightforward starting place is to distinguish online risks (whatever users encounter that poses a possible harm) from online opportunities (whatever users encounter that poses a possible benefit). EU Kids Online classified the online opportunities and risks afforded to children by the internet and associated mobile and digital technologies as shown in Table 3. This recognised the main (but not all) types of opportunity and risk on the public and policy agenda.

It also took a child-centred approach, recognising that children are positioned in different ways in relation to the internet – as recipient, as participant, and as actor. The role of the child – as recipient, participant or actor – is not always easy to determine, but the idea is to recognise how their agency online depends in part on the actions of others – individuals and institutions, children and adults, people who are known to them or unknown. For some online experiences, their role is primarily as the recipient of content produced by

Figure 2: Online processes that mediate child well-being and rights in the digital age



8 We use the term 'practices' rather than 'use' for the latter seems to imply how much time children spend online whereas the notion of practices brings to the fore also how they use it – the nature of their communication or privacy or coping practices, for instance. Related to this, we do not here enter the lively debate over digital skills versus media literacy versus information competence and so on; rather, we intend to include all such forms of knowledge insofar as they are relevant to the inquiry.

others, often mass-produced by public or private organisations. For other experiences, children participate in an online domain largely constructed by the wider adult society. Last, children can play an even more active role in co-constructing their online experiences.

"What about the nature of online experiences? A straightforward starting place is to distinguish online risks (whatever users encounter that poses a possible harm) from online opportunities (whatever users encounter that poses a possible benefit)."

While the issues shown in the cells of Table 3 have been variously researched and reviewed (for example, see Cortesi & Gasser, 2015; Livingstone, Carr & Byrne, 2015, OECD, 2011b, 2012; Raftree & Bachan, 2013; UNICEF 2012), the point here is to sketch the range of public and policy priorities and, therefore, the range of research questions. The classification will never be comprehensive, and it should be assumed that further opportunities and risks will appear the policy and research agenda as ever more countries and contexts gain everyday internet access. But it does capture an important agenda of concerns.

However, as already noted, research shows a positive correlation between online opportunities and risks. For policy makers, this means that efforts to enhance children's online opportunities may bring increased risk, and that efforts to minimise risk may depress children's opportunities to benefit from internet use. This correlation can be explained in several ways:

- Partly, it reflects the porous boundary between opportunities and risks. For example, seeing sexual content online may mean gaining valuable information about sexual experience or it may mean being exposed to unwanted pornography; the difference partly lies in the nature of the online content encountered, and partly in the child's own maturity and needs – within limits, what shocks one child may help another.
- Then, one should consider that children often seek or enjoy transgression of various kinds, pushing boundaries in order to develop their own perspective and strengthen their own capacity to cope and build resilience. For instance, looking for new friends online may bring benefits (i.e. this activity represents an opportunity), or it may lead a child to be contacted by a potential abuser (i.e. it represents a risk), or children may play with this uncertainty by experimenting with anonymous contacts on the edge of their social circle for fun and to test themselves and their peers (Smahel & Wright, 2014).
- It can therefore be helpful to conceive of online 'risky opportunities' in addition to the seemingly-clear opposition between risks and opportunities (Livingstone, 2008). This relationship is indicated through a dotted diagonal line in Figure 2 – the diagonal to refer to the positive association between opportunities and risks, and the dotted line to refer to the porous boundary between them.

Table 3: Mapping online opportunities and risks, by child role

		Content: Child as recipient	Contact: Child as participant	Conduct: Child as actor
OPPORTUNITIES	**Education learning and digital literacy**	Educational resources	Contact with others who share one's interests	**Self-initiated or collaborative learning**
	Participation and civic engagement	Global information	Exchange among interest groups	**Concrete forms of civic engagement**
	Creativity and self-expression	Diversity of resources	Being invited/ inspired to create or participate	**User-generated content creation**
	Identity and social connection	Advice (personal/ health/sexual etc.)	Social networking, shared experiences with others	**Expression of identity**
RISKS	**Commercial**	Advertising, spam, sponsorship	Tracking/ harvesting personal info	**Gambling, illegal downloads, hacking**
	Aggressive	Violent/ gruesome/ hateful content	Being bullied, harassed or stalked	**Bullying or harassing another**
	Sexual	Pornographic/harmful sexual content	Meeting strangers, being groomed	**Creating/ uploading pornographic material**
	Values	**Racist, biased info/ advice (e.g. drugs)**	**Self-harm, unwelcome persuasion**	**Providing advice e.g. suicide/ pro-anorexia**

Source: Staksrud et al. (2009)

From the individual to the social level

Beyond focusing on the individual child, it is also vital to encompass the social dimensions of children's lives. The individual level of analysis depicted in Figure 2 can, therefore, be embedded within a wider frame (see Livingstone, Mascheroni & Staksrud, 2015). Thus the linear model – moving from inputs on the left through to outputs on the right – is embedded within a model that shows the social influences surrounding the child (see Bronfenbrenner's (1979) ecological approach to childhood, now extended to include the digital ecology; boyd, 2014). Again without pretending to be comprehensive in listing all social influences, Figure 3 identifies key social agents in children's lives:

- *Family,* including parents and carers, as well as the siblings, grandparents and other relatives who mediate children's socialisation in relation to the internet, whether or not they share a home (or homes) with the child.
- *Educators,* including school but also out-of-school, informal and other forms of learning that are also important to understanding children's relation to the internet.
- *Peers*, including (but going beyond) friends, have long been shown mediate children's online experiences, including socialisation to (sub)cultures, perceptions of risks and opportunities, ways of coping with online risks and developing resilience.
- By *community*, we recognise the often-extensive though largely local social networks with which the child interacts beyond family and school. This is likely to vary considerably across countries and contexts – bringing in questions of religious norms and sanctions, local customs, key authority figures in children's lives other than parents and teachers, and a range of informal structures for participation and belonging.
- *Digital ecology* refers to all the ways that the specific assemblage of digital devices, platforms and services used by children shape the ways they engage with the internet (and, through the internet, with the wider world). Compare the experience of a multi-player gaming community with an anonymous chat forum with a strongly moderated educational platform. Or consider the difference in online opportunities for a child who speaks the

majority language compared to one who speaks the minority language – the digital ecology enjoyed by the former is likely to be much richer than for the latter. Different digital ecologies have their own character – for instance, commercially or publicly funded, local or international, safe or transgressive.

