Save the Children

Vodafone Foundation

Skills Upload Jr

CLICK, SCROLL, CONNECT – AND BALANCE

Children's digital wellbeing in educational contexts across Europe

This report has been written by Daniela Ritz, Jeffrey DeMarco and Michelle Sandall and has been developed by Save the Children UK together with Vodafone Foundation.

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London, July 2025

TABLE OF CONTENTS

Lisa Felton
Managing Director, Vodafone Foundation

I am proud to present this comprehensive new report on children's digital wellbeing in educational contexts across Europe.

Developed as part of an innovative partnership between Vodafone Foundation and Save the Children, this report reflects our shared commitment to supporting children in an increasingly connected world, ensuring that digital spaces are not only safe, but empowering too.

The goal of our alliance with Save the Children is to equip children aged 9 to 16 years with the necessary skills to navigate the digital landscape safely, confidently and responsibly. But our joint efforts go beyond mere digital literacy to striving to help foster a sense of security, identity and empathy. Essential skills for every child, wherever in the world they may be.

At Vodafone Foundation, our mission is to connect for good. We use the power of technology to create positive social impact in three key areas: driving inclusion through digital skills, tackling harm and abuse, and supporting individuals in times of crisis.

By working with Save the Children we will be able to grow our impact further to reach more of those who might otherwise be at risk of getting left behind. Using our combined expertise, we aim to provide practical, sustainable solutions that will address real-world needs and create a safer, more inclusive, and empowering digital environment for all.

We are immensely grateful to everyone who has contributed to this report and look forward to exploring the topics highlighted further over the coming months. In direct response to the insights uncovered we are already expanding our Skills Upload Junior programme, Vodafone Foundation's flagship digital skills initiative, to include new lesson plans focused on digital wellbeing.

Developed in partnership with Save the Children, these resources will support educators in embedding digital safety, empathy, and resilience into everyday learning. With more than 10.5 million students already reached across eight countries, this programme is helping to close the digital divide and ensure that every child has the opportunity to thrive in a digital world.

Uju Aderemi
Executive Director, Global Programmes, Save the Children UK

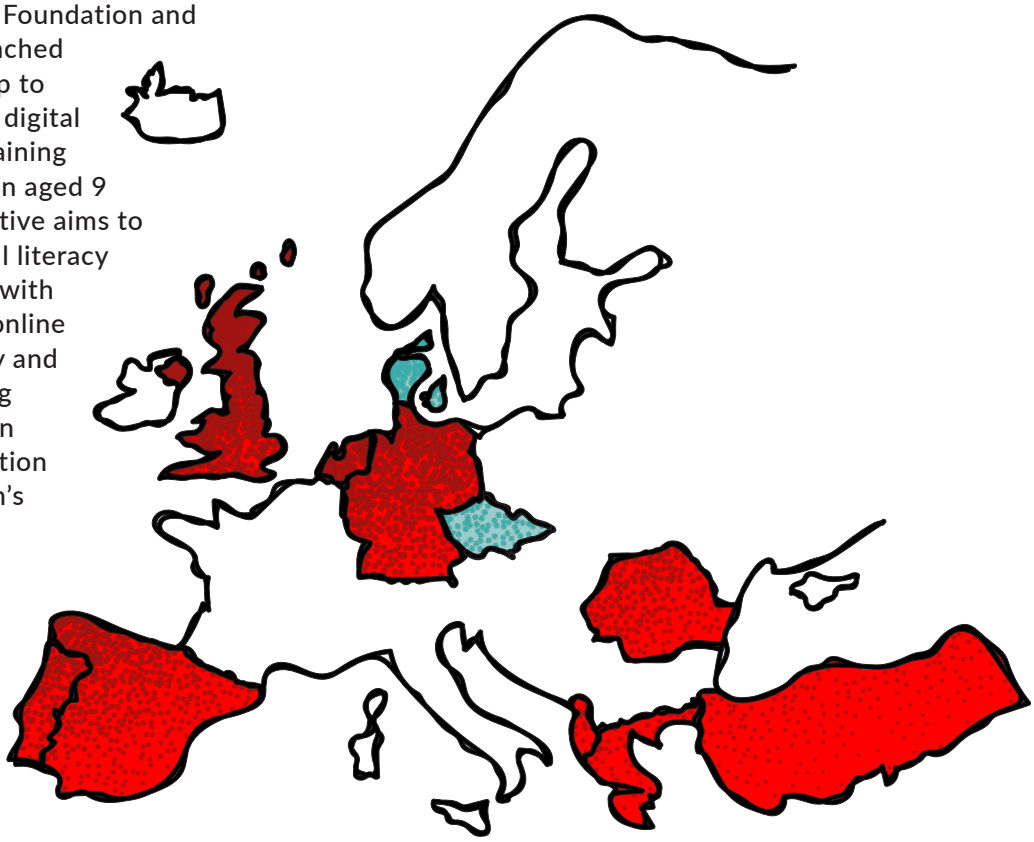
At Save the Children, we are very aware that the digital world presents both opportunities and risks for children. As digital access grows, so must our responsibility to ensure every child is safe, included and empowered online. By working in partnership, Save the Children and Vodafone Foundation enhance each other's capabilities and are able to deliver a more meaningful outcome for children that touches on the reality of their augmented lives.

This research flags the importance of digital experiences for children across Europe and beyond. It challenges us to move beyond protection and to centre children's rights and voices in every policy, product, platform and classroom. The findings are clear: meaningful change requires systemic action, not piecemeal solutions.

For Save the Children, this work strengthens our call to ensure every child is thriving, heard and valued – and hopeful for a more just, equal and sustainable future. We commit to using these insights to build a safer digital future for every child, everywhere.

INTRODUCTION

In 2025 the Vodafone Foundation and Save the Children launched a landmark partnership to deliver a Europe-wide digital skills and resilience training programme for children aged 9 to 16 years. This initiative aims to go beyond basic digital literacy by equipping children with the tools to navigate online spaces safely, ethically and confidently. Combining Vodafone's expertise in inclusive digital education with Save the Children's leadership in child protection, wellbeing and promoting children's voices, the programme will address key issues such as online safety, digital rights and responsible digital behaviour. Set to roll out across eight countries within Europe – Albania, Romania, Spain, Portugal, Greece, Netherlands, Germany and Türkiye – the programme will be integrated into Vodafone Foundation's existing Skills Upload Junior initiative, which has already reached more than 10.5 million children. The partnership reflects a shared commitment to strengthening digital wellbeing among the most vulnerable groups and with that, ensuring that all children, regardless of background, can thrive in an increasingly connected world.



Countries we work with
Countries referenced within this report

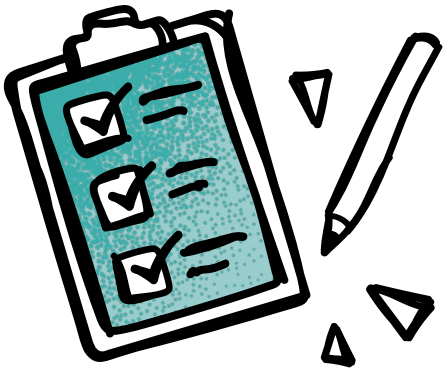
Children's digital wellbeing has emerged as a critical area of focus in Europe, as children increasingly grow up in digital environments. While the digital world offers opportunities for learning, connection and self-expression, it also introduces a complex set of risks, ranging from exposure to harmful content and online abuse to challenges related to screen time, mental health and identity development. In this context, ensuring children's digital wellbeing requires a balanced and rights-based approach that supports children's protection, meaningful participation and healthy development across diverse digital experiences. Children's agency is fundamental in creating a digital world that is safe, inclusive and empowering. This study explores the current state of children's digital wellbeing in Europe, examining existing systems, policies and practices as well as identifying gaps and opportunities for strengthening protective frameworks and promoting positive, inclusive and empowering digital environments for all children.

The findings of the study inform the development of the partnership's educational materials and a joint digital wellbeing framework that is centred around children's rights, pinpointing strategic focus areas and laying the groundwork for our

advocacy ambition. As a partnership we have developed the SMILE framework (Security, Management, Identity, Literacy and Empathy), which acts as an integrated blueprint for promoting children's digital resilience and wellbeing. Security recognises that safeguarding children's personal data is a prerequisite for other developmental goals. Management shifts the conversation from screen time limits to evidence-based self-regulation strategies that help children balance their blended life. The Identity and Literacy pillars move beyond risk avoidance, supporting society to equip young users with the skills to explore their identities through curating authentic online selves and critically understand the wider ecosystems they navigate. Empathy ensures digital spaces are not just safe but also prosocial, embedding kindness and respect into peer norms. Taken together, these five strands seek to empower children's online experience and resilience as well as to give practitioners a single, coherent lens for curriculum design, parental guidance, platform governance and informing the wider wellbeing initiatives for children's development.

the programme will be integrated into Vodafone Foundation's existing Skills Upload Junior programme, which has already reached over 10.5 million children

EXECUTIVE SUMMARY



In 2025, the Vodafone Foundation and Save the Children launched a Europe-wide digital skills and resilience programme for children aged 9 to 16, aiming to go beyond basic digital literacy by promoting safe, ethical and confident online engagement. Rolled out across eight countries and integrated into Vodafone's existing Skills Upload Junior initiative, the programme addresses key issues like online safety, digital rights, and responsible behaviour and is guided by the SMILE framework – Security, Management, Identity, Literacy, and Empathy – supporting children's digital wellbeing and resilience through a rights-based inclusive approach.

In support of the newly formed partnership, both organisations jointly carried out this study to explore and provide a holistic understanding of the current state of digital wellbeing for children across Europe. The objectives of the study were to map existing evidence and identify gaps in provision and delivery, as well as opportunities to enhance protective frameworks and to promote inclusive, empowering digital experiences for all children. This report presents the findings of a semi-systematic desk-based review of academic and grey literature combined with expert key informant interviews. Based on a search of databases and a list of expert recommended documents and content pieces, a total of 112 sources were initially reviewed, of which 53 were selected for in-depth analysis. Children's voices were integrated through secondary data from specific child-focused research studies, in particular studies previously conducted by Save the Children member offices in Romania, Spain and Denmark. These insights provided valuable context and helped ground the analysis in children's lived experiences.

Four interviews were conducted with experts from academia, policy development, civil society and advocacy, representing a diverse range of perspectives on the topic of children's digital wellbeing. The experts were Rhiannon-Faye McDonald (survivor of both online and offline abuse and Head of Advocacy at the Marie Collins Foundation [MCF]), Charlotte Aynsley (Founder and CEO of Rethinking Safeguarding), Tyler Shores (Director of the University of Cambridge ThinkLab Programme) and Silke Müller (secondary school headteacher, author and advocate). This study will form the basis for programmatic and advocacy ambitions of the Vodafone Foundation/Save the Children partnership.

Key findings

Over the past decade, the European Union has developed the world's most comprehensive digital protection framework for children, built on children's rights principles and supported by major legislation, such as the General Data Protection Regulation (GDPR) and Digital Services Act (DSA). These collectively mandate privacy-by-design, platform accountability and protections from harmful content, while also providing enforcement tools. Despite progress, disparities remain across the EU in age verification, content moderation and digital literacy, creating a fragmented landscape. The new EU-wide age assurance app and Age Assurance Toolbox aim to harmonise standards but, without flexible and inclusive design, risk excluding vulnerable children. Similarly, content moderation remains uneven, with exposure to harmful content varying drastically between countries.

Emerging risks, including AI-generated child sexual abuse material, deepfakes and harmful algorithmic recommender systems are outpacing regulatory tools. While the AI Act and DSA aim to address these threats, they are still evolving. Stronger alignment with the best interests of the child, children's rights in general and meaningful child participation are needed to make frameworks future-fit. A consistent, rights-based approach that continuously evolves will be essential to address the speed, scale and sophistication of new digital harms.

Children across Europe are increasingly exposed to digital stressors such as cyberbullying, disinformation, addictive design features and harmful social comparisons, all of which contribute to rising levels of anxiety, depression and behavioural issues. Harmful content ranging from hate speech to violent imagery is widespread and experts warn of the growing influence of misogyny, harmful gender norms and deepfakes. Gender significantly shapes children's online experiences: girls face more body image pressure, sexual harassment and exposure to degrading content, while boys are at risk of internalising harmful norms through violent or exploitative media, with abuse often going unreported due to stigma.

Children from minoritised backgrounds, such as LGBTQIA+ youth, children of colour or those with neurodevelopmental disabilities, face compounded risks online, including identity-based harassment, exclusion and misinformation. These harms are often under-recognised in policy and education, despite their impact on mental health and safety. As harmful norms spread rapidly online, there is an urgent need for digital wellbeing strategies that are inclusive, trauma-informed and responsive to children's diverse experiences and identities, ensuring safe and supportive digital environments for all.

As digital environments become central to children's lives, it is essential to recognise their evolving developmental needs and to tailor support to their specific circumstances and experiences. Digital harm can affect all children requiring nuanced and child-centred approaches. These approaches should both acknowledge children's capabilities and resilience when shaping policies, support systems and interventions.

There is growing recognition across the EU that schools must move beyond narrow academic goals to support children's holistic digital wellbeing. This includes fostering digital literacy, safety and mental health through curricula, teacher training and whole-school approaches. EU frameworks like the Digital Education Action Plan, DigComp and Digital Citizenship Education aim to equip students with critical digital skills, while countries implement national initiatives to teach responsible online behaviour and resilience.

> **Spain, girl 16: And here the problem is also partly that if a woman posts something, she's already seen as provocative or doing something wrong, but if a man posts it, he's the best in the world.**
>
> Save the Children Spain, 2024

However, implementation is inconsistent, often hindered by broader systemic challenges such as limited resourcing, time constraints, insufficient teacher training and a lack of curriculum alignment. Children often report lacking essential knowledge on misinformation, data privacy and algorithmic profiling, while teachers cite inadequate training and unclear guidance as barriers.

