



Raspberry Pi
Foundation

Design principles for safe and responsible education technology

Building technology that puts children first

Millions of young people and educators around the world use our education technology (edtech) to teach, learn, and create with code. Building it safely and responsibly is intrinsic to who we are and what we stand for.

A growing body of research and public commentary links the use of social media, smartphones, and algorithmic platforms to declining mental health and attention in young people. None of this is new territory for researchers, who have argued for decades that technology is not neutral, and that the choices made in designing it can either embed harm or help prevent it (Friedman & Nissenbaum, 1996; O'Neil, 2016; Noble, 2018). Meanwhile, generative AI brings a new worry: that millions of young people, especially in under-resourced systems, will end up being taught mainly by AI systems rather than by human teachers.

Public attitudes are shifting in response, and parents, teachers, and governments are increasingly demanding action. UNESCO and others have been clear that AI in education should support teachers, not stand in for them (UNESCO, 2023; Selwyn, 2019). Phone bans in schools and restrictions on social media are spreading across many countries. The technology sector can no longer take public trust for granted.

We have always been a research-led organisation. When we face a difficult question, we look at the evidence and learn from the people who have studied it.

Children's digital rights is a rich and well-established field. Researchers and experts have spent years thinking carefully about what children need from the technology they use, and how their rights apply in a digital world. The United Nations set out a clear framework in 2021 with General Comment No. 25, which describes how children's rights apply to the digital environment. Organisations like UNICEF and the 5Rights Foundation have built on this with practical guidance for the people who design and build products.

This body of work gives us firm ground to stand on. Rather than starting from scratch, we have used it to shape our own approach. We have written eight principles for safe and responsible edtech, to guide the decisions we make as we build and run our products. In writing them, we have drawn in particular on [UNICEF's Responsible Innovation in Technology for Children framework](#), the [UN's General Comment No. 25](#), the [Child Rights by Design principles](#), and the [EdTech for Good framework](#).

Publishing these edtech principles is a statement of intent, not a claim that we have got everything right. This is a fast-moving area. Regulation is changing quickly, the research keeps developing, and we grow and change our own products. There are areas where we know we have work to do, and almost certainly areas we have not yet spotted.

These principles are how we hold ourselves to account, and they are only a start. Alongside them, we are mapping the regulatory landscape across the countries where we work, developing ways to assess our products against these principles, and building these commitments into how we make decisions. We will keep listening to the people who use our products, and making sure children themselves have a voice in shaping the technology built for them.

We also know we cannot do this alone. We would like to build a coalition of like-minded organisations to share what we are learning and raise standards across the sector. Together we can build technology that puts children first.

Eight principles to guide our work on edtech products

The following eight principles reflect our responsibility to both the educators and the children who use our education technology products. These principles aim to connect global best practice with our values, guiding our decisions for how we design and deliver our products. Crucially, they do not eliminate the complexities of responsible edtech design, which requires balancing competing priorities and contextual realities, and being honest about tradeoffs and imperfect choices.

We plan to evolve these principles through conversation with others in the ecosystem, and as technology, evidence, and the needs of young people and educators change

1. The best interests of the child come first

We design edtech products for children's wellbeing and we have honest conversations about the tradeoffs that come with that.

What research says:

UNICEF's Responsible Innovation in Technology for Children (RITEC) framework defines children's wellbeing in digital environments as extending beyond safety and privacy to include agency, emotional health, relationships, creativity, self-expression, and meaningful choice (UNICEF, 2022). Young people's evolving capacities are central to UN General Comment No. 25: as young people grow, the digital environment must adapt with them (UN Committee on the Rights of the Child (UNCRC), 2021). This means delivering age-appropriate interfaces, clear explanations, graduated autonomy, and safeguards that evolve as young people age (Luria & Bhatia, 2025).

What this means for us:

We adopt the RITEC definition of wellbeing (UNICEF, 2022). Supporting children's wellbeing includes supporting their ability to participate, make informed choices, express themselves, and shape their own learning experiences in age-appropriate ways. Protecting these elements guides all our product decisions.

We also acknowledge that determining a child's best interests can be complex and context-dependent. At a minimum, we do not design features that benefit our organisation at the expense of children's wellbeing. Prioritising children's wellbeing will sometimes require tradeoffs — against growth, engagement, or speed — and we commit to having those conversations openly. Where applicable, we seek input from young people, educators, caregivers, and subject-matter experts, and we are transparent about significant decisions and trade-offs.

2. Our technology supports human relationships. It does not replace them

Our edtech products are designed to support relationships between children, educators, and caregivers, instead of replacing them. The in-person environment is essential to young people's learning and development. We aim to expand opportunities for meaningful connection and support where possible.