"Research with children – focused on children's own voices and experiences, as revealed through methods such as surveys and interviews – are less common, especially in less well resourced countries and contexts

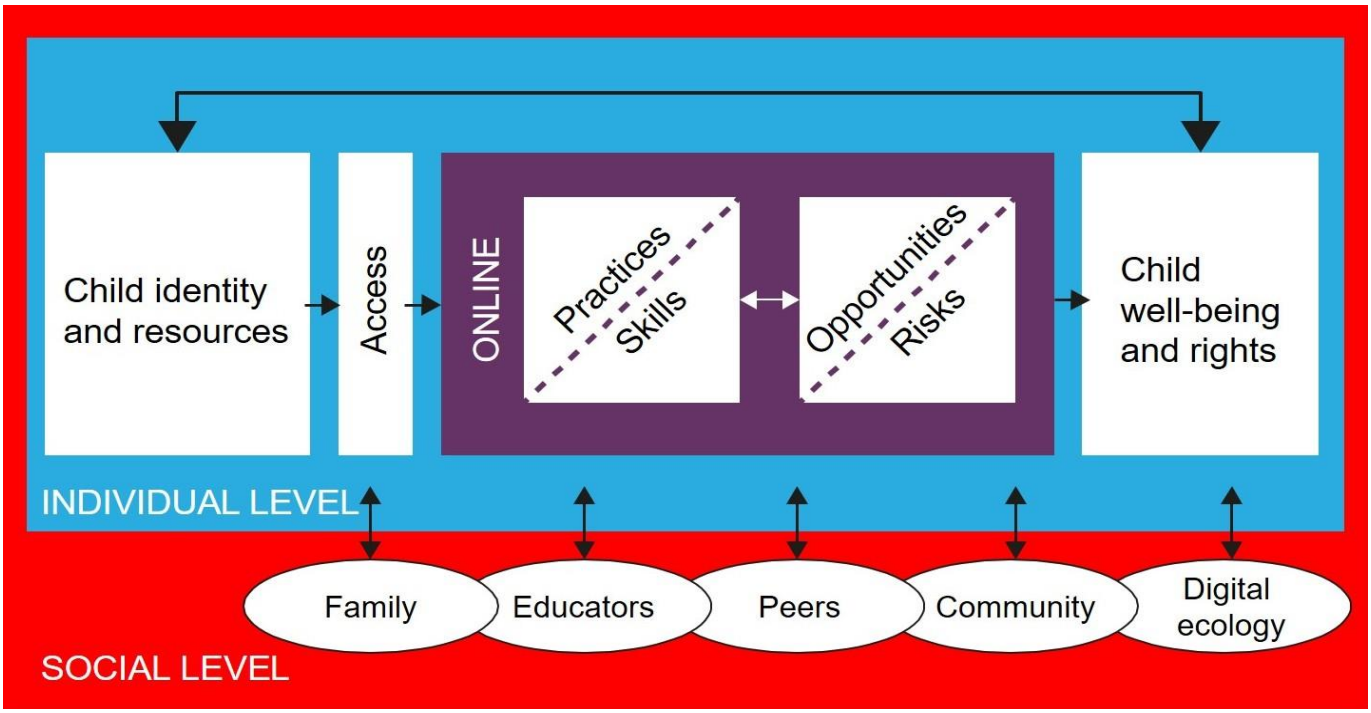
Figure 3 thus adds more elements to the model. The arrows are deliberately vague in their point of impact, although research is beginning to show just how, for instance, parental mediation of children's internet use supports their online opportunities or mitigates the risks (Garmendia et al., 2012). As indicated by the bidirectional arrows, our intention is to recognise that children are not only influenced by social mediators but also they themselves influence their family, peers, educational relationships, their community and their digital ecologies

Looking wider: comparing countries worldwide

For 'global' research, and to inform stakeholders who operate at national or even international level, we can also consider countries as the unit of analysis. This permits the research framework to encompass the larger structural factors that influence children's experiences – for instance, the technological infrastructure that supports their communities and school, or the religious and cultural values that inform their societies. Such structural factors are best examined through data collected using the country as unit of analysis. [9]

While there is no obvious way to limit relevant country-level factors in advance, the last iteration in building the model identifies factors important in shaping children's online experiences and, therefore, their well-being and rights in the digital age – see Figure 4. Thus four groups of 'country-level' factors are added, and a host of hypotheses can usefully be formulated for how

Figure 3: Individual and social influences on child well-being and rights in the digital age



Source: Livingstone, Mascheroni and Staksrud (2015)