Children themselves call for greater clarity and support in navigating the digital world, including understanding how their data is used and building media literacy. Despite some effective programmes and tools (e.g. SELFIE[1], DETECT), most teacher training remains fragmented and often relies on short-term, NGO-led campaigns rather than systemic policy. Embedding digital wellbeing into national curricula, strengthening teacher capacity, and adopting whole-school and participatory approaches are essential to address digital risks and promote student wellbeing. However, disparities in infrastructure and resources continue to hinder equitable access, particularly in underserved communities, making it vital to invest in inclusive, sustainable education strategies that prioritise the digital lives of all children.

Advancing children's digital wellbeing requires more than isolated interventions, but rather a system-focused approach that embeds digital wellbeing within the broader structures that support children's lives. Recognising that digital experiences are inseparable from children's experiences overall, supporting their digital wellbeing must be integrated into the everyday environments where children grow and develop, structured around their families, schools, communities and policy frameworks. This approach must be child-centred, rights-based, informed by children's voices, and supported by coordinated action across sectors. Ultimately, digital wellbeing should be seen as a shared responsibility, embedded in the systems that shape children's lives both online and offline.

Taking a children's rights perspective

Children increasingly view digital technology as essential to realising their rights, seeing access to the internet as a basic need tied to education, identity, employment and their participation in diverse societies (Third and Moody, 2021). They recognise the digital environment as a critical enabler of personal development and future opportunities, both in their private lives and professional aspirations. The UN Convention on the Rights of the Child (UNCRC) underscores that digital policies, technologies and services must prioritise the best interests of the child. Children are not just passive users but active rights-holders, and their voices must be considered in shaping the digital environment. UNCRC General Comment No. 25 (2021) reinforces that children's rights, including to privacy, participation and protection must be upheld online as they are offline.

Balancing children's rights to protection with freedoms like expression and access to information requires nuanced policymaking. Overly restrictive measures, such as blanket bans, may inadvertently undermine efforts to promote children's digital wellbeing. Children are also calling for transparency from companies and tighter regulation to curb exploitative practices like data monetisation and excessive advertising. Despite growing awareness, national laws often lag behind the cross-border nature of digital services, and businesses may prioritise profit over children's best interests. Child Rights Business Principles and systematic tools like Child Rights Impact Assessments (CRIAs) can help ensure that emerging technologies respect and support children's rights from the outset. To protect and promote children's rights online, governments must adopt unified, rights-based strategies aligned with international standards. Stronger coordination and enforcement mechanisms are essential to ensure consistent implementation across countries and platforms.

United Kingdom, girl, 17: Digital rights are human rights. It shouldn't be a trade.

Third and Moody, 2021

Recommendations:

Prioritise children's digital rights through the development of comprehensive national guidelines and resources that explicitly recognise and uphold these rights in online environments. Such efforts should align with international standards, including the UNCRC General Comment No. 25 to ensure a consistent and rights-based approach.

Establish stronger implementation mechanisms that ensure compliance across platforms and jurisdictions and strengthen cross-border enforcement mechanisms to close regulatory gaps.

[1] https://education.ec.europa.eu/selfie

Prioritising children's voices and recognising their agency

Children's meaningful participation is crucial in shaping digital environments that reflect their rights, needs and lived experiences. Rather than being seen as passive users, children must be recognised as active contributors in policy, education and technology design. Experts agreed that most adults, whether educators, families or policymakers have limited understanding of children's online experiences due to, for instance, the use different platforms or engaging with different content due to algorithms. While youth engagement is growing, it remains uneven, with only a few countries enabling formal co-creation structures. True participation involves not only consulting children but involving them directly and meaningfully in decision-making processes. Their awareness of online risks, desire for guidance over restriction and nuanced understanding of digital interactions show that children are experts in their own right.

Younger children and children with disabilities are often excluded from this participatory approach. Policies tend to frame younger users solely as recipients of protection, limiting opportunities to build resilience and agency. Accessibility issues further marginalise children with disabilities, due to limited access to assistive tools and a lack of inclusive research and design. To ensure all children are heard, mechanisms such as school councils, youth panels and feedback loops with regulators must be embedded in digital governance. When children see that their voices lead to tangible change, they are more likely to engage, report problems and help shape a safer digital future.

Recommendations:

- Ensure meaningful, ongoing child participation in policymaking with clear structures and feedback loops showing how children's input shapes decisions, especially in digital safety, education and regulation.
- Co-create accessible, child-friendly policy materials that reflect the diverse experiences of children, including those with disabilities, to support informed and inclusive engagement in digital governance.

Strengthening systems to create an enabling environment

Fostering children's digital wellbeing in Europe requires a holistic, systems-strengthening approach that goes beyond fragmented or issue-specific interventions. Grounded in the socioecological framework, both child protection and whole-school models emphasise coordinated efforts across all levels – individual, interpersonal, institutional and systemic. These models promote digital literacy, emotional regulation and safe online behaviours while ensuring inclusive, sustainable policies and practices across schools, communities and national systems.

> **The move from rhetoric to practice needs a whole ecosystem commitment spanning government, industry, schools, families and civil society to resource, coordinate and normalise a holistic vision of children's digital wellbeing**
>
> Rhiannon-Faye McDonald interview, May 2025

Key pillars of this approach involve supporting teachers and educators through professional development in digital literacy, resilience and wellbeing, alongside actively engaging parents and caregivers, who play a crucial role in shaping children's digital experiences. Research shows that the most effective digital wellbeing strategies are co-created through strong partnerships between families and schools. However, both educators and caregivers feel ill-equipped to support children due to gaps in digital knowledge and confidence. Children themselves call for greater investment in educating trusted adults about online risks, platforms and protective strategies. Successful initiatives promote non-judgmental spaces for dialogue and collaboration, empowering caregivers as relational enablers rather than monitors, and ensuring consistent support for children across both home and school settings. High-quality digital literacy is important, and as part of a system-strengthening approach, should go hand in hand with safety-by-design principals, tech accountability and wider ecosystem responsibilities across the diverse actors that maintain a safe and balanced digital experience for children and young people.

Recommendations:

Encourage system-strengthening and whole-school approaches that embed digital wellbeing into policies, learning environments and broader mental health and inclusion strategies. Digital wellbeing must be woven into school culture, ethos, policies and daily routines. This also includes both multi-stakeholder and cross-sectoral collaboration, for instance, through partnerships between schools and mental health professionals, EdTech providers and media literacy organisations.

Strengthen teacher (and by association, parent/caregiver) training and professional development in the wellbeing and online safety space and engage families and foster strong school–parent partnerships by involving parents/caregivers in digital wellbeing initiatives through training, workshops and co-design.

Embedding online – recognising the interconnectedness of online/offline

There is growing recognition that children's digital and physical lives are deeply intertwined, forming a continuum that requires integrated rather than isolated interventions. A whole-school approach to digital wellbeing, endorsed by the European Commission and UNESCO, advocates for embedding online safety within existing programmes on bullying, sexual health and relationship education to deliver consistent messages around dignity, consent and mutual respect across both online and offline contexts. Evidence shows that most online risks and harmful behaviours mirror existing peer dynamics and relationship patterns, reinforcing the need for prevention models that equip young people to navigate complex social interactions in all settings.

Ethical reflection as part of digital literacy helps children to think critically about the moral and social implications of their actions and experiences in digital environments. It encourages value-oriented discussions, thoughtful decision-making, empathy and a growing sense of responsibility, both for oneself and for others. Additionally, digital wellbeing includes physical health: prolonged screen use affects the body through inactivity and strain, making it essential that interventions address the full spectrum of children's digital engagement: social, emotional and physical.

We need to have values-based conversations with children, conversations that empower them to navigate this world resilient and as healthy as possible. So they can say: "I'm turning this off now. I don't want to be part of this network anymore. I'm putting my smartphone aside and meeting my friend."

Silke Müller interview, June 2025

Recommendations:

Promote a balanced, inclusive approach to digital literacy that moves beyond restrictive or protective-only strategies by embedding online safety modules inside existing programmes, fostering healthy online/offline habits, teaching resilience to online risks, and emphasising technology's potential to support creativity, inclusion and student agency.

Considering children's developmental stages and focus on their resilience

As digital environments become central to children's lives, fostering digital resilience, rather than shielding them from all risks, is essential. Resilience enables children to manage and recover from online challenges through emotional regulation, critical thinking and digital literacy. A strengths-based, age-appropriate approach recognises children's evolving capabilities and supports their development, particularly during adolescence when peer approval and social status play a critical role in wellbeing. Rather than avoiding adversity, children learn through guided experience and dialogue to turn challenges into opportunities for growth. Initiatives like the UK's Digital Resilience model and the Council of Europe's 2025 Year of Digital Citizenship Education stress the need for inclusive, rights-based and restorative approaches that equip children to participate safely, empathetically and confidently online.

Recommendations:

Develop policies and initiatives that are developmentally tailored and age-appropriate approaches by differentiating between age groups (e.g. early childhood, middle childhood, adolescence) and align digital protections and supports accordingly.

Promote digital resilience as a core competency through fostering empathy and positive digital citizenship by for instance promoting programmes that help children understand the emotional impact of online behaviour, encouraging respectful and empathetic interactions.

Reputation-based harms hit adolescents hardest because social status matters so much at that age.

Charlotte Aynsley interview, May 2025

Recognising and integrating children's diversity

Children are not a uniform group, yet digital wellbeing policies often treat them as such, overlooking their diverse developmental stages, social contexts and life circumstances. Promoting digital equality requires an inclusive, intersectional approach that considers overlapping identities such as gender, disability, socioeconomic status, ethnicity and geography. These factors shape how children access, engage with and are affected by the digital world and they also contribute to stark disparities in digital inclusion. Strategies must be tailored to reflect these varied realities to ensure equitable access to digital opportunities and protection from harm, especially for girls, children with disabilities and those from marginalised backgrounds.

Research highlights that children from low-income families, rural areas and those with neurodevelopmental disabilities face the greatest barriers to digital inclusion, often lacking accessible technology and targeted support. This exclusion can lead to social isolation, reduced educational outcomes and increased exposure to online risks. Without user-centred design and inclusive policies, digital platforms may reinforce existing inequalities. An intersectional lens is therefore essential to ensure that digital wellbeing initiatives reach and support the most vulnerable, enabling all children to participate fully and safely in digital life.

Recommendations:

Adopt an intersectional framework in policy and practice that addresses the needs of marginalised and underrepresented groups, recognising how overlapping vulnerabilities compound digital risks and exclusion (Stefanidi, 2023; OECD, 2025b).

Ensure equity, inclusion and age appropriateness in all initiatives and programmes that support children's digital resilience and wellbeing by including particular support for children from disadvantaged backgrounds, rural areas, minority groups, children from low-income families and those with disabilities.

Utilising evidence-based approaches

Despite growing attention to children's digital wellbeing, current strategies often lack a strong evidence base due to research gaps, weak measurement frameworks and underrepresentation of marginalised groups where the evidence exists. This limits the effectiveness of interventions, especially for children facing inequality and discrimination.

Evidence remains fragmented, particularly around how digital experiences shape identity and social norms, with little intersectional analysis. Monitoring and evaluation of digital wellbeing efforts are inconsistent across Europe and few schools systematically assess impact. To improve outcomes, robust frameworks are needed that include emotional and civic dimensions of digital citizenship. Children, especially those facing discrimination, should be actively and meaningfully involved in research design or evidence generation in general, as well as evaluation efforts. Their voices must be authentically represented and acted upon, especially those most affected by exclusion.

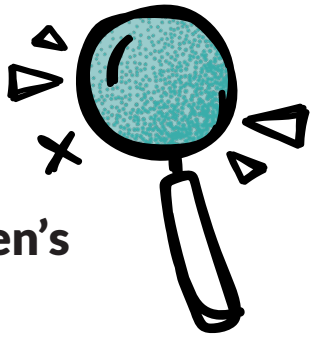
Recommendations:

Close existing research gaps in children's digital wellbeing, particularly around intersectionality and strengthen generation of evidence that is disaggregated by age, gender, ethnicity, disability and socio-economic status.

Establish and support good-quality monitoring and evaluation systems around children's digital wellbeing through investing in and developing robust methodologies and tools that measure children's digital resilience and wellbeing holistically.

> **[An] idea is if apps and devices had [something similar to] a rating system where, for example, [one] app gets a green label [indicating] no known behavioural risks, … and then a red label, where the addictive design is known and documented. [This could include specific warnings] like: 'May significantly affect attention span, self-regulation, or sleep cycles'.**
>
> Tyler Shores interview, May 2025

FINDINGS



The current ecosystem for children's digital wellbeing

Over the last decade, the European Union has further built a layered regulatory architecture for protecting and empowering European children in the digital age. Through key legal instruments, specific child-centred strategies, evidence-based policies and operational tools, a mutually reinforcing and child-rights aligned regulatory framework has been established that is widely seen as the most comprehensive digital protection model globally.

The General Data Protection Regulation (GDPR) requires privacy-by-design and sets an age-graduated consent expectation (13–16 years) for information service providers (ISPs), prompting the development of age-appropriate design codes across Member States. The Digital Services Act (DSA) requires every intermediary to identify and mitigate 'systemic risks' to minors and bans behavioural advertising to children, while empowering the European Commission (EC) to audit what are known as 'very large online platforms' (e.g. Instagram, TikTok, Snap) and search engines (VLOPs/VLOSEs). Revisions in 2018 to the Audiovisual Media Services Directive (AVMSD) extend long-standing broadcast rules on harmful content, sponsorship and commercial communications to video-on-demand and video-sharing platforms, expressly to protect minors from harmful content on social media.