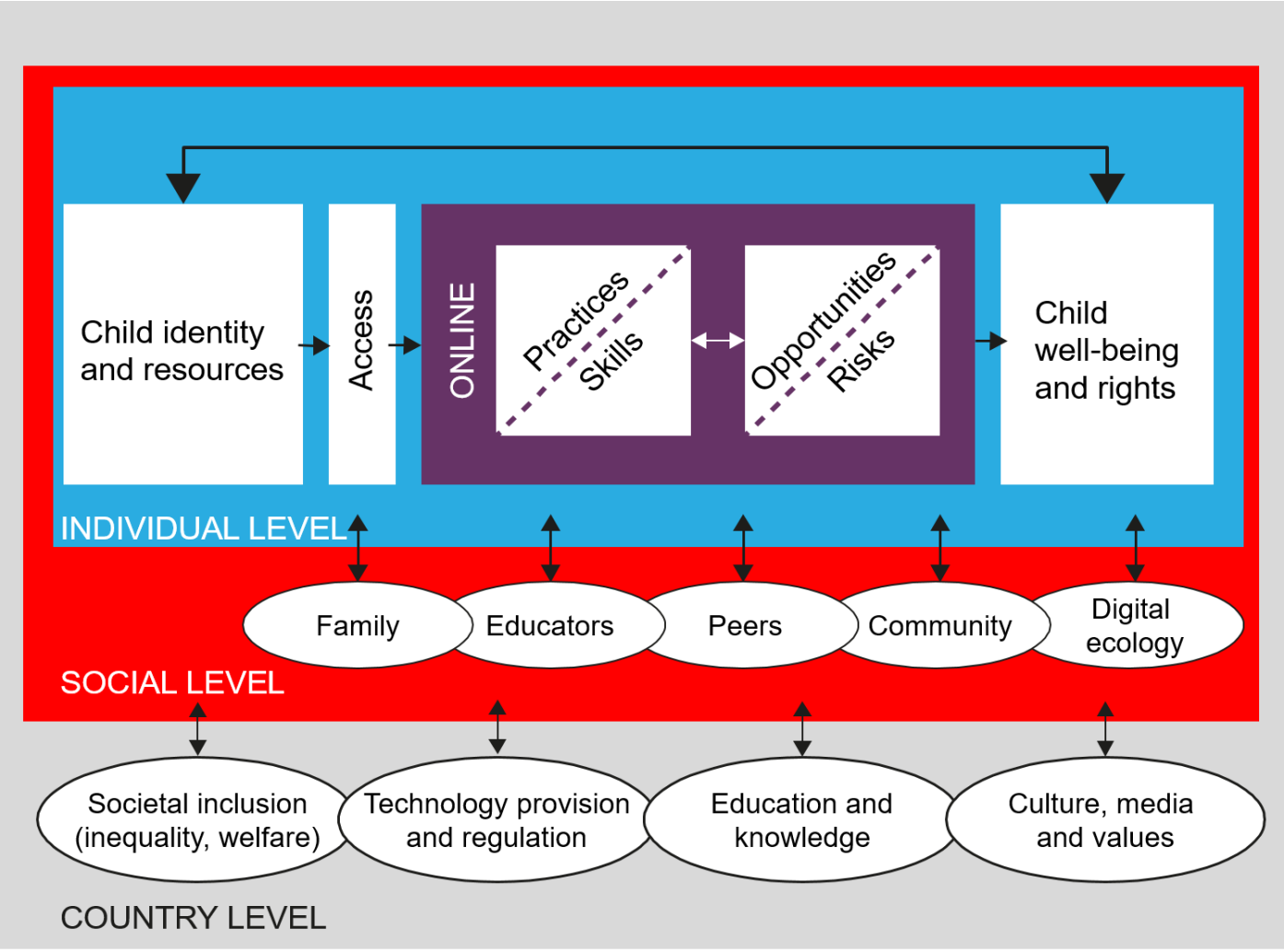
9 For instance, the European Social Survey, the World Values Survey, or data collected by the International Telecommunications Union (ITU) or OECD.

they are likely to influence both the social and the individual-level factors:

- *Societal inclusion* (inequality and welfare) emphasises inclusion or exclusion based on economics, ethnicity, urban concentration, linguistic differences, systematic racism/exclusion of minority groups or marginalised groups, or other structurally differentiating factors.
- *Technological provision and regulation* are heavily linked in practice: technological infrastructures are established within particular regulatory or legislative frameworks, regulation evolves partly in response to technological innovation, etc.
- At the country level, *structures of education and knowledge* include a range of institutional provision for education, including not only schools and colleges but also libraries and museums, as well as the private/commercial services that provide access to knowledge.
- The grouping of *culture, media and values* acknowledges that culture and values cannot easily be separated from media systems which, in combination, shape the system of meanings and social norms within a society.

To highlight the country level is not by any means to assume differences across countries or similarity and homogeneity within countries. Rather it is to generate findings that can give insight into the complexity of children's online experiences in a way that is amenable to action by policy-makers and practitioners (O'Neill et al., 2013). Often these have the power at country level to intervene constructively in order to improve outcomes for children, in effect by manipulating one or more of the factors that research

Figure 4: Individual, social and country influences on child well-being and rights in the digital age



Source: Livingstone, Mascheroni and Stakrud (2015)

has shown to be influential. And national stakeholders are often motivated to prioritise such interventions when they see findings presented in terms of national rankings or trends over time.

The main design of the model was originally developed by the EU Kids Online network.[10] Definition and measurement of many of the main elements, plus hypothesis-testing of the relationships depicted by the arrows were developed on data generated by 2010 survey of a 25,000 9-16 year olds in 25 European countries, and then further examined in Russia, Switzerland, Brazil and Australia (Livingstone, 2014). The findings were then re-examined and extended in seven countries in 2014 by the Net Children Go Mobile project (Mascheroni & Cuman, 2014), all this permitting further revisions of the model (Livingstone, Mascheroni & Staksrud, 2015).

Case study: Key findings from Europe

Based on an earlier version of the above model, the EU Kids Online network analysed its 25-country survey, with the following key findings. At the individual level: children's online practices, skills, opportunities and risks are all positively inter-correlated, showing that 'the more, the more' (and 'the less, the less'). The positive correlation between opportunities and risks is especially important.

At the social level: these online activities are also related to demographic variables. So, children who are older, and from more privileged homes tend to rise higher up 'the ladder of opportunities', and their greater engagement in activities online is associated with more digital skills. Thus usage, activities and digital skills operate in parallel to fuel a virtuous or a vicious circle, depending on the circumstances of the child.

However, risk may not result in harm, for risk refers to experiences that carry a probability but not a certainty of harm. For instance, a child may be exposed to online pornography and find it upsetting or funny, and it may normalise a problematic view of sexuality or be shrugged off. The factors that translate risk into harm centre on a child's vulnerability (for instance, low self-esteem, exposure to other risks, being younger). The factors that prevent risk becoming harm may indicate a child's coping ability and resilience (for instance, effective parental mediation).

At the country level: the degree of broadband penetration, and length of time that most people in a country have had internet access, are associated with higher levels of online risks, but not with a wider range of online activities among children. This suggests that policy-makers have put more effort into risk management than into optimising online opportunities.

See Livingstone et al., (2014)

"Beyond focusing on the individual child, it is also vital to encompass the social dimensions of children's lives."

While the model includes explicit representation of the main factors and interrelationships important to the research framework for Global Kids Online, it cannot include every factor that may be important to children's rights in the digital age, nor can it determine the exact meaning of the factors identified across all contexts. Much remains to be specified, and researched, in diverse contexts. Especially important is that the model implies that generalisations about 'the effects of the internet on children' are near-impossible and, arguably, undesirable. Rather, the research effort should be directed towards understanding which factors make a difference to which outcomes, recognising that these factors usually act in combination and that outcomes are thereby differentiated for different children and circumstances.

The model concentrates on factors that can guide research conducted directly with children, for this is the

10 To develop the academic and policy agendas for researching children's online risks and opportunities, the EC's Safer Internet Programme (subsequently renamed Better Internet for Kids) funded the EU Kids Online network from 2006 to 2014. This collaboration among some 150 researchers in 33 countries across Europe brought together diverse disciplines, methodological expertise and research specialisms (for an overview, see Livingstone et al., 2014; for its diverse research and policy outputs, see www.eukidsonline.net).

main contribution of the Global Kids Online research toolkit to future research. Although analytically, the individual and social levels of analysis can be distinguished, in terms of research methodology, children can be asked about all the factors at these two levels, particularly true for the age range on which Global Kids Online focuses, namely children aged 9–17. Thus interviews and/or surveys with children can generate data that permits researchers to analyse all the relations depicted at the individual and social level.

Since it treats the individual as the unit of analysis, the model is weaker if the social level itself becomes the unit of analysis – for instance, if research takes a school or community as its main focus. It is least well designed for research at the country level, because such research generally focuses on governments, industry, or on national infrastructure such as the education system, and while the research may be designed to benefit children it often does not conduct research with children. For Global Kids Online, then, the country level adds the necessary layer of data and analysis – largely obtained through secondary sources – to contextualise the findings obtained in any particular country and to enable the interpretation of observed cross-national differences.

Our contention, however, is that the country level is more often researched, using policy analysis, political economy research, stakeholder interviews, economic data or literature reviews. Meanwhile research with children – focused on children's own voices and experiences, as revealed through methods such as surveys and interviews – are less common, especially in less well resourced countries and contexts. Hence our present emphasis, recognising that all methods are mutually complementary but the child's voice is paramount.

IDENTIFYING GOOD PRACTICE

Using the research framework

In an international seminar held in 2015 (Livingstone, Byrne and Bulger, 2015), the invited experts highlighted some notable challenges facing a project such as Global Kids Online:

- The conceptual challenges of identifying the key opportunities and risks regarding children's rights in a digital age, as viewed from (and responsive to) highly diverse and sometimes conflicting perspectives, constituencies, cultures and contexts.
- The methodological challenges of balancing the merits and limits of standardized versus contextual approaches to cross-cultural research and integrating these within a coherent research design able to produce high quality results.
- The practical challenges of setting meaningful research and policy priorities, selecting partners, obtaining funding, meeting research training needs, addressing ethical and political difficulties, and ensuring research impact.

The framework offered here seeks to meet these challenges by prioritising the conduct of theoretically-informed, rigorous and independent research to generate a strong evidence-base. It does this by integrating top-down and bottom-up sources of knowledge to produce an insightful comparative evidence-base that captures both commonality and differences across country and contexts. In so doing, the aim is to encompass the full range of children's experiences, well-being and rights in a digital age by relating evidence to a normative policy framework.

The research framework to inform this enterprise must be thoughtful, flexible and effective. It must build on what is already known yet sustain a critical gaze on established knowledge. This is important because the socio-technological environment continues to change, and because publics and stakeholders continue to contest the nature and significance of the internet and mobile technologies for children, as well as the wider adjustments that society should make to underpin children's rights in the digital age. Many elements of the framework are perhaps already in place: the key questions to be asked, the conceptual and methodological resources needed, the established knowledge on which to build. However, the nature and direction of the arrows connecting elements in the model are still to be established. For a global project undertaken in changing times, we can never take for granted what we already know or think we need to know. In continuing to develop the Global Kids Online research framework, researchers might usefully ask themselves:

- Are the important factors included in the model shown in Figure 4? If not, what should be added?
- Are the important relations among factors included in this model; how might it be better drawn to fit particular problems or contexts?
- Do the meanings of the concepts represented in the model vary so greatly by context that it is difficult to use the model to generate findings or compare them across contexts?
- What particular challenges arise in operationalising the model or interpreting its findings within the particular context under study?

"We urge the research community to collaborate precisely as a community – sharing and debating new findings in the context of existing research."

Case study: Kids Online Brazil

Since 2012, Cetic.br has adapted the original EU Kids Online model and questionnaire for Brazil, conducting an annual nationally representative in-home survey with children aged 9–17. This necessitated addressing the considerable regional and income differences across Brazil, these being much greater than in Europe. Further adaptation was needed because, by contrast with Europe where until very recently children have generally accessed the internet via a computer, many children in Brazil go online first, or only, via a mobile phone.