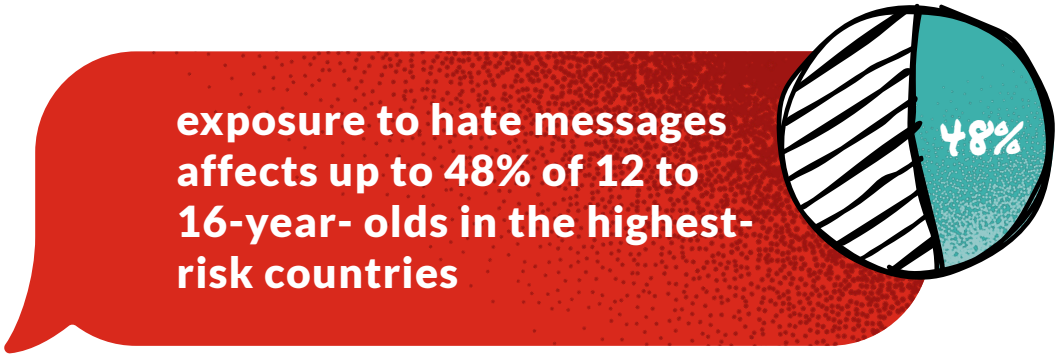
The UK and Türkiye both engage with the European Union's digital policy landscape in distinct ways, shaped by their regulatory histories and geopolitical contexts. In the UK, current frameworks align with the EU's digital agenda, particularly around child online protection and data governance, but diverges in legal mechanisms and enforcement. The UK's Online Safety Act 2023 and Age-Appropriate Design code (referred to as the Children's Code) reflect and in some areas exceed the EU's regulatory ambitions. For example, the Children's Code operationalises principles of GDPR and expands beyond it through, for instance, mandatory design standards tailored to children's needs. The UK's regulatory regime also provides for stronger enforcement mechanisms (e.g. Ofcom's significant investigatory powers) and broader scope (beyond VLOPs). Türkiye aligns selectively with EU regulations and the country's framework under Law No. 5651 (Law on the Regulation of Publications on the Internet and Combating Crimes Committed through Such Publications) is more content-restrictive and securitised, reflecting national priorities around morality, national security and public order rather than children's rights or children's participation per se. Data protection is governed by the Personal Data Protection Law (KVKK, Law No. 6698), which was broadly modelled on the EU's GDPR. However, it is not fully equivalent, as it lacks specific safeguards for children's data compared with the GDPR or the UK's Children's Code. Türkiye participates in regional dialogues (e.g. through the Council of Europe Budapest Convention); however, gaps in enforcement and public digital literacy remain, limiting the impact of its regulatory efforts.

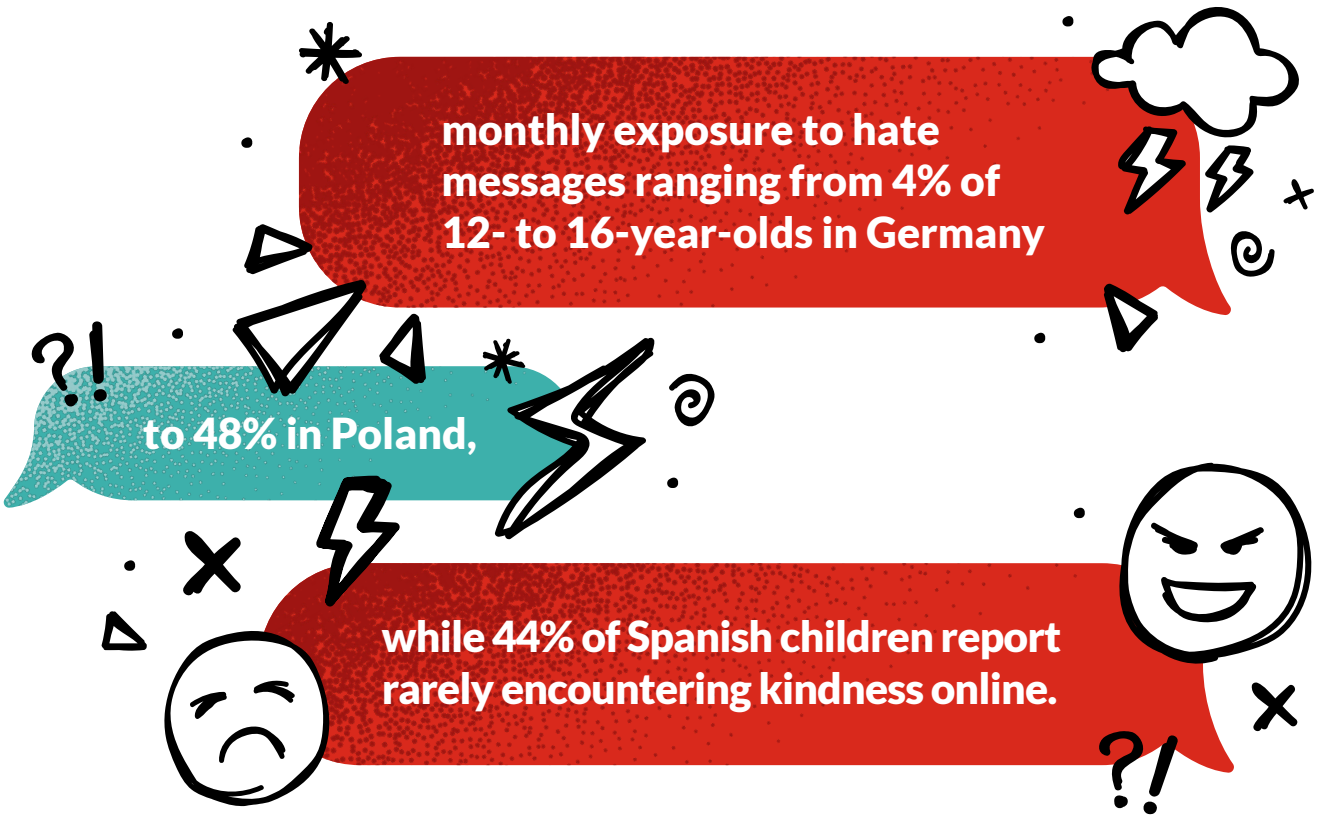
Continuous guidance and enforcement innovations, such as the EU-wide privacy preserving age verification app, which was launched in July 2025, demonstrate the EU's readiness to operationalise these duties as digital markets evolve. Complementing these legal obligations, the Better Internet for Kids Plus (BIK+) strategy adopted in May 2022 operationalises children's rights principles through three integrated pillars: creating a safe digital environment, equipping children and caregivers with digital literacy, and supporting meaningful youth participation. The initiative reaches more than 30 million Europeans annually through the network of Safer Internet Centres, dedicated helplines and a continually updated resource portal, and has become a stated policy priority in almost every Member State. Smahel and colleagues (2020) through the EU Kids Online survey demonstrated that, while a majority of European children avoid harm, exposure to hate messages affects up to 48% of 12- to 16-year-olds in the highest-risk countries and self-harm content reaches more than half of children in Czechia, Poland, Serbia and Finland. This data is being considered in DSA risk-assessments, the forthcoming EU age assurance toolbox and grassroots digital literacy campaigns across Europe.

Despite this comprehensive regulatory framework at European level, disparities remain across Member States. This includes areas such as age verification, content moderation and digital literacy. National laws for age verification vary, introducing at times stricter or differing requirements. This leads to fragmented enforcement and a 'postcode lottery' of standards. The European Commission is working on harmonised solutions, such as a privacy-preserving EU-wide age check, but it lacks a unified technological approach. Age-assurance is the broad, rights-based suite of measures that include age verification, estimation and contextual signals that allows services to treat children as children without demanding more data than is necessary. Reliable, privacy-preserving checks are becoming the gateway to protections such as advertising bans, safety-by-design duties and AI watermarking, as signalled by the EU's forthcoming Age-Assurance Toolbox and July 2025 pan-European age-check app. Yet experience shows that one-size-fits-all, high-friction models can backfire.

Vulnerable groups including young migrants, children in care or families without formal ID risk being excluded from learning platforms and peer spaces. This may hinder their development of wellbeing and lead to a widening of inequalities that the protection system seeks to address. The policy and solutions must be proportionate and grounded in the United Nations Convention on the Rights of the Child (UNCRC). Furthermore, governments and services should consider multiple routes for compliance so that no child is excluded. This could include measures such as device estimation capabilities or integrating school-issued credentials within educational systems. Lastly, these solutions need to engage in both data minimisation and independent audits to stop states or platforms moving into surveillance and there should be clear guidance for the education sector so schools can translate a technical check into teachable moments on privacy and rights. Provided it is properly framed, age-assurance can enable safer, more inclusive participation across the digital ecosystem.

While the DSA provides a common statutory framework to work from, differences at Member State-level continue to compromise online safety and digital wellbeing. For instance, France's SREN law, requires pornographic and other high-risk sites to deploy double-blind age-verification or face blocking orders. In Spain,





the draft law on the Protection of Minors in Digital Environments raises the minimum age for opening a social-media account from 14 to 16 and ties the rule to effective age-verification systems (however, this will be dependent on the public bodies involved in compliance operating and resourcing at the EU and Spanish state level). The EC is trying to close the enforcement gap with a privacy-preserving EU age check introduced in July 2025, but the resources behind this move do not name a specific, single technology, leaving Member States to localise the solution. As a result, companies must manage several complex technical standards and supervisory styles, whilst cross border platforms and services can still exploit wherever the weakest link exists.

Similarly, content moderation is also implemented inconsistently. Under the DSA, platforms must resource moderation for all EU languages; however, this is not the reality for some of the lesser spoken EU languages. Children's exposure to harmful content varies as well, with EU Kids Online data showing monthly exposure to hate messages ranging from 4% of 12- to 16-year-olds in Germany to 48% in Poland, while 44% of Spanish children report rarely encountering kindness online (Smahel et al., 2020).

Finally, continued regulatory adaptation is needed to provide protection from emerging threats such as AI-generated harmful content, deepfakes and algorithmic risks. Current regulatory frameworks are not keeping up with the pace of technological developments, suggesting a different, more holistic approach rooted in existing child protection and children's rights principles may be needed. Generative AI has compressed both the cost and skill barriers for producing harmful material. Synthetic child sexual abuse material (CSAM) is circulating at an industrial scale, with the Internet Watch Foundation (2024) logging more than 20,000 AI-generated images from a single darkweb forum in one month, one sixth of which showed contact abuse of children under 10 years. Europol co-ordinated an operation in early 2025 that arrested 25 offenders from 19 countries for trading AI-fabricated abuse content. Deep-fake technology now increasingly targets children, with global incidents up by 550% since 2019 and an 81% jump since the beginning of 2025. This is driven by a combination of factors across the digital ecosystem, including lower technical barriers, increased accessibility to tools and exploitative demand, all in the context of weak global enforcement and legal grey areas that fail to adequately manage these risks (Thorn, 2024).

Deep-fake technology now increasingly targets children, with global incidents up by 550% since 2019 and an 81% jump since the beginning of 2025.

Recommender systems have become a key factor for harm, with controlled tests demonstrating that TikTok pushes self-harm and eating disorder clips to teen accounts within minutes. Amnesty International's audit (2023) found the 'For You' feed routinely amplifying anxiety-inducing content to children worldwide. From a regulatory perspective, this creates difficulties in forging and implementing strong, rigorous and helpful standards. The 2024 European Union Artificial Intelligence Act classifies systems likely to harm a child's physical or mental health as high risk and requires providers to build in safety, transparency and deep-fake watermarking, yet full application will not occur until late 2026. The DSA does require platforms to address systemic risks to children but its first investigations still rely on guidance rather than hard technical standards for synthetic media or child-specific algorithmic audits.

A more nuanced solution involves implementing bridging measures that protect children whilst still enabling them to enjoy the positive aspects of their digital lives. Examples include voluntary industry commitments to watermark synthetic media and limit emotionally manipulative child-facing design; interim algorithmic audits and risk assessments focused on the impact they have on children; and enhanced transparency reporting tailored to child-specific risks. Safeguarding conditions should also be attached to public procurement and platform funding, requiring early alignment with forthcoming legal standards. In parallel, cross-sectoral safeguarding panels and accelerated digital literacy initiatives should be deployed to equip children and caregivers with the tools to navigate emerging harms. These actions are essential to uphold children's rights before statutory protections are fully operational, and to foster a culture of upstream, anticipatory compliance. Charlotte Aynsley noted that one option is to tie platform profits to child-safety outcomes, as linking commercial success directly to safety performance is judged to be the single step most likely to speed up progress (interview, May 2025). Charlotte Aynsley stated how important it is to 'make shareholders responsible for safety… associate safety metrics with the financial rewards of shareholders', as without hard financial pressure, the burden remains on schools, parents and NGOs (interview, May 2025).

Practitioners increasingly focus on things such as the best interests of the child, privacy-by-default and children's right to participation in decision-making. UNICEF research office Innocenti's (2024) brief on generative AI argues that children's rights norms provide some safety/guardrails in the absence of detailed rules that are not yet written. Civil society organisations' (CSO) submissions to the call for evidence on the EU Online Safety code mention the importance of managing these recommender systems. The BIK Policy Monitor 2025 and related reports (O'Neill and Dopona, 2025) show a maturing, but fragmented landscape. The report calls for more integrated strategies, robust data systems and a focus on children's voices and rights. While there is clear progress in policy development and implementation, there is a lack of coherence across sectors and levels, and gaps between policy and practice still need to be addressed. Meaningful child and youth engagement across the ecosystems they inhabit is fundamental to build a truly inclusive and empowering digital environment for all children. Core risk of harms such as exploitation or coercive manipulation remain the same, but the scale and speed that AI can reproduce them makes it more urgent. As such, a stable rights-based approach is needed for navigating emerging harms.