Making the effort (itself expensive) to survey children even across the rural and mountainous regions of the country was the only way to capture the experiences of the poorest children. This in turn revealed that children while from wealthier homes mainly accessed the internet at home, those from poorer and more rural homes relied on LAN houses (coffee shops etc. with local area networks (LANs), which charge for internet access by the hour).[11] It also enabled the researchers to speak authoritatively when presenting the findings to government and stakeholders.

Replicating the survey year after year allows the researchers to track changes in access and use over time. For example, the findings from 2012, 2013 and 2014 show, first, a slight rise over time in the number of children who reported being bullied. It also showed that this is largely because of the increase in cyberbullying rather than face-to-face bullying, as internet access has grown over those years.

The researchers also found that cyberbullying – reported in 2014 by around one in six children – was growing especially among girls.

Last, adapting a common questionnaire allowed the Brazilian and European research teams to compare their findings. For example, in both places, pornography and violent content topped children's concerns about the internet. But in Brazil fewer children than in Europe had parents who used the internet and children in Brazil thought they knew more than their parents about the internet.

See Barbosa (2015), Barbosa et al. (2013)

"For a global project undertaken in changing times, we can never take for granted what we already know or think we need to know."

Learning from experience

In prioritising good research practice, it is important to avoid some common pitfalls:

- *Media panics.* In many contexts around the world, anxious discussions centring on the harms associated with the internet are leading public and, sometimes, policy debate. Hence it is vital for researchers to identify their own agenda and concerns. Research findings can and should be used to inform these public and policy discourses, but they should be gathered independently of them. Note that the opposite of media panics, namely hyperbolic expectations of children as so-called 'digital natives' is equally problematic, implying that children are born self-sufficient in the digital age and have little need of supportive policy or practice.

"While technology must be part of the bigger story of the digital age, even more important are the crucial social, economic and political processes by which technology is invented, designed, marketed, used, profited from and regulated."

- *Technological determinism*. Both techno-optimism and techno-pessimism tend to foreground technological innovation as the main source of social change. While technology must be part of the bigger story of the digital age, even more important are the crucial social, economic and political processes by which technology is invented, designed, marketed, used, profited from and regulated. One common consequence of technological determinism[12] is the conflation of risk and harm (Livingstone, 2013). Rather than conceiving of risk as the probability – not the inevitability – of harm, there is a temptation to interpret the online availability of, for example, pornography or hate speech as inevitably causing

11 See http://publius.cc/lan_houses_new_wave_digital_inclusion_brazil/091509

12 A technologically determinist account of social change positions technologies as external to society and as a distinctive and independent cause of observed changes in society. We avoid such a position, recognising instead that digital technologies have been invented, designed, produced, marketed and appropriated by people and are influential precisely because of these social activities (Lievrouw & Livingstone, 2006).

harm to children. As research has repeatedly shown, exposure to risk may or may not result in measurable harm, depending on the child and the context. Similarly, exposure to educational content may or may not result in measurable benefit, again depending on the child and the context.

- *Polarisation.* Both research findings and good policy practice are clear that since risks and opportunities co-occur in children's lives, being interlinked for a range of reasons noted above, it is not good practice to examine or plan for one in isolation from the other. But over and again, we witness the desire to discuss risks in the absence of opportunities (making for overly-protectionist approaches) or opportunities in the absence of risks (making for naïve approaches). We therefore urge that risks and opportunities, along with children's rights to protection and participation, are addressed together. In this context, it is particularly important to appreciate children's own perspectives, as research has repeatedly shown that the gap between child and adult perceptions of what is risky or desirable online is itself problematic, generating misunderstandings, ineffective efforts at parent or teacher mediation and child tactics to protect their own agency and privacy.

"Research findings can and should be used to inform these public and policy discourses, but they should be gathered independently of them."

- *Simplification.* In looking for quick fixes and policy solutions, there is a tendency to pick out certain parts of a research analysis as if they were all that mattered. Part of the researcher's task, therefore, is to present a contextualised, integrated and nuanced account that recognises complexity and contingency, and that seeks to explain rather than promote particular findings. This matters when designing research, determining its scope and identifying contextual factors to be taken into account. It often matters even more when reporting research results, ensuring that they are not misinterpreted or taken out of context, and especially that they are not misused by those with interests (e.g. censorious governments, profit-hungry businesses) that are not aligned with supporting child rights.
- *Weak methodologies*. In a fast-changing domain of media panics, demand for quick policy fixes and public anxiety, there is a temptation to conduct hasty research, often communications-driven rather than research-led, involving ill-thought out 'polls' and ad hoc samples. As the Global Kids Online toolkit is at pains to observe, this is a field facing notable ethical, political and conceptual challenges. It is therefore important to build on prior good practice, consult widely, and ensure that the most 'at-risk' and 'hard-to-reach' children are conscientiously included in the research design and process – ideally as participants as well as respondents.

Researchers in many countries have at times learned the hard way that the failure to set a broad, consultative and theoretically grounded agenda for the conduct of independent research can result in unfortunate or misguided practice and policy directions. On the other hand, no single research project can always achieve all objectives within one all-inclusive study. For this reason, we urge the research community to collaborate precisely as a community – sharing and debating new findings in the context of existing research, comparing across cultures and countries where appropriate and meaningful to do so, and putting as many of their findings and even their raw data into the public domain for independent scrutiny and mutual benefit. The result will, no doubt, necessitate the revision of the research framework offered in the present guide, and that too will surely be beneficial.

USEFUL ONLINE RESOURCES

Resources provided by the author

Crimes against Children Research Center, University of New Hampshire. www.unh.edu/ccrc/

Cyberbullying Research Centre. http://cyberbullying.org/

Digitally Connected: A collaboration between UNICEF and the Berkman Centre at Harvard on children and youth in the digital environment. www.digitallyconnected.org/

EU Kids Online: Best Practice Guide. http://www.lse.ac.uk/media@lse/research/EUKidsOnline/BestPracticeGuide/Home.aspx

EU Kids Online: Research and policy implications for children's online risks and opportunities in Europe. www.eukidsonline.net

Family Online Safety Institute's Global Resource and Information Directory (GRID). http://fosigrid.org/

Health Behaviour in School-aged Children (HBSC): World Health Organization collaborative cross-national survey. www.hbsc.org/

International Telecommunications Union (ITU): Global statistics on internet and mobile. www.itu.int/en/ITU-D/Statistics/Pages/default.aspx

Livingstone, S., & Smith, P. (2014). Annual research review: Children and young people in the digital age: The nature and prevalence of risks, harmful effects, and risk and protective factors, for mobile and internet usage. *Journal of Child Psychology and Psychiatry: Annual Research Review 2014.* Online first. doi: 10.1111/jcpp.12197. www.academia.edu/6711610/Livingstone_Smith_JCPP2014

Livingstone, S., Kirwil, L., Ponte, C., & Staksrud, E. (2014). In their own words: What bothers children online? *European Journal of Communication*, 29 (3), 271–88. http://eprints.lse.ac.uk/62093/

Nordicom: International Clearinghouse on Children, Youth and Media. www.nordicom.gu.se/en/clearinghouse

Ólafsson, K., Livingstone, S., & Haddon, L. (2013). *How to research children and online technologies? Frequently asked questions and best practice.* London: EU Kids Online, LSE. http://eprints.lse.ac.uk/50437/

UNESCO: Youth Programme. www.unesco.org/new/en/social-and-human-sciences/themes/youth/

UNICEF (no date) *Child rights in the digital age*. Recent research and reports by UNICEF Office of Research-Innocenti. www.unicef-irc.org/research/270/

UNICEF: The State of the World's Children reports. www.unicef.org/sowc/

REFERENCES

Alderson, P. (2000). UN Convention on the Rights of the Child: Some common criticisms and suggested responses. *Child Abuse Review*, 9, 439–443.

Barbosa, A., O'Neill, B., Ponte, C., Simões, J. & Jereissati, J. (2013). *Risks and safety on the internet: Comparing Brazilian and European findings*. Available at http://eprints.lse.ac.uk/54801/

Barbosa, A. (2015). *ICT Kids Online Brazil 2014. Survey on the Internet Use by Children in Brazil.* São Paolo: Brazilian Internet Steering Committee. Available at http://cetic.br/publicacao/pesquisa-sobre-o-uso-da-internet-por-criancas-e-adolescentes-no-brasil-tic-kids-online-brasil-2014/

Barbovschi, M., Green, L. & Vandoninck, S. (2013). *Innovative approaches for investigating how young children understand risk in new media: Dealing with methodological and ethical challenges*. London, UK: EU Kids Online Network. http://eprints.lse.ac.uk/53060/

Beger, G., & Sinha, A. (2012). *South African mobile generation: Study on South African young people on mobiles.* New York: UNICEF. Available at http://www.unicef.org/southafrica/SAF_resources_mobilegeneration.pdf

Biggs, P., & Zambrano, R. (2013). Doubling digital opportunities: Enhancing the inclusion of women and girls in the information society. Geneva: Broadband Commission. Retrieved from http://www.broadbandcommission.org/documents/working-groups/bb-doubling-digital-2013.pdf

boyd, d. (2014). *It's complicated: the social lives of networked teens*. New Haven: Yale University Press.

Bradshaw, J., Keung, A., Rees, G., & Goswami, H. (2011). Children's subjective well-being: International comparative perspectives. *Children and Youth Services Review,* 33 (4), 548–556.

Bronfenbrenner, U. (1979). *The ecology of human development*. Cambridge, MA: Harvard University Press.

LSE Enterprise (2013) *Youth participation in democratic life. Final report to EACEA 2010/03*. Available at http://eacea.ec.europa.eu/youth/tools/documents/lse_study_on_youth_participation_2013.pdf

Christensen, P. M., & James, A. (2008). *Research with children: perspectives and practices* (2nd ed.). London: Routledge.

Cortesi, S., & Gasser, U. (Eds.) (2015). *Digitally Connected: Global Perspectives on Youth and Digital Media*. Harvard: Berkman Center Research. Available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2585686

De Pauw, L. (2011). *Girls speak out: Girls' fast-talk on the potential of information and communication technologies in their empowerment and development*. Woking: Plan International.

Frau-Meigs, D., & Hibbard, L. (2016). *Education 3.0 and Internet Governance: A New Global Alliance for Children and Young People's Sustainable Digital Development*. Paper series no. 27. Retrieved from Ontario, Canada; London, United Kingdom: https://www.cigionline.org/publications/education-30-and-internet-governance-new-global-alliance-children-and-young-peoples-sus

Garcia de Diego, S. (2012). *Understanding the use of ICTs by children and young people in relation to their risks and vulnerabilities online specific to sexual exploitation: A youth- led study in Latin America*. Bangkok: ECPAT International. Retrieved from http://www.ecpat.org/wp-content/uploads/legacy/ICT%20Research%20in%20LatinAmerica_ENG.pdf

Garmendia, M., Garitaonandia, C., Martinez, G., & Casado, M. Á. (2012). The effectiveness of parental mediation. In S. Livingstone, L. Haddon, & A. Görzig (Eds.), *Children, risk and safety on the internet: Research and policy challenges in comparative perspective* (pp. 231–244). Bristol: The Policy Press.