Digital stress factors in children – The cost of hyper-connectivity and social norms

Children across Europe report a range of digital stressors, including cyberbullying and harassment, information overload and disinformation, addictive design features such as infinite scroll and autoplay, fear of missing out, and social comparisons (O'Neill and Dopona, 2025), with bullying being the top online worry (Charlotte Aynsley interview, May 2025). A study carried out by Save the Children Romania in 2025 on the effects of cyberbullying on children's emotional wellbeing found that children who have been victims of at least one type of cyberbullying have significantly more difficulty concentrating, feel anxious about going to school or consider skipping school, feel hopeless, report having nightmares, or have thought about hurting themselves. Half (50%) of the children interviewed said they have been called hurtful, offensive words or insults that caused them fear, and 45% of them say this happened in the last month. A quarter (26%) of children reported they have had difficulty falling asleep after an online incident, with 6% saying this happens frequently (Save the Children Romania, 2025).

The 'hyper-connectedness' of children's experience has consequences for their health, development and future (O'Neill and Dopona, 2025) and these stressors are associated with both increased internalised health problems, for instance, anxiety and depression, or externalised consequences, such as aggression in children and young people (Li et al., 2024). A recent study (OECD, 2025b) that included digital stress factors reported by students across different OECD countries found that approximately 1 in 6 (17%) 15-year-olds feel anxious without their devices and a third (35%) are in constant online contact with friends. 1 in 10 (10%) report problematic social media use, with higher rates (14%) among children from migrant backgrounds. In Romania Save the Children (2024) found through its support services that in the last two years, one in three children between the ages of 8 and 17 have shown some form of emotional disorder, such as anxiety or depression, caused by prolonged exposure to social media.

> **Spain, girl, 16: Well, I think I use it a bit too much, because especially with TikTok, you start at six like 'just five minutes' and then suddenly it's eight-thirty and the whole evening is gone.**
>
> Save the Children Spain, 2024

Furthermore, a number of studies describe how children's increasing exposure to harmful content such as hate messages, desensitisation to violence and the promotion of harmful behaviours affect their wellbeing and rights globally (The Lancet Digital Health, 2024) (Hollis et al., 2020), (Kardefelt Winther et al 2023), with experts confirming that teenagers frequently report seeing 'awful, awful things' in their feeds (interview with Charlotte Aynsley, May 2025). In addition to these, experts also highlight emerging digital stress factors of misogyny and toxic masculinity, including spread of deepfake nudes, financial sexual exploitation of boys, and shame and self-blame following image-based abuse, often reinforced by victim-blaming narratives (interview with Rhiannon-Faye McDonald, interview with Charlotte Aynsley, May 2025). This is confirmed by children globally, who highlighted that, just as gender shapes their access to and use of digital technology, it also profoundly shapes their sense of safety online (Third and Moody, 2021).

Indeed, digital harms have significant and gender-specific consequences for children and young people, influencing their mental health, safety and social development in distinct ways. Repeated exposure to harmful social and gender norms online can reinforce and amplify these harmful messages, especially as online platforms allow them to be spread faster, more widely and visualised. This can create a false sense of normalcy, leading children to believe such behaviour is typical or acceptable. Online platforms often tolerate or even glorify toxic behaviour and messaging, contributing to environments where hate, harassment and abuse are normalised (Mandryk et al., 2023). Over time, children may internalise these harmful norms.

Girls and young women are particularly vulnerable to online content that perpetuates harmful beauty ideals, often leading to increased body dissatisfaction and mental health struggles. The World Health Organization (2025) highlights that the most vulnerable young people, especially girls, are disproportionately affected by the negative impacts of digital technologies, including social media, which can exacerbate existing mental health challenges. Charlotte Aynsley notes that girls face body-image pressures, which are exacerbated online through algorithms that quickly learn a teen girl's interest in clothes or fitness, for instance, then feed them more extreme content that can harm their self-esteem (interview, May 2025).

Children generally agree that girls are more likely to be at risk online and they attributed this to gendered social norms that reinforce different standards for boys' and girls' behaviour, both online and offline (Third and Moody, 2021). Girls are more likely to encounter gender-based online abuse, such as sexual harassment, misogynistic remarks and exposure to degrading or violent pornography (Papamichail and Sharma, 2019; Children's Commissioner, 2023). Gender-based digital violence is a continuation of offline gender violence, now amplified by digital tools like social media, messaging apps and online platforms, and adolescents often normalise these behaviours, especially in romantic relationships (Save the Children Spain, 2024). These experiences not only harm their psychological wellbeing but also reinforce restrictive gender norms that undermine their autonomy and safety in digital environments (NSPCC, 2025).

Spain, girl 16: And here the problem is also partly that if a woman posts something, she's already seen as provocative or doing something wrong, but if a man posts it, he's the best in the world.

Save the Children Spain, 2024

For boys, the gendered impact can manifest through exposure to violent and misogynistic content, particularly pornography, which has been linked to the development of harmful gender attitudes (Papamichail and Sharma, 2019). Boys who regularly consume such content are more likely to normalise aggression and objectification, contributing to peer-perpetrated sexual violence (Children's Commissioner, 2023). While girls are more frequently targeted for sexual exploitation, boys are also at significant risk, especially in cases of sextortion, where they may be coerced into sharing explicit images and are subsequently blackmailed. These cases are often underreported due to shame, fear of stigma or concerns about masculinity. Law enforcement and child protection agencies have emphasised that boys may be less likely to disclose abuse, making it essential for prevention and support efforts to be gender-inclusive and trauma-informed (NCA, 2024). These dynamics underscore the urgent need for digital education and protection strategies that are sensitive to the distinct risks faced by all children.

However, children online are exposed to harmful norms not only related gender identities but also to other minority identities. Social norms around discrimination and stigma based on vulnerabilities are also exacerbated in the online space. Discrimination, under-representation or misrepresentation of minority groups online can also negatively impact the development and validation of children's cultural and religious identities and can contribute to poorer mental health and wellbeing outcomes. Overall, children who face stigma and discrimination in their everyday lives are more likely to suffer from poorer digital wellbeing, as they are at greater risk of encountering online harms (OECD, 2025b). For example, young people with minoritised identities, such as LGBTQIA+ individuals and children of colour are more likely to face identity-based online victimisation (Keighley, 2021; Tao and Fisher, 2022). This includes direct and indirect experiences of verbal and sexual harassment, threats of physical violence, and exposure to racial discrimination, all of which can contribute to serious mental health challenges, such as depression and suicidal thoughts. Despite the growing emphasis on digital wellbeing in European policy, significant gaps remain in addressing the needs of LGBTQIA+ children. LGBTQIA+ children are disproportionately exposed to online risks such as harassment and exclusion, yet remain largely invisible in digital wellbeing strategies. Their needs for safe, affirming online spaces and targeted support are rarely addressed in national curricula or policy initiatives.

Children with neurodevelopmental disabilities, such as autism spectrum disorder (ASD), attention-deficit and hyperactivity disorder (ADHD) and learning disabilities are particularly vulnerable in online environments due to challenges with communication, social understanding and impulse control. These difficulties can increase their risk of exposure to online harm, including cyberbullying, exploitation and misinformation. Additionally, their limited ability to interpret social cues and assess risk can make them more susceptible to manipulation or unsafe interactions online (Hellström, 2019; Lough, Flynn and Riby, 2015).

Towards a definition for children's digital wellbeing

Children's digital wellbeing is not uniformly defined across Europe and political and public narratives vary largely. The OECD and the EU Kids Online framework both provide guidance around children's digital wellbeing, but there is no single agreed definition to guide coordinated policy development and standardised implementation of best practice across Europe. This also hinders cross-country comparability (O'Neill and Dopona, 2025). The OECD (2025b) notes that digital wellbeing is often understood in two ways: narrowly as 'the psychological or emotional well-being of children during their digital engagements' and more broadly as encompassing 'the effects of digital technology on children's physical health, socio-emotional well-being, mental health, education and learning'. The Council of the European Union (2022) described 'Well-being in digital education as a feeling of physical, cognitive, social and emotional contentment that enables all individuals to engage positively in all digital learning environments including through digital education and training tools and methods, maximise their potential and self-realisation and helps them to act safely online and supports their empowerment in online environments'. The council stresses the potential to empower schools in enhancing the wellbeing of learners and of the school community in general (including teachers and parents).

Many national strategies include wellbeing, though implementation varies (OECD, 2025b). Nearly one-third of European countries have national action plans for children in the digital environment and there are examples of countries, such as Norway and Slovakia, where digital wellbeing is integrated in broader child protection frameworks. Children's mental health and wellbeing online is an emerging priority, with 22 of 29 countries having wellbeing-related measures in place or in development (O'Neill and Dopona, 2025). Wellbeing is increasingly visible in national digital education strategies, often under the umbrella of mental health, online safety, or digital citizenship. While the depth of integration varies (O'Neill and Dopona, 2025), this shift from a risk and harm focus to a more holistic approach, fostering positive engagement and opportunity, is welcomed.

Political and public narratives around children's digital wellbeing thus far have mainly focused on harm rather than opportunity, keeping digital wellbeing visible in parliamentary and media narratives but largely through a risk and culpability lens. Charlotte Aynsley noted that media stories and policy proposals centre on addiction, screen-time and grooming/exploitation, while the positive side of being online such as developing or acquiring creativity or friendships rarely gets prioritised (interview, May 2025). Outright bans are an example of emphasising the potential negative impacts over recognising the opportunities for children's social connections and community when used safely. While governments' efforts to ensure a safe digital childhood by interrupting and addressing the harms children are facing online are welcomed, complete bans may inadvertently undermine efforts to promote children's digital wellbeing. Many young people argue that these bans will just push children and young people into less visible parts of cyberspace, where it is more difficult to manage risk and prevent harms from occurring. They also don't foster communication between children and adults, particularly their parents and caregivers.

Well-being in digital education as a feeling of physical, cognitive, social and emotional contentment that enables all individuals to engage positively in all digital learning environments including through digital education and training tools and methods, maximise their potential and self-realisation and helps them to act safely online and supports their empowerment in online environments.

Council of the European Union, 2022

Recognising the opportunities for children's online engagement helps to move away from a deficit model of children's digital lives. This sentiment is shared by children. As Third and Moody stated (2021), children deeply value opportunities to use digital technology to express themselves creatively and politically, and to share who they are and what they believe with the world. They want to use digital technologies to connect and learn and for opportunities to contribute meaningfully to their communities and create positive change in the world. Children also want adults to recognise the value of digital play for their learning and development, and to respect their evolving capacities to independently balance their right to leisure and play with other rights.

Indeed, a definition of children's digital wellbeing should be grounded in a rights-based approach, drawing on the UNCRC General Comment No. 25 (2021), which emphasises children's rights to protection, participation and development in the digital environment. It should also align with frameworks such as the OECD's digital literacy model and UNICEF's guidance (2020), which advocate for promoting resilience and empowerment rather than focusing solely on restriction. Digital wellbeing encompasses not only the absence of harm but also the presence of positive, enriching experiences that support children's mental, physical and social health. It involves balancing risks and opportunities in ways that enable children to thrive online (Livingstone and Stoilova, 2021).

Rhiannon-Faye McDonald agrees digital wellbeing should be viewed as a broad and child-centred construct that 'is more than just safety… Safety is a part of well-being, but it's only one aspect' (interview, May 2025). Wellbeing encompasses physical, emotional and mental health online, the cultivation of positive digital opportunities, but it also ensures creating the 'armour' of resilience to rebound when harms do occur. This holistic lens contrasts with narrower policy tools and efforts that still treat online safety as a synonym for wellbeing. To effectively support children's digital lives, curricula and guidance should balance risk mitigation with positive engagement. This means combining protective content, such as abuse prevention, with developmental content that fosters creativity, digital citizenship and meaningful participation online. Essentially, they are two sides of the same coin.

In addition, a focus on mental health as part of children's digital wellbeing needs to be highlighted. European policy treats mental health as a prerequisite of successful digital transformation. The Commission's 2023 'Comprehensive Approach to Mental Health' identifies children and young people as a high-risk cohort and has committed over €1 billion for prevention and resilience programmes across education and online environments. This focus on mental health was reiterated in the most recent EU Council conclusions from May 2025, calling on EU countries and the Commission to better protect the mental health of children and adolescents by promoting the safe and healthy use of digital tools, and by creating a healthier, safer and more age-appropriate digital environment. Similarly, the WHO European Framework for Action on Mental Health 2021–2025 calls on member states to strengthen services and programmes to address the mental health needs of children and adolescents, anchoring resilience building in schools and community settings.

In their partnership, the Vodafone Foundation and Save the Children identify digital wellbeing as a holistic concept. There is a recognition that all children may be vulnerable online and need support to protect their mental health, understand their rights and make informed choices. Within that, a balanced relationship with technology that encourages healthy screen habits, emotional regulation, and meaningful online and offline engagement is promoted.

Education plays a central role in promoting and articulating digital wellbeing effectively. We work with teachers, families and communities to embed digital wellbeing into everyday learning. Our main programmes are co-created with children, ensuring their voices shape the content and that learning reflects their real experiences.

By fostering digital literacy, empathy and critical thinking, we help young people thrive in a connected world – empowered to use technology creatively and responsibly, while staying safe and well.

Digital wellbeing in school and education initiatives

The Council of the European Union specifically notes that 'well-being in digital education' is understood as a feeling of physical, cognitive, social and emotional contentment that enables all individuals to engage positively in all digital learning environments, including through digital education and training tools and methods. It supports individuals to maximise their potential and self-realisation. It helps them to act safely online and supports their empowerment in online environments (Council of the European Union, 2022).