Gigli, S. & Marles, V. (2013). *A (private) public space: Examining the use and impact of digital and social media among young people in Kenya*. Nairobi: UNICEF Kenya. Available at http://www.unicef.org/infobycountry/files/A_Private_Public_Voices_of_Youth_Kenya_study.pdf

Groupe Special Mobile Association (GSMA). (2014). *Children's use of mobile phones: An international comparison 2013*. London: GSM Association and NTT DOCOMO. Available at http://www.gsma.com/publicpolicy/wp-content/uploads/2012/03/GSMA_ChildrensMobilePhones2013WEB.pdf

Hasebrink, U. (2014). *Children's changing online experiences in a longitudinal perspective*. LSE, London: EU Kids Online. Available at http://eprints.lse.ac.uk/60083/

Helsper, E., & Eynon, R. (2010). Digital natives: Where is the evidence? *British Educational Research Journal, 36*(3), 502–520. doi:10.1080/01411920902989227

International Telecommunications Union (ITU). (2013). *Measuring the Information Society 2013: Measuring the World's Digital Natives*. Available at http://www.itu.int/en/ITU-D/Statistics/Documents/publications/mis2013/MIS2013_without_Annex_4.pdf

ITU. (2014). *Measuring the Information Society Report*. Geneva, Switzerland: ITU.

Available at www.itu.int/en/ITU-D/Statistics/Documents/publications/mis2014/MIS2014_without_Annex_4.pdf

ITU. (2015). *The World in 2015. ICT Facts and Figures*. Geneva: ITU. Available at www.itu.int/en/ITU-D/Statistics/Documents/facts/ICTFactsFigures2015.pdf

Kleine, D., Hollow, D., & Poveda, S. (2014). *Children, ICT and development: Capturing the potential, meeting the challenges*. Available at https://www.unicef-irc.org/publications/715/

Lievrouw, L., and Livingstone, S. (2006). Introduction. *Handbook of New Media: Social Shaping and Social Consequences* (1-14). London: Sage. Available at http://eprints.lse.ac.uk/21502/

Livingstone, S. (2008). Taking risky opportunities in youthful content creation: teenagers' use of social networking sites for intimacy, privacy and self-expression. *New Media & Society,* 10(3): 393–411. Available at http://eprints.lse.ac.uk/27072

Livingstone, S. (2013). Online risk, harm and vulnerability: Reflections on the evidence base for child internet safety policy. *ZER: Journal of Communication Studies,* 18(35) 13–28. Available at http://www.ehu.es/zer/hemeroteca/pdfs/zer35-01-livingstone.pdf

Livingstone, S. (2014) *EU Kids Online: Findings, methods, recommendations*. LSE, London: EU Kids Online. Available at http://lsedesignunit.com/EUKidsOnline/

Livingstone, S., and Bulger, M. (2013) *A Global Agenda for Children's Rights in the Digital Age: Recommendations for Developing UNICEF's Research Strategy*. Florence: UNICEF Office of Research. Available at https://www.unicef-irc.org/publications/702

Livingstone, S. and Bulger, M. (2014) A global research agenda for children's rights in the digital age. *Journal of Children and Media* 8(4), 317–335. Available at http://eprints.lse.ac.uk/62130/

Livingstone, S., & Byrne, J. (2015). Challenges of parental responsibility in a global perspective. In U. Gasser, (Ed.), *Digitally Connected: Global Perspectives on Youth and Digital Media* (pp.26–29). Cambridge: Berkman Center for Internet and Society, Harvard University. Available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2585686

Livingstone, S., Byrne, J., and Bulger, M. (2015) *Researching children's rights globally in the digital age: seminar report*. London: London School of Economics and Political Science. Available at http://www.lse.ac.uk/media@lse/research/Research-Projects/Researching-Childrens-Rights/pdf/Researching-childrens-rights-globally-in-the-digital-age-260515-withphotos.pdf

Livingstone, S., Carr, J., & Byrne, J. (2015) *One in three: The task for global internet governance in addressing children's rights*. Global Commission on Internet Governance: Paper Series. London: CIGI and Chatham House. Paper series no. 22. Available at https://ourinternet.org/publication/one-in-three-internet-governance-and-childrens-rights/

Livingstone, S., Haddon, L., & Görzig, A. (Eds.) (2012). *Children, Risk and Safety Online: Research and policy challenges in comparative perspective*. Bristol: The Policy Press. Available at http://eprints.lse.ac.uk/44761/

Livingstone, S. & Helsper, E.J. (2010). Balancing opportunities and risks in teenagers' use of the internet: The role of online skills and internet self-efficacy. *New Media & Society*, 12(2), 309–329. Available at http://eprints.lse.ac.uk/35373/

Livingstone, S., Mascheroni, G., & Staksrud, E. (2015). *Developing a framework for researching children's online risks and opportunities in Europe*. EU Kids Online. Available at http://eprints.lse.ac.uk/64470/

Mascheroni, G., & Cuman, A. (2014). *Net Children Go Mobile: Final Report*. Milan: Educatt. Available at http://netchildrengomobile.eu/reports/

O'Neill, B., Staksrud, E., & McLaughlin, S. (Eds.) (2013). *Towards a better internet for children: policy pillars, players and paradoxes.* Goteborg: Nordicom. Available at http://eprints.lse.ac.uk/57403/

Organisation for Economic Co-operation and Development (OECD). (2011a). *How's Life? Measuring Well-being*. Paris: OECD Publishing. www.oecd-ilibrary.org/economics/how-s-life_9789264121164-en

OECD. (2011b). *The Protection of Children Online*. OECD Digital Economy Papers. Paris: OECD. www.oecd-ilibrary.org/content/workingpaper/5kgcjf71pl28-en

OECD. (2012). *Connected Minds: Technology and Today's Learners*. Paris: OECD. www.oecd-ilibrary.org/content/book/9789264111011-en

Raftree, L. and Bachan, K. (2013). *Integrating Information and Communication Technologies into Communication for Development Strategies to Support and Empower Marginalized Adolescent Girls*. New York: UNICEF. Available at www.unicef.org/cbsc/files/ICTPaper_Web.pdf

Sabella, R. A., Patchin, J. W., & Hinduja, S. (2013). Cyberbullying myths and realities. *Computers in Human Behavior,* 29, 2703–2711.