There is growing recognition across the EU and its Member States that schools must move beyond narrow, sector-specific objectives, like academic performance. This shift is grounded in the fundamental rights of children to quality education, healthcare, protection and participation (UN Convention on the Rights of the Child, 1989; Cefai, Simões and Caravita, 2021). Schools are seen as central actors and vital platforms for fostering a positive and structured approach to children's digital lives, through integrating digital literacy into curricula, and the promotion of mental health, safety and overall wellbeing (OECD, 2025b). The responsibility for digital wellbeing is increasingly acknowledged within national education frameworks and teacher training programmes, though the clarity and consistency of this recognition vary across countries. In Europe, several key frameworks guide this integration.

The EU Digital Education Action Plan (2021–2027) sets out a unified vision for inclusive and high-quality digital education, emphasising the need for digital infrastructure, teacher training and student wellbeing (European Commission, 2020). The European Digital Competence Framework (DigComp) provides a structured model for developing digital skills across five key areas, including safety and information literacy, and has been adopted or adapted by countries such as Spain, Italy, Estonia and Belgium (European Commission, 2022). The Council of Europe's Digital Citizenship Education (DCE) Framework complements this by focusing on equipping children with the values, attitudes and skills needed to navigate the digital world responsibly (Council of Europe, 2023).

Yet, the capacity and autonomy of schools vary widely. In some countries, schools are empowered to develop their own policies (for instance, Belgium and Malta), when others rely on centralised mandates. In the UK, the Education for a Connected World framework outlines age-appropriate digital competencies, including online relationships, reputation and wellbeing (UKCIS, 2020). The Online Safety Act (OSA) mandates that schools implement appropriate filtering and monitoring systems, though the specificity of these requirements can vary (Internet Matters, 2025). While these differences can foster innovation it also leads to inconsistencies in implementation (O'Neill and Dopona, 2025). The OSA, however, does introduce risks, relating to adult perceptions of harm and children's privacy due to monitoring obligations. Broad or unclear definitions of harm may unintentionally restrict children's access to important resources on sensitive topics, such as sexual and reproductive health, gender identity and mental health. Additionally, increased monitoring by schools,

as recommended within the OSA, raises privacy concerns for children and could undermine trust within schools. Addressing these risks requires clear definitions, transparent monitoring practices and the meaningful involvement of children in policy development.

Schools are now expected to promote digital wellbeing by teaching responsible technology use, implementing digital safety policies and fostering resilience, as well as critical thinking through comprehensive digital literacy programmes (Arroyo Moliner et al., 2023; Gouseti et al., 2021). The OECD (2025b) states that embedding digital literacy and citizenship education into curricula includes teaching students how to critically assess online content, promoting responsible online behaviour and awareness of digital risks as well as encouraging safe and respectful communication online. The Council of the European Union (2022) notices that aspects such as inclusion and exclusion, cyberbullying, contentment and self-confidence are important.

Across Europe, the vast majority of countries (27 out of 29) implement national initiatives on the topic of digital literacy. These typically focus on identifying misinformation and fake news, evaluating sources and detecting bias, and understanding media influence (O'Neill & Dopona, 2025). For children, the top five most important digital literacy skills also include critical thinking, tolerance and respect and they highlighted that their schools are not teaching them important digital skills (Third and Moody, 2021). The study by Third and Moody (2021) found that while children are cautious of false information online, the majority felt that discerning between true and false information sources is challenging, and they worry they do not always have the digital literacy skills to assist them in critically assessing information online. Children's ability to distinguish between trustworthy and misleading information varies significantly by age and context. While older students demonstrate relatively strong fact-checking behaviours, younger children may struggle with identifying misinformation, particularly related to source credibility, sponsored or algorithmically amplified content, emotional manipulation, and clickbait (Tamboer et al., 2023).

Better Internet for Kids (O'Neill and Dopona, 2025) notes that children's understanding of data collection, consent and surveillance is limited and only half (51%) of 15-year-olds can change privacy settings easily, and almost a third (28%) do not compare sources when searching online (OECD, 2025b). Many children are unaware of how their data is used or how to protect it and 40% were upset when personal data was shared without consent (OECD, 2025b). A recent study of Czech adolescents aged 11 to 18 years found that knowing their data is commodified impacts on children's sense of agency in the digital environment. In an activity to map the power dynamics of the internet, the majority (80%) of participants identified themselves as the 'servants' from whom others – primarily technology companies or digital content creators – profit financially (Smahel et al., 2025). Rhiannon-Faye McDonald confirms that there is a critical gap in teaching children about algorithmic profiling and targeted advertising, in particular, the commercial intent of social media companies, as well as a gap in ethical reflection on what the tools they use and like mean more widely (interview, May 2025). Formal schooling does not usually offer structured privacy management training. Therefore, opportunities to practise informed consent (e.g. interrogating cookies, terms of service) are ad hoc. While some curricula address topics such as data privacy and digital rights, most content relies on NGO-led awareness campaigns (O'Neill and Dopona, 2025). Charlotte Aynsley notes that a simple skills framework agreed by schools and regulators is needed to embed critical thinking in lessons and skills development with young people (interview, May 2025).

Romania, girl, 16: Adults (institutions, companies, the parents and the teachers etc) should teach children to make the difference between fake news and true news.

Third and Moody, 2021

Germany, girl, 16: Generally, it is a gigantic riddle what happens to our data, as it is hidden in complex data protection agreements and legal texts. I would like to obtain clarity about what really happens with my data.

Third and Moody, 2021

Children, experts and research consistently call for improved staff training and emphasise the importance of regular, high-quality professional development. This is essential to effectively manage online risks and integrate more complex concepts, such as digital resilience and wellbeing, into everyday teaching practices (OECD, 2025b; Charlotte Aynsley interview, May 2025; Third and Moody, 2021; Eurochild, 2025). Children felt that teachers were generally not knowledgeable about these issues, producing gaps in children's digital literacy skill sets (Third and Moody, 2021). Many educators themselves feel unprepared to address digital wellbeing issues such as cyberbullying, screen time and digital addiction. This is particularly true for educators supporting children with disabilities. A review by Mastam and Zaharudin (2024) found that many educators working with students with disabilities lack sufficient digital competence due to inadequate training. This limits their ability to provide effective support. Targeted professional development that strengthens both technical skills and inclusive digital teaching practices is essential for improving digital wellbeing outcomes for students with disabilities. Charlotte Aynsley noted that in the UK, for instance, the lack of appropriate training materials leads to the use of commercial safety training, drawing on fear-based messaging and offering little evidence of lasting impact on children (interview, May 2025). The JOMO[2] (Joy Of Missing Out) programme, for instance, is a Vodafone Foundation initiative that supports teachers with structured resources and pedagogical tools to enable the delivery of the content in the classroom. JOMO aims to promote healthy digital habits, reduce digital stress and create reflective learning environments focused on balance and wellbeing for children.

While some education systems offer structured and ongoing professional development for teachers, others lack comprehensive training programmes, leading to fragmented implementation (Cefai et al., 2021; Guitert and Romeu, 2021). Initiatives such as the DETECT project and tools like SELFIE and the Critical Digital Literacies Framework offer structured training to build educators' digital competencies and critical thinking (Gouseti et al., 2021; Panesi et al., 2020). These are often supported by ongoing professional development through alumni networks and resource hubs (Smoothwall, 2024). To be truly effective, teachers' and educators' capacity strengthening efforts must not only be a focus but also be supported by public policies that embed digital skills development into the core of educational planning. This includes integrating digital literacy into teacher education curricula, engaging digital experts within schools and aligning digital

[2] The Joy of Missing Out (JOMO) concept by Coding for Tomorrow encourages children to consciously disconnect from digital media to foster mindfulness, emotional regulation and offline engagement. https://coding-for-tomorrow.de/konzepte/joy-of-missing-out/

competence with national teaching standards. However, the professional development of educators must be considered alongside broader systemic challenges, such as limited resources and the need for better integration of such initiatives into existing educational structures. This ensures that time and capacity constraints are more effectively addressed.

The involvement of schools goes beyond providing digital literacy and citizenship education, emphasising a holistic approach to addressing children's digital wellbeing. Efforts are seen as most effective when embedded in school culture and supported by collaboration with external stakeholders such as mental health professionals, EdTech providers and community organisations (OECD, 2025a; O'Neill and Dopona, 2025). The OECD (2025b) specifically outlines a four-pillar model: (1) legal frameworks (2) education systems (3) parental guidance and (4) child participation, with the whole-school approach mentioned.

Innovative intervention and best practice models particularly focus on whole-school approaches (e.g. Ireland's Cineáltas), peer-led programmes (e.g. Hungary's NETMENTOR) and the involvement of youth advisory panels (e.g. Luxembourg's BEE SECURE). These models reflect a shift towards participatory and contextualised approaches, moving beyond top-down awareness campaigns. A whole-school approach integrates digital wellbeing into broader mental health strategies and supports teacher confidence and wellbeing (Cefai, Simões and Caravita, 2021). Research shows that teacher wellbeing is closely linked to student wellbeing, reinforcing the importance of equipping educators to manage digital challenges effectively (Harding et al., 2019).

Despite increasing recognition of the importance of digital wellbeing in education, implementation across schools remains inconsistent. There are challenges with scalability and evaluation of best practices and many initiatives are project-based and lack long-term funding or integration into national systems. This inconsistency is further exacerbated by disparities in infrastructure and digital access, particularly in rural or socio-economically disadvantaged areas, where students are more likely to experience digital exclusion (UNICEF UK and Carnegie UK Trust, 2021).

CONCLUSIONS

Advancing children's digital wellbeing requires more than isolated interventions, but rather a system-focused approach that embeds digital wellbeing within the broader structures that support children's lives. Recognising that digital experiences are inseparable from children's overall experiences, supporting their digital wellbeing must be integrated into the everyday environments where they grow and develop, namely their families, schools, communities and policy systems. This approach must be child-centred, rights-based and informed by children's voices, supported by coordinated action across sectors. Ultimately, digital wellbeing should be seen as a shared responsibility, embedded in the systems that shape children's lives both online and offline.

Taking a child rights perspective

As highlighted by Third and Moody (2021), children believe that digital technology is critical for realising their rights in the contemporary world, and many see digital access and use as a basic need. Children particularly value how digital technology and connectivity allow them to access a wide variety of resources, helping them learn about diverse ideas, people and ways of life as they grow. They highlighted that digital technology plays a critical role in their developing sense of identity, their education and employment opportunities, and more broadly, in strong economies, the appreciation of diversity and social justice outcomes. Indeed, many saw technology as a potential leveller of inequalities, enabling children to enjoy a better life. Overall, though cognisant of the ways digital technology can infringe their rights, children see access to the internet as vital to achieving their rights (Third and Moody, 2021).

All decisions affecting children should be guided by the upholding of their rights, as set out in the UN Convention on the Rights of the Child (UNCRC). The best interests of the child principle is a fundamental part of this, ensuring that any decision that may have a direct or indirect impact on children primarily considers their best interests. In all actions related to the digital environment, the best interest of every child must be a primary consideration. This applies to the development of policies and regulations as well as the provision, design, operation and management of digital products and services that children use or may access. Applying this principle recognises that children are not just passive users of technology but are rights-holders with a voice on how digital spaces are designed and governed (UNICEF Innocenti, 2025). The UN Committee on the Rights of the Child General Comment No. 25 (2021) provides guidance to States on how to implement the UNCRC in the digital environment. It emphasises that children's rights, such as access to information, privacy, protection from harm, and participation, must be upheld online just as they are offline.

A balanced approach between competing rights and conflicting interests is needed to support safety online, while also ensuring other children's rights (for instance, the right to play and to freedom of speech). Blanket bans can lead to disadvantage. In developing policies that aim to protect children from online risks (such as access to harmful content), policymakers should also consider their rights to freedom of expression, access to information, and participation. The interests of parents, governments or tech companies may not always be based on children's rights, creating a conflict between children's interests and the interests of others. For example, while age verification and parental controls help to keep children safe online, they can also limit children's rights to privacy and self-expression. As children grow and gain more independence, protections must reflect their evolving capacities (UNICEF Innocenti, 2025).

Businesses share the responsibility for upholding children's rights and children are asking that companies clearly explain their policies and practices to them and reel in the pervasive presence

of marketing and advertising in the digital spaces they populate (Third and Moody, 2021). Children are also calling on states and other duty bearers to enact tighter regulation to curb private entities' monetisation of their data (Smahel et al., 2025). In addition, there are Children's Rights and Business Principles, developed by UNICEF, the UN Global Compact and Save the Children, providing a comprehensive set of principles guiding companies on the full range of actions they can take to respect and support children's rights[3].

United Kingdom, girl, 17: Digital rights are human rights. It shouldn't be a trade.

Third and Moody, 2021

The combined trends of datafication, commercialisation and hyperconnectivity potentially expose children to a range of exploitative economic practices in the digital environment, with implications for their right to protection from economic exploitation (Article 32), as well as their rights to health (Article 24), privacy (Article 16), information (Article 17), education (Article 28) and freedom of thought (Article 14) (Third and Moody, 2021). Additionally, laws and policies are national or regional in scope. This creates loopholes and difficulties in implementation and oversight of digital products and services that work across borders (UNICEF Innocenti, 2025). Integrating systematic Child Rights Impact Assessments (CRIA)[4] for instance into the design of digital products or services can help evaluate how emerging technologies may affect children's rights (UNICEF, 2024).