Selwyn, N. (2013). *Education in a digital world: Global perspectives on a technology and education*. New York: Routledge.

Smahel, D. & Wright, M. (Eds.) (2014). *The meaning of online problematic situations for children: Results of cross-cultural qualitative investigation in nine European countries*. LSE, London: EU Kids Online Available at http://eprints.lse.ac.uk/56972/

Staksrud, E. (2013). *Children in the online world: Risk, regulation, rights*. Surrey: Ashgate.

Staksrud, E., Livingstone, S., Haddon, L., & Ólafsson, K. (2009). *What Do We Know About Children's Use of Online Technologies? A Report on Data Availability and Research Gaps in Europe*. Second edition. LSE, London: EU Kids Online. Available at http://eprints.lse.ac.uk/24367/

Third, A., Bellerose, D., Dawkins, U., Keltie, E. & Pihl, K. (2014). *Children's Rights in the Digital Age: A Download from Children Around the World*. Melbourne: Young and Well Cooperative Research Centre. Available at http://www.unicef.org/publications/index_76268.html

UNICEF Innocenti Research Centre. (2012). *Child Safety Online: Global Challenges and Strategies*. Florence, Italy: UNICEF Innocenti Research Centre. www.unicef-irc.org/publications/pdf/ict_techreport3_eng.pdf

United Nations. (1989). *Convention on the Rights of the Child*. www.ohchr.org/EN/ProfessionalInterest/Pages/CRC.aspx

United Nations. (2012). Migrants by origin and destination: The role of South-South migration. *Population Facts, No 2012/3.* New York: United Nations Department of Economic and Social Affairs, Population Division. Retrieved from http://www.un.org/en/development/desa/population/publications/pdf/popfacts/popfacts_2012-3_South-South_migration.pdf

UN Department of Economic and Social Affairs, Population Division (n.d.). Available at http://esa.un.org/unpd/wpp/Demographic-Profiles/index.shtm

van Deursen, A. J. A. M., Helsper, E. J., & Eynon, R. (2015). Development and validation of the Internet Skills Scale (ISS). *Information, Communication & Society*, 1–20. doi:10.1080/1369118X.2015.1078834

World Bank. (2016). *World Development Report 2016: Digital Dividends*. Available at http://www.worldbank.org/en/publication/wdr2016

CHECKLIST 1

Questions to consider when framing a new research project

1	WHAT: What's the question or problem to be researched? How should it best be defined, framed and scoped? How does the research question relate to what is already known and to the pressing knowledge gaps?	☐
2	WHERE: In what ways is the research context distinctive or common? How can the researchers learn from and contribute to the research conducted by others, whether in similar or different contexts?	☐
3	WHEN: Why is this research needed now, and how is it timely? To the extent that it might become out of date, are there plans to keep the evidence-base updated and to compare findings over time?	☐
4	HOW: What kind of findings could best answer the research questions or address the research problem? What resources are available to conduct the research, and what standards of evidence will be met?	☐
5	WHY: Who wants or needs the results of the research, and for what purpose? Will the researchers retain responsibility for their dissemination, use and impact, both within and beyond their originating context?	☐
6	WHO: Does the research team contain the requisite expertise, bearing in mind that this may be multi-disciplinary and multi-method? What partnerships can best support the research and the use of its results?	☐
7	FOR WHOM: How can the research draw directly on children's own voices and experiences, and how can it be shared with them and used to advance their best interests?	☐

CHECKLIST 2

Glossary of terms used in Global Kids Online

Term	Description
Child	We follow the UNCRC in defining 'a "child" as a person below the age of 18, unless the laws of a particular country set the legal age for adulthood younger' (UN, 1989). Global Kids Online focuses on children aged 9–17, while also encouraging research on younger children and young people aged 18+. We recognise that teenagers often bear adult responsibilities and may not consider themselves children, and also that cultures and contexts matter in determining the significance of 'child' and 'childhood'.
Digital, Digital age	Digital technologies are distinctively interactive, networked, remixable and ubiquitous media (boyd, 2014). Global Kids Online specifically focuses on the internet, whether accessed via computers, mobile phones or other digital devices, also including some other uses of computing and mobile technologies. When referring to 'the digital' or 'the digital age', we do not imply that society is radically transformed by digital media, nor that digital media represent the most important change in today's society.
Global North, Global South	These terms refer in shorthand to the strong (but far from absolute) tendency for inequalities in income (and research) to map onto geography and cultures. The terms avoid the much-criticized language of 'development' (as in developing vs developed countries). Still, there are dangers in all such binaries of implying a singular, normative vision of development goals, and obscuring inequalities within countries as well as the commonalities that exist even across continents.
Parent	We use the term 'parent' synonymously with 'carer' or 'guardian' to refer to the adults most closely involved in or responsible for a child's welfare and upbringing, recognising that this may include biological parents living separately from the child or step-parents or foster parents living with the child. We make no assumptions as to the number of parents or their sexuality, and we recognise that other family members (e.g. grandparents or aunts and uncles) may care for a child (including undertaking 'parental mediation' of their internet use). On the other hand, some children receive little or no parenting, whether or not they possess biological parents.
Research	Good quality research provides evidence that is robust, ethical, stands up to scrutiny and can be used to inform policymaking. It should adhere to principles of professionalism, transparency, independence, accountability and auditability. This is generally achieved through the development of theory, the specification of a clear research question, and the deployment of established methods of research designed to answer the question.

Rights	Included here are children's civil, political, economic, social, health and cultural rights, as specified in the UNCRC (UN, 1989). This conceives of children as rights-holders and has been ratified by most countries in the world.
Well-being	The Organisation for Economic Co-operation and Development (OECD) (2011a, p. 18) defines well-being as 'meeting various human needs, some of which are essential (e.g. being in good health), as well as the ability to pursue one's goals, to thrive and feel satisfied with their life' (see Bradshaw et al., 2011).