Recommendations:

Prioritise children's digital rights through developing comprehensive national guidelines and resources that explicitly recognise and uphold these rights in online environments. Such efforts should align with international standards, including the UN Committee on the Rights of the Child General Comment No. 25, to ensure a consistent and rights-based approach. These guidelines must address the full spectrum of children's rights, while considering their unique experiences, vulnerabilities and wellbeing in digital spaces. Adopting integrated national strategies is essential to ensuring a safer and more empowering digital environment for children. In addition, governments should develop and implement cohesive strategies that explicitly align with the three core pillars of the BIK+ framework: safe digital experiences, digital empowerment and active participation. These strategies must avoid fragmentation by unifying related policies and actions under a single, coherent framework. To support effective implementation, robust national coordination bodies should be established or strengthened, with clear mandates, sufficient resourcing, and mechanisms to enable meaningful cross-sectoral collaboration (O'Neill and Dopona, 2025). Such bodies play a critical role in aligning stakeholders, driving policy coherence and ensuring accountability in promoting children's digital wellbeing.

Stronger implementation mechanisms, ensuring compliance across platforms and jurisdictions, and strengthening cross-border enforcement mechanisms to close regulatory gaps. Europe has made impressive attempts at regulatory code. However, this desk review shows that implementation fragments along linguistic, technical and resourcing lines. An EU-supported convergence toolkit that would (i) give smaller language regulators shared lexicons for content moderation, (ii) embed privacy-preserving, age-appropriate design templates that local developers can drop straight into code, and (iii) resource joint audits so that a children across the continent can benefit from the same opportunities and protections. By mainstreaming enforcement capacity rather than rewriting law, there is an opportunity to close the delivery gap without reopening legislative challenges. Quality assurance could be supported through appropriate, multi-year financing.

[3] Save the Children, UNICEF and United Nations Global Compact (2012) *Children's Rights and Business Principles.* Available at: https://www.unicef.org/documents/childrens-rights-and-business-principles (Accessed: 4 June 2025).

[4] Save the Children, UNICEF and United Nations Global Compact (2012) *Children's Rights and Business Principles: Summary.* Available at: https://resourcecentre.savethechildren.net/pdf/5717.pdf (Accessed: 4 June 2025).

Prioritising children's voices and recognising their agency

In today's digital age it is essential to involve children and young people in shaping their digital interactions today as well as shaping their digital futures. Children's voices and experiences must be central to the development of policies, technologies and educational frameworks that impact them. A multistakeholder approach that recognises children as active agents rather than passive recipients in the digital realm will foster generations of informed, resilient and responsible digital citizens as well as foster a digital ecosystem centred around children's diversity that is relevant and that promotes ethical technology designs, digital literacy and resilience, enabling children navigate the digital environment safely, confidently and securely.

O'Neill and Dopona (2025) note that youth participation is growing but remains inconsistent and limited in scope in Europe, and that true participation requires moving from consultation to co-creation, involving children in designing policies, platforms and protections. Children are deeply aware of and conscientious about the responsibilities that come with self-expression, and their deliberations about their own and other people's safety, wellbeing and privacy powerfully shape their decisions about how they express themselves online (Third and Moody, 2021). Children's agency is fundamental in creating a digital world that is safe, inclusive and empowering. All experts interviewed for the study noted that for the most part, adults – whether educators, family members or policymakers – are not fully aware of the online world children are experiencing. This is largely because adults are not using the apps or platforms that children are frequenting or their engagement is different, often due to the algorithm driven content. Only children themselves can truly describe their online experience, much of which they navigate alone.

As Charlotte Aynsley noted, young people have a perception that policymakers 'are not listening to us on the smartphone issue… it's just driving people underground' (interview, May 2025). While adults often worry about teens interacting with strangers online, many adolescents navigate these interactions with confidence, caution and competence. They would prefer guidance rather than dialogues focusing on risk and harm. As such, meaningful participation in digital wellbeing overall should include regularly and dynamically consulting with children about what problems are important to them before creating new programmes or policies and involving them in creating solutions. Silke Müller discussed having an emergency button at the bottom of every chat or online activity, similar to calling the police offline, an idea that originally stemmed from a year 7 student (interview, June 2025).

Similarly, while younger children are more frequently acknowledged, particularly in relation to age verification, parental controls and early digital literacy (O'Neill and Dopona, 2025), there is a tendency to frame them primarily as passive recipients of protection rather than as active digital citizens. This protective framing can limit opportunities for younger children to develop agency and resilience online (Livingstone et al., 2021). The Better Internet for Kids report (O'Neill and Dopona, 2025) notes that only a minority of countries provide child-friendly versions of policy documents or age-specific wellbeing frameworks, which further marginalises younger children from meaningful participation in digital governance.

It is to be noted that digital initiatives and research often overlook the voice and perspective of children with disabilities. According to UNICEF (2022), many platforms lack accessible design, posing particular challenges for girls with disabilities, who face compounded barriers at the intersection of gender and disability. These include limited access to assistive technologies, underrepresentation in digital development, and a lack of gender-sensitive research. Xu et al. (2024) further note that most studies focus on male participants with autism spectrum disorder, despite growing awareness of underdiagnosis in girls.

Examples of designing mechanisms for the inclusion of children's voices at various levels include the creation of feedback loops through a range of sources, including school councils and youth panels, with regulators so children can see how their input changes policy. When children see their experience reflected in decisions, they are more likely to engage openly, report problems early and co-create safer digital spaces. At school level children can meaningfully participate through establishing student leadership and peer mentoring programmes that, for instance, promote positive digital behaviours (OECD, 2025b).

Recommendations:

Child-centred approaches: Engaging child and youth voices in policymaking. Guarantee meaningful, feedback-looped child participation at every tier of the systems structure.

True participation is more than a tick-box exercise. Every public consultation, platform safety code and school policy should demonstrate co-creation with children and publish findings that demonstrate how active child engagement was reflected, demonstrating youth influence. Children should be meaningfully[5] involved in all aspects of decision-making, in the creation of structures and in the development of content of educational programmes for digital resilience and wellbeing. Within that there should be diverse representation, especially of marginalised groups.

At EU level, the 2025 European Year of Digital Citizenship Education offers opportunity to establish a standing young person wellbeing panel that nominates child experts to set standards and hold regulators and politicians (and technology companies) accountable for listening. This will go a long way in ensuring policy reflects the lived experiences of those it is meant to protect.

Produce child-friendly policy materials through creating and disseminating accessible versions of key policy documents that are tailored and recognise children's needs. This requires designing policy briefings, information and communication materials that recognise children as the primary audience, ensuring that content is not only accessible in language and format, but also informative, relevant and developmentally appropriate. Materials should be co-developed with children to reflect their perspectives, questions and lived experiences, rather than retrofitting adult content. This approach supports meaningful understanding and informed participation in digital policy discussions. To ensure inclusivity, these materials must also be accessible to children with disabilities and available in diverse languages and formats (O'Neill and Dopona, 2025).

[5] Save the Children (2021) The Nine Basic Requirements for Meaningful and Ethical Children's Participation, London: Save the Children. Available at: https://resourcecentre.savethechildren.net/pdf/basic_requirements-english-final.pdf

Strengthening systems to create an enabling environment

Fostering children's digital wellbeing in the European context requires a systems-strengthening approach that moves beyond fragmented or issue-specific interventions toward a comprehensive, integrated framework. Grounded in the socioecological framework (Bronfenbrenner, 1979), both a child protection systems-strengthening approach and the whole-school model to children's digital wellbeing provide a holistic model that enables both prevention and response efforts that support all children, especially the most vulnerable, while building on their strengths and resilience (UNESCO and UNICEF, 2024; OECD, 2025a; Save the Children UK, 2019).

Both acknowledge that children's digital experiences are shaped by multiple layers of influence and ensure a coordinated, sustainable and inclusive response to digital risks by reinforcing interconnected functions, structures and capacities at all levels: family, community, school, national, and transnational. At the individual level, it supports students in developing digital literacy, critical thinking and self-regulation. Interpersonally, it fosters positive relationships through teacher training, peer support and parental engagement. At the institutional level, schools implement inclusive policies, safe digital practices and wellbeing-focused curricula. This is reinforced by community partnerships and national protection, digital and education systems and policies that align strategies, resources and regulations to promote a culture of digital responsibility and care across all environments where children live, learn and connect.

As digital technologies become increasingly embedded in children's lives, responsibilities for promoting digital wellbeing are shared between schools and families. While schools are often seen as the primary institutions for digital education, research consistently highlights that the home environment, which is shaped by parental attitudes, behaviours and engagement, is equally critical in fostering safe, balanced and responsible digital habits (O'Neill, 2023; OECD, 2025a). The most effective strategies for digital wellbeing are those that are co-constructed through strong partnerships between schools and families, ensuring consistency and reinforcement across both settings. Sanders and Turner (2018) further argue that parenting quality, particularly in the digital age, is a key determinant of children's ability to self-regulate and engage socially, both online and offline.

Schools can involve families for instance through workshops on digital risks and screen time, providing communication strategies to align home and school digital practices (OECD, 2025b), community-based seminars, and digital literacy campaigns that provide guidance on media literacy and healthy technology use. While schools are a key channel for these efforts, it is to note that such initiatives must be planned and supported at the national level, alongside the necessary resourcing. Good practice examples are, for instance, the Lie Detectors initiative in Europe[6], which brings journalists into classrooms to teach media literacy, with follow-up materials designed to involve families in discussions about misinformation and digital responsibility or France's "La Mallette des parents"[7] and Germany's "SCHAU HIN!" media guide[8].

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UNESCO and UNICEF, 2024; OECD, 2025a; Save the Children UK, 2019

[6] https://lie-detectors.org/wp-content/uploads/2021/07/LD-Building-Resilience-presentation-public.pdf

[7] https://school-education.ec.europa.eu/en/teach/teaching-materials/parents-briefcase-la-mallette-des-parents

[8] https://www.schau-hin.info/fileadmin/content/Downloads/Broschueren/ISH_Aufwachsen_digital_Broschuere_Barrierefrei_Englisch_20211118_01.pdf

As Rhiannon-Faye McDonald notes, parents/caregivers should be viewed as relational enablers rather than surveillance agents. Workshops with parents have been shown to destigmatise and reinforce a line of communication (interview, May 2025). Judgment-free spaces where caregivers can admit uncertainty and learn techniques that keep channels open with their children, even after incidents have occurred, could be effective practice and part of digital wellbeing initiatives. Across countries, children's number one source of help and guidance is a trusted adult, usually a parent or guardian, followed by their friends, NGOs, counselling services and child protection services. Very few children said they would be confident about turning to teachers or police, due to fear of being misunderstood or punished, or because they are unsure about the confidentiality of seeking help via these avenues.

Children want to turn to parents/caregivers for support but feel they are under-equipped to guide them. Children believe that skilling parents/caregivers needs to be a key focus, because in their experience, parents and caregivers do not understand the dangers children face online and/or lack knowledge and confidence about how best to support, guide or respond to potential online risks and harms (Third et al., 2024). Children want their parents/caregivers to understand the platforms they use, who they interact with, what they share and how they might be harmed online. They call for education targeting trusted adults (Third et al., 2024). However, parental and caregiver engagement is often underdeveloped, with schools often lacking the tools or strategies to involve parent/caregivers, especially those with low digital literacy, in supporting children's digital wellbeing (O'Neill and Dopona, 2025).

High-quality digital literacy is important, and as part of a system-strengthening approach, should go hand-in-hand with safety-by-design principals, tech accountability and wider ecosystem responsibilities across the diverse actors that maintain a safe and balanced digital experience for children and young people. Part of this is also working in closer collaboration with partners, including education technology and media companies. In Estonia, for instance, the Ministry of Education and Research and the Ministry of Economic Affairs and Communications signed a cooperation agreement with EdTech Estonia, a non-governmental organisation that brings together educational technology companies to promote educational technology and innovation, facilitate cooperation between the non-profit, public and private sectors, enable rapid testing and integration of new digital tools in schools, and support the swift adoption of services into the education system (European Commission, 2023). However, partnerships with digital and media experts are underutilised, limiting schools' ability to provide holistic and up-to-date guidance on navigating the digital world (Gouseti et al., 2021).

Recommendations:

Encourage system-strengthening and whole-school approaches that embed digital wellbeing into policies, learning environments and broader mental health and inclusion strategies. Digital wellbeing must be woven into school culture, ethos, policies and daily routines. Building on socio-ecological and child protection systems theories, education ministries could integrate initiatives such as SMILE across curriculum standards as well as teacher professional development pathways and inspections, with outcome indicators that track protective and developmental competencies. Integration will assist with curricula while aligning with existing mental health and violence prevention programmes, offering children a coherent narrative about dignity, consent and mutual respect in all aspects of their lives (on and offline). This also includes both multi-stakeholder and cross-sectoral collaboration, for instance, through partnerships between schools and mental health professionals, EdTech providers and media literacy organisations.

Strengthen teacher (and by association, parent/caregiver) training and professional development in the wellbeing and online safety space. Children consistently identify a trusted adult as their first line of support online, yet both groups report feeling under-equipped in digital literacy, online safety and student wellbeing. Ring-fenced funding is needed for mandatory, accredited, continued professional development (CPD) that covers algorithmic profiling, trauma-informed responses and inclusive pedagogy for children with disabilities (Mastam and Zaharudin, 2024). Judgement-free workshops for parents and carers should demystify platform mechanics, model open dialogue after incidents and reinforce shared home-school norms. This also includes equipping educators with tools to identify and support students at risk of digital harm and to recognise and respond to gender-specific risks but also guidance on how to develop more simplified tools that offer conversation starters rather than longer lists of controls. Positioning adults as relational enablers rather than surveillance agents will strengthen the wider ecosystem associated with digital wellbeing.

Engage families and foster strong school–parent partnerships by involving parents/caregivers in digital wellbeing initiatives through training, workshops and co-design. It is important to recognise parents/caregivers as co-educators and key stakeholders in children's digital lives and that supporting them ensures they have the right tools and confidence to manage children's digital wellbeing. Fostering a shared responsibility between schools and families for digital literacy, safety, healthy technology use and wellbeing helps to promote consistent messaging and practices between home and school environments. This also includes providing accessible resources and developing strategies to reach families with limited digital literacy or access as well as providing multilingual and culturally responsive materials to engage diverse families.

> **The move from rhetoric to practice needs a whole ecosystem commitment spanning government, industry, schools, families and civil society to resource, coordinate and normalise a holistic vision of children's digital wellbeing**
>
> Rhiannon-Faye McDonald interview, May 2025

Embedding online – recognising the interconnectedness of online/offline

There is increasing recognition that digital lives have now become part of everyday life. Contemporary prevention theory treats children's digital and physical lives more and more as a single developmental continuum, acknowledging that causes and drivers of harms as well appropriate interventions and policies are rooted in existing approaches.

The European Commission recommends a whole-school approach to wellbeing, embedding online safety modules inside existing programmes on bullying, sexual abuse and dating violence rather than teaching them as add-ons. Such integration helps save curriculum time while also delivering a coherent narrative to learners around the principles of dignity, consent and mutual respect and how these apply consistently, whether the interaction happens in the halls of the school or in a group chat. School-based violence prevention models therefore provide a good framework and these same pedagogies, once updated with digital scenarios, could reduce cyberbullying perpetration and victimisation by a significant amount. Similarly, as part of Comprehensive Sexuality Education (CSE), digital safety lessons should be grounded in the same competencies that underpin healthy offline relationships: recognising respect and coercion, negotiating consent, and knowing where to seek help (Global Partnership Forum on Comprehensive Sexuality Education, 2023). Framing 'online' merely as an additional context for relationship skills speaks to the realities of blended friendship, flirting and break-ups.

This idea is supported by prevalence evidence from the EU Kids Online 2020 survey, which shows that while almost half of nine- to 16-year-olds have communicated online with someone they did not previously know offline, the great majority of sexual messages they send or receive involve peers or people they already knew (Smahel et al., 2020). Similarly, UK helpline data for 2024 show that two-thirds of perpetrators are current or former partners, and not anonymous strangers. In other words, children's relational dynamics mirror existing 'offline' relationships and reflect those perpetration patterns, underlining the need for programmes that equip young people to recognise manipulation, resist peer pressure and intervene safely when friends become aggressors.

Ethical reflection as part of digital literacy helps children to think critically about the moral and social implications of their actions and experiences in digital environments. It encourages value-oriented discussions, thoughtful decision-making, empathy and a growing sense of responsibility, both for oneself and for others. This includes fostering an understanding of how online actions can affect others, and helping children reflect on the consequences of their behaviour. Silke Müller explains that ethical reflection can be effectively embedded into digital literacy education through scenario-based discussions and role-playing exercises. These methods support children in thinking through complex situations and navigating digital dilemmas (interview, June 2025).

We need to have values-based conversations with children, conversations that empower them to navigate this world resilient and as healthy as possible. So they can say: "I'm turning this off now. I don't want to be part of this network anymore. I'm putting my smartphone aside and meeting my friend."

Silke Müller interview, June 2025

In addition, there's growing recognition that digital wellbeing isn't just about screen content or cognitive impact, it also has a physical dimension. As Tyler Shores expert noted, children engage with digital devices using their whole bodies, and prolonged screen time can lead to physical strain, inactivity and other health concerns (interview, June 2025). As awareness has grown, so has the understanding that supporting digital wellbeing means addressing both social and physical effects of how technology is used every day.

Recommendations:

Promote a balanced, inclusive approach to digital literacy that moves beyond restrictive or protective-only strategies by embedding online safety modules inside existing programmes, fostering healthy online/offline habits, teaching resilience to online risks and emphasising technology's potential to support creativity, inclusion and student agency. Children's emotional wellbeing is supported by acknowledging their digital identities and reducing fear-based messaging. In line with that, curriculum content should be expanded to include algorithmic awareness, commercial intent and ethical reflection and should translate abstract privacy rules into everyday choices through practical, age-appropriate exercises. Digital resilience strategies also include teaching a better understanding of data management and consent, and how to respond to hate comments, fake news or online pressure. Emerging trends such as AI literacy and critical thinking should also be included. Digital literacy programmes should be age-appropriate, participatory and gender-sensitive, particularly addressing issues like body image, sextortion and misogynistic content, while offering trauma-informed support (WHO, 2025; NSPCC, 2025) and encouraging children to engage meaningfully in digital governance.

Considering children's developmental stages and focus on their resilience

As digital environments become increasingly central to children's lives, it is important to recognise their unique developmental stages and the importance of fostering resilience rather than shielding them entirely from online risks. Digital resilience is the ability to manage and recover from online challenges through emotional regulation, critical thinking and digital literacy (Qamaria et al., 2025). A strengths-based approach, which builds on existing technological architectures and children's own evolving capabilities, as well as their protective behaviours and skills repertoires, can nurture digital resilience when grounded in age-appropriate design principles that reflect children's varying ages and stages of development (Third et al., 2024; Qamaria et al., 2025).

As children grow and develop, their needs, interests and understanding of the world evolve, requiring specific approaches. For instance, Charlotte Aynsley noted that teenagers, especially those in the middle of their adolescence, require specific supports as their social standing and peer approval are their social currency (interview, May 2025). In a study by Save the Children Spain in 2024, it was noted that adolescence is a critical stage for emotional development, identity formation and social validation, which is now deeply intertwined with digital life. Social media validation (likes, comments) plays a key role in adolescents emotional wellbeing, especially for girls.

> **"Reputation-based harms hit adolescents hardest because social status matters so much at that age."**
>
> Charlotte Aynsley interview, May 2025

Rather than avoiding digital adversity, children develop resilience by safely engaging with it and learning from it. Frameworks such as the UK Council for Internet Safety's Digital Resilience model offer practical guidance for embedding this approach in education and policy. By focusing on resilience, we empower children not only to navigate digital risks like cyberbullying and social media pressure, but also to thrive in a connected world. Negative incidents can become learning moments when adults facilitate dialogue instead of punishment, reinforcing inclusive and restorative approaches. Giving children the space and support to learn from mistakes, develop empathy and choose respectful interactions online is central to positive digital citizenship programmes (Save the Children Denmark/Red Barnet, 2021). However, unpleasant experiences such as digital violations, bullying, unsolicited explicit content and grooming attempts have increasingly become normalised aspects of children's digital lives. This underscores the importance of equipping children not only with proactive empathy skills but also with resilience and coping mechanisms to handle harmful online encounters effectively.

The Council of Europe has designated 2025 as the European Year of Digital Citizenship Education[9], aiming to highlight the importance of equipping learners with the skills to engage in the digital environment as active citizens. The initiative invites governments to align developmental psychology, rights-based design and classroom practice together with common milestones for resilience and active participation.

Denmark, girl, 5th grade (approximately 11 years old): I think a lot about how you treat people online. I wouldn't like a nasty comment myself, so others probably wouldn't either. If someone writes something mean to me, I shouldn't hit back, because they probably wouldn't like that.

Save the Children Denmark/Red Barnet, 2021

Recommendations:

Develop policies and initiatives that are developmentally tailored and use age-appropriate approaches by differentiating between age groups (e.g. early childhood, middle childhood, adolescence) and align digital protections and supports accordingly. This recognises that children's needs and vulnerabilities evolve with age and focusses initiatives to provide more effective support. For example, in adolescence, particularly in mid-adolescence, children are uniquely vulnerable to reputation-based harms due to the heightened importance of peer validation.

Promote digital resilience as a core competency through fostering empathy and positive digital citizenship by, for instance, promoting programmes that help children understand the emotional impact of online behaviour, encouraging respectful and empathetic interactions. Rather than shielding children from all online risks, governments and institutions should integrate digital resilience into national curricula and child protection strategies, particularly emphasising emotional regulation, critical thinking and digital literacy as foundational skills. Using a strengths-based approach enables turning negative experiences into learning opportunities and empowers children to navigate challenges, build empathy and become responsible digital citizens, aligning with frameworks like the Council of Europe's 2025 Digital Citizenship Education initiative.

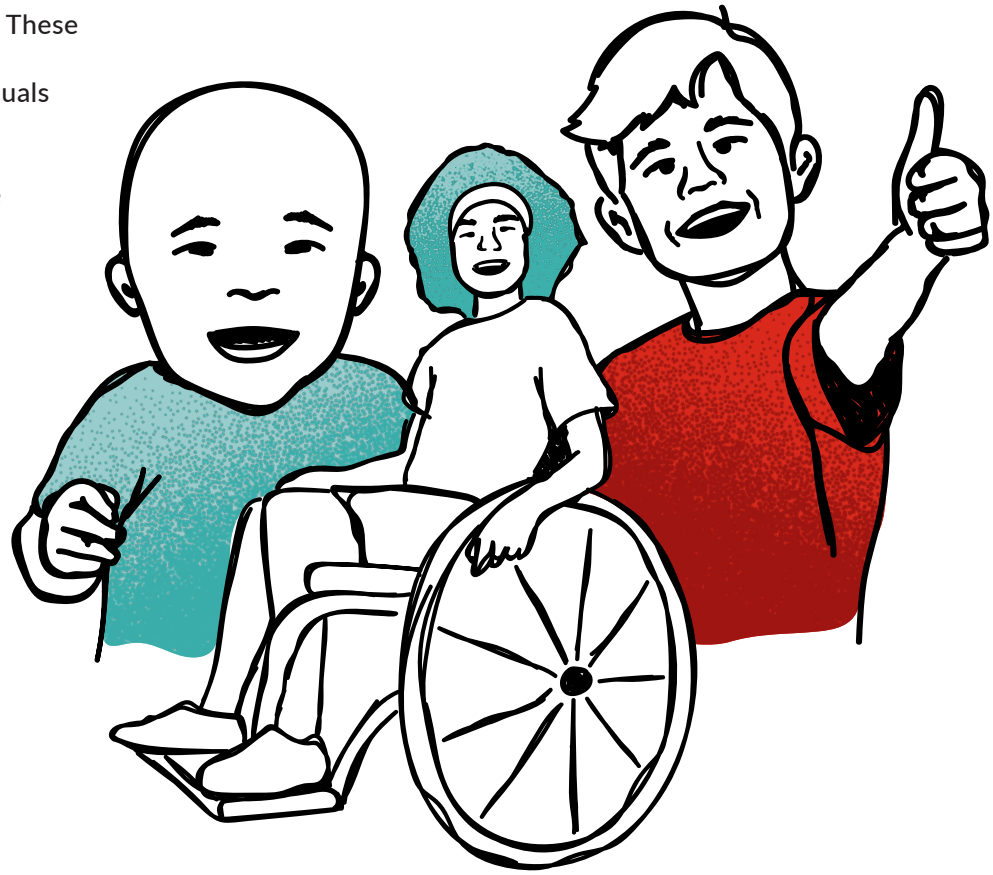
[9] Council of Europe, 2025 – European Year of Digital Citizenship Education – Call to Action online Call to action – European Year of Digital Citizenship Education

Recognising and integrating children's diversity

Children are not a homogenous group, yet they are often treated as such. Children's best interests vary based on different developmental stages and evolving capacities, social and cultural contexts, digital literacy, and their life situations. This makes it difficult to create one-size-fits-all policies that work for every child. Yet, in general, in relation to the digital environment, children are considered at the collective level and not individually (Özkul et al., 2025). Promoting digital equality requires a holistic and inclusive approach that addresses structural inequalities by meeting the specific needs of diverse children. This approach must apply an intersectional lens, particularly to advance girls' digital inclusion and ensure all children can benefit equitably from digital opportunities (Özkul et al., 2025).

To effectively promote digital wellbeing, it is essential to adopt an intersectional approach that considers not only gender but also children's overlapping identities and vulnerabilities, such as disability, age, ethnicity, geographic location and socioeconomic status. Their engagement with the digital world is shaped by these multiple and intersecting factors and they contribute to significant disparities in access to and use of digital technologies. These overlapping identities can compound the risks individuals face, influencing how they access technology, how they are targeted by online harms, and how they are supported by digital safety interventions. An intersectional lens ensures that digital wellbeing strategies are inclusive, equitable and responsive to the diverse realities of all young people, especially those who are most marginalised. Digital wellbeing strategies across the UK and Europe are increasingly recognising the importance of tailoring interventions to these diverse needs of children and young people. However, the extent to which specific groups are prioritised or supported varies significantly across national and school-level initiatives.

Research consistently identifies children from lower socio-economic backgrounds, from rural areas and children with disabilities – including autism spectrum disorder, attention-deficit/hyperactivity disorder (ADHD), intellectual and developmental disabilities, and sensory processing disorders – as particularly vulnerable to digital exclusion and its associated wellbeing risks. This also applies to children from minority or migrant backgrounds, who often face additional barriers (Smahel et al., 2020; Eurochild, 2025; UNICEF UK and Carnegie UK Trust, 2021; OECD 2025b). Despite evidence that children from low-income families are more frequently exposed to harmful content and have less access to parental mediation tools, digital wellbeing initiatives often overlook these groups. Charlotte Aynsley notes that in the UK, some work has been done to tailor support for pupils with disabilities or from low-income families, but not enough and as such, their specific risks remain under-researched (interview, May 2025). This digital divide contributes to lower digital literacy skills and poorer educational outcomes (Smahel et al., 2020).



Children with disabilities face some of the most persistent and complex barriers to digital inclusion, as they often lack access to accessible digital infrastructure, both hardware and software designed with their needs in mind (Stefanidi, 2023). This exclusion can lead to increased social isolation, reduced self-esteem and limited opportunities for participation in digital life, all of which are critical components of digital wellbeing. Without deliberate design and coordinated support to ensure inclusivity, digital platforms risk perpetuating existing inequalities rather than addressing them (Tiernan, 2022).

This need for tailored approaches can be further exemplified for children with neurodevelopmental disabilities, such as autism spectrum disorder, ADHD and learning disabilities. Roberts-Yates and Silvera-Tawil (2020) argue that while digital technologies can enhance access and engagement, they must be intentionally designed to do so. Poorly adapted digital environments can lead to frustration, disengagement and emotional distress, undermining the potential benefits of digital engagement (OECD, 2025b). This in turn may lead to a limited ability to navigate digital spaces safely and it puts these children at risk of exclusion from digital learning environments. Ensuring digital wellbeing for this group requires inclusive, user-centred design and consistent support from caregivers and educators.

Without an intersectional perspective, efforts to address digital well-being risk overlooking the unique challenges faced by those at the intersections of multiple forms of disadvantage. Digital exclusion can exacerbate existing inequalities and expose children to a range of wellbeing risks, including social isolation, reduced educational attainment and exposure to harmful content (UNICEF, 2022). Children who are digitally excluded are far less likely to participate in school-based digital wellbeing interventions due to infrastructural, socio-economic and skill-based barriers. Despite government efforts to improve connectivity, many families, especially in low-income or rural areas, remain underserved (Ofcom, 2021). Persistent digital inequalities not only limit access to education but also reduce the effectiveness of digital literacy and wellbeing strategies, particularly for the most vulnerable students (OECD, 2025a).

Recommendations:

Adopt an intersectional framework in policy and practice that addresses the needs of marginalised and underrepresented groups, recognising how overlapping vulnerabilities compound digital risks and exclusion (Stefanidi, 2023; OECD, 2025b). Digital wellbeing strategies should explicitly address the intersecting identities of children, such as gender, disability, ethnicity, socio-economic status and sexual orientation and ensure these groups are not only included in digital wellbeing strategies but are prioritised in implementation and evaluation. This includes the development of inclusive frameworks that allocate targeted resources – particularly to support children with disabilities and neurodevelopmental disorders, LGBTQI+ youth, children from low-income and rural communities, and those from migrant and minority ethnic backgrounds. Perspectives from these groups should be integrated into national curricula, protection and safeguarding frameworks and digital citizenship education, and safe, affirming online spaces and support services specially tailored to these groups (Keighley, 2021; Tao & Fisher, 2022).

Ensure equity, inclusion and age appropriateness in all initiatives and programmes that support children's digital resilience and wellbeing by including particular support for children from disadvantaged backgrounds, from rural areas, from minority groups, from low-income families and those with disabilities. Interventions should be specifically tailored to address any intersecting characteristics, such as socio-economic status, disability and ethnicity. This includes designing inclusive digital tools and accessible learning environments and ensuring that early learners (under 10) and neurodiverse students have age-appropriate and inclusive digital wellbeing resources.

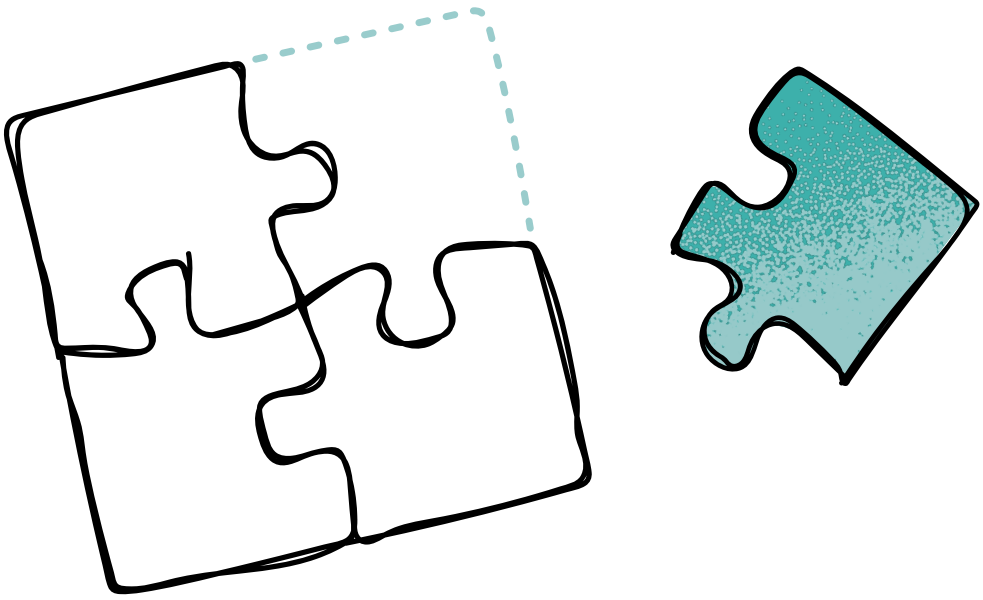
Utilising evidence-based approaches

Despite the growing attention on children's digital wellbeing, current strategies often lack a strong or specific evidence base due to gaps in research but also weak measurement frameworks and approaches for current intervention models, which ultimately result in ineffective policies and approaches. This is true for the groups of children most impacted by inequality and discrimination, who are underrepresented in both research and policy, highlighting the need for more inclusive and targeted studies (Eurochild, 2025; OECD, 2025b).

The existing evidence base remains fragmented, for instance, in its understanding of how digital experiences shape children's identities and social norms. Evidence around these topics is critical to ensure that programmes are holistically designed to address the diverse and intersecting norms that influence identity development, with careful consideration of intersectionality. There is a notable lack of intersectional analysis, as the barriers experienced by children with diverse characteristics or identities, such as disability, sexual orientation, rural residence, migration background, socio-economic disadvantage and ethnicity, are often examined in isolation. This fragmented approach overlooks the ways in which these factors intersect and interact to deepen exclusion and compound disadvantage (Stefanidi, 2023).

There are also largely gaps in the monitoring and evaluation of approaches and interventions. The evaluation of digital wellbeing interventions remains inconsistent, with few robust frameworks in place to assess their effectiveness across diverse student populations (OECD, 2025a). Only a few schools have robust systems in place to assess the effectiveness of their digital wellbeing initiatives, making it difficult to measure impact or adapt strategies accordingly (Internet Matters, 2025; Smoothwall, 2024). A 2024 mapping by the European Audiovisual Observatory finds that only a handful of Member States impose curriculum-level evaluation of media literacy or wellbeing outcomes, and evaluation requirements are often limited to pilot projects (European Audiovisual Observatory, 2024).

A key component of this involves developing a measurement framework that captures critical dimensions of children's digital citizenship. For example, the Council of Europe's 2025 European Year of Digital Citizenship Education initiative emphasises that tracking progress requires indicators that go beyond technical skills or device access to include aspects such as emotional safety and civic participation. In addition, the continuous monitoring of emerging trends in children's digital activities and evolving behaviours, of new online risks and harms, and of wellbeing outcomes is important to further inform programming approaches and practices, policy development and evaluation.



Experts interviewed offered practical suggestions. For instance, one expert proposed developing a standardised digital risk rating system for apps and platforms to help measure and communicate risks to digital wellbeing (Tyler Shores interview, June 2025). This system could clearly label behavioural and wellbeing risks, with tools rated based on features such as addictive design, in-app purchases, or their impact on attention and sleep.

Lastly, these frameworks, particularly around evaluation efforts should include the meaningful and ethical participation of all groups of children in research and measurement efforts. This includes harnessing children's agency, particularly those most impacted by inequality and discrimination, ensuring that their voices, experiences and perspectives are authentically represented and inform decision-making processes. Researchers should actively involve children as partners in shaping research questions, methodologies and tools in ways that respect their evolving capacities.

Recommendations:

Close existing research gaps in children's digital wellbeing, particularly around intersectionality, and strengthen generation of evidence disaggregated by age, gender, ethnicity, disability and socio-economic status. Children from diverse groups and their intersectionality need to be more reflected in research frameworks, associated data collection and interpretation in order to understand how different groups experience digital risks and benefits.

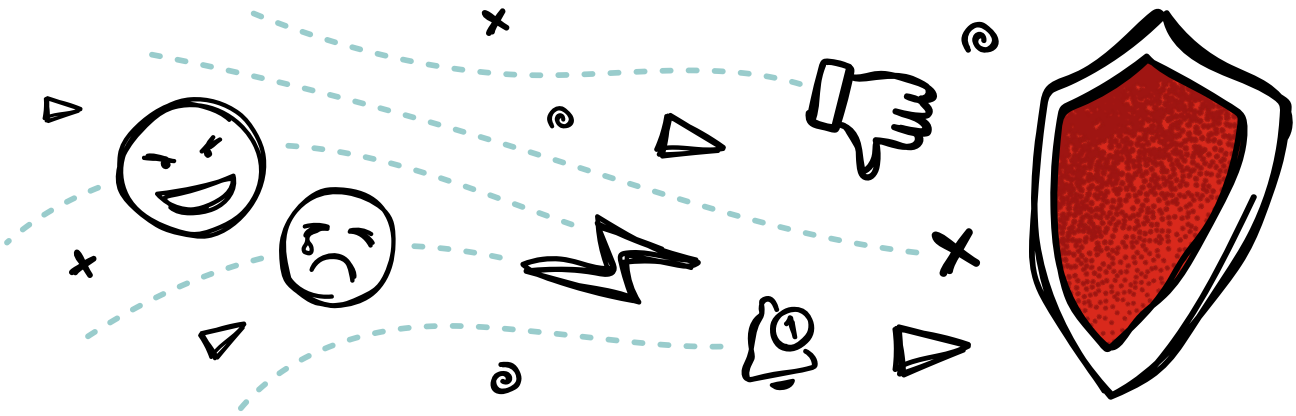
Establish and support quality monitoring and evaluation systems of children's digital wellbeing through investing in and developing robust methodologies and tools that measure children's digital resilience and wellbeing holistically. This includes creating indicators that reflect emotional, cognitive and social dimensions of digital engagement, but also robust evaluation frameworks that assess the effectiveness of digital wellbeing interventions across diverse groups (OECD, 2025a). This data should be used to inform continuous improvement and share best practices in the sector.

METHODS

This study adopted a mixed-methods approach, combining desk research and qualitative key informant interviews to explore and provide a holistic understanding of the current state of digital wellbeing for children across Europe. This dual approach enabled triangulation of findings and ensured a comprehensive understanding of the topic from both empirical and current, expert observed perspectives. The desk research involved a semi-systematic review of academic and grey literature, policy analysis, and secondary data on children's experiences. The key informant interviews provided expert insights into institutional practices, policy implementation and emerging trends in the digital wellbeing space.

The desk review followed a semi-systematic methodology, allowing for a structured and at the same time flexible approach to evidence gathering. Academic literature was accessed through databases such as Google Scholar, PubMed, ERIC and PsycINFO, with a focus on studies published since 2020. Inclusion and exclusion criteria, such as a focus on children aged nine to 16 years and a European geographical scope, were applied to ensure the relevance of the materials reviewed. Only sources that employed methodological rigour were included and meta-analyses took preference. The review also placed specific attention to gender, vulnerability and intersectionality aspects. Based on a search of databases and a list of 15 expert-recommended and specifically curated documents and content pieces, a total of 112 sources were initially reviewed, of which 53 were selected for more in-depth analysis. These included peer-reviewed academic articles and journal papers as well as grey literature, such as position papers, research reports and policy briefs from government agencies and leading organisations and institutions such as OECD, the Council of Europe, EU Kids Online, WHO, UNICEF, Better Internet for Kids, Eurochild and Save the Children. In particular, EU-level and national-level policy documents, strategies, frameworks, action plans and national strategies were reviewed. In addition, newspaper articles and blogs were included.

Children's voices were integrated into the desk review through secondary data from specific child-focused research studies, in particular, studies previously conducted by Save the Children member offices in Romania, Spain, Finland, Denmark and Norway. These insights provided valuable context and helped ground the analysis in children's lived experiences.



A series of key informant interviews were conducted with experts from across the digital wellbeing space. The interviews aimed to deepen the understanding of conceptual definitions, institutional practices and emerging trends in the field. Data from the interviews were analysed thematically and triangulated with findings from the literature and policy analysis. Participants were selected to represent a diverse range of perspectives, including academia, policy, civil society and children's rights advocacy. Expert interviewees were:

Rhiannon-Faye McDonald

Head of Advocacy at the Marie Collins Foundation (MCF), a UK-based charity dedicated to supporting children who have experienced technology-assisted child sexual abuse. Drawing from her own lived experience as a survivor of both online and offline abuse, Rhiannon-Faye McDonald brings a powerful and authentic voice to her advocacy work. She plays a key role in shaping survivor-informed policy and raising awareness about the complex challenges faced by victims in the digital age.

Charlotte Aynsley

Founder and CEO of Rethinking Safeguarding, a consultancy specialising in digital safeguarding with over 20 years of experience. Charlotte Aynsley has advised UK government departments, local authorities and schools on online safety, and played a key role in implementing the education recommendations from the Safer Children in a Digital World review as part of the UK Council for Internet Safety (UKCIS).

Tyler Shores

Director of the University of Cambridge ThinkLab Programme, which connects researchers with public and private sector organisations generating research impact at scale. Tyler Shores' research focuses on digital distraction, attention spans, reading habits and social media. He is well-known for his insightful talks and publications on the effects of digital technology in everyday life.

Silke Müller

Secondary school headteacher, author and advocate for digital wellbeing. Silke Müller is passionate about promoting a safe and supportive digital environment for children and adolescents, especially at school. She is a recognised author of two books, focusing on problems in schools related to digital media, providing practical advice and strategies for parents, educators and policymakers.

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