What research says:

"The social environment... is crucial to shaping children's cognitive, emotional and social development." (UNCRC, 2021). As Third and colleagues (2019) acknowledge, this is further influenced by the intertwined digital and offline environment. What happens online directly shapes and is shaped by relationships in the offline world. This dynamic can have different effects. Where positive in-person relationships exist, the digital space can strengthen collaboration, communication, and creativity (UNICEF, 2022). Where they do not, digital environments can provide a sense of safety and connection for young people (Luria & Bhatia, 2025).

What this means for us:

As stated in our theory of change, our products aim to strengthen supportive relationships between young people, educators, and caregivers, not substitute for them. We recognise that not all young people have access to supportive learning environments or trusted adult relationships, and in these contexts technology can provide meaningful opportunities for connection, guidance, creativity, and learning. However, we believe that all young people should have access to high-quality education, and we design our products to support — not replace — the people and systems that make this possible.

Any personalisation, adaptive, or AI-supported features are designed to augment existing human interactions, not replace them. We avoid designing systems that simulate human relationships in misleading or disingenuous ways. In line with the 5Rights Foundation's Children & AI Design Code (2026a) and recommendations from International Telecommunication Union & UNICEF (2026), humans will always remain accountable and in control. We do not delegate decisions about children's learning, wellbeing, or opportunities to machines.

See also: [Our theory of change](#)

3. We only collect the data we need

We collect and use the minimum data necessary to support good user experiences and measure our impact. We never sell or monetise user data.

What research says:

Since 1990, the UNCRC explicitly acknowledges young people's right to privacy as essential. In modern day, this has become increasingly urgent. 5Rights Foundation (2026b) reports that "by the time a child is 13, over 72 million pieces of personal data will have been captured about them". As this data enters the global ecosystem, it is vulnerable to data breaches and commercial profiling, which may have tangible consequences on young people's futures (Livingstone et al., 2024; Ayalew et al., 2024). Crucially, children themselves have identified privacy as one of the most important rights in the digital age (Third et al., 2019).

What this means for us:

We apply the strict data minimisation principles put forward by the UK Information Commissioner's Office in its [age-appropriate design code](#). We collect only what is necessary to deliver effective learning experiences and measure impact and regularly review whether the data we collect remains justified. We ensure age-appropriate informed consent and give young people, educators, and caregivers control over their experience using our platforms. This includes easy access to review, modify, and delete their data on our systems. We do not use children's data for purposes that do not directly support their learning, wellbeing or safety.

4. We design for learning and prove its impact

Our edtech products are grounded in evidence-informed pedagogical approaches and we openly evaluate the impact that they've had in young people's differing contexts.

What research says:

Research shows that when educational products are not grounded in pedagogy, their benefits are limited or unclear (Meyer et al., 2021; Livingstone et al., 2024), particularly with emerging generative AI-based education technology products (Atabey et al., 2025). The UN General Comment No. 25 explicitly calls for evidence-based standards for education technology, in order to fully realise young people's right to education (Article 11).

What this means for us:

We define success by the learning outcomes our products achieve. Learning can include knowledge, skills, confidence, creativity, self-expression, and belonging, and not all outcomes can be captured through quantitative metrics alone. We clearly communicate the pedagogical approach and intended outcomes for each product, and use research, evaluation, and user feedback to define, refine, and assess those outcomes over time. We care about reaching the broadest number of young people with the most meaningful learning experiences. We explicitly avoid manipulative design practices, ensuring our products support intentional, meaningful use rather than addictive behaviours.

See also: [Our theory of change](#) and [teaching and learning design principles](#)

5. We design with children and educators, not for them

Young people, educators and caregivers are the experts on their own needs. They are active participants in how our edtech products are designed and improved.

What research says:

“We have the right to speak up, and people should listen.” (Child aged 11–12, as quoted in [Child Rights by Design](#)). UNCRC explicitly states that young people have a right to be heard (Article 12). Indeed, participatory research with educators and young people can help offset power imbalances (Atabey et al., 2025), provide important contextual and pedagogical expertise (Tuhkala, 2021), and ultimately ensure business objectives align with children’s best interests (Pothong & Livingstone, 2025; Stoilova et al., 2025).

What this means for us:

We involve young people and educators in research, testing, and feedback. We support young people and educators’ digital agency by helping them understand, question, and make informed choices about the technologies they use. We create structured opportunities for meaningful participation and ensure people’s input is not only heard, but acted upon. Their perspectives inform our decisions and shape the evolution of our products. Where trade-offs arise, we are transparent about decisions and prioritise children’s rights and well-being.

6. We design for diverse needs, abilities, and contexts

Our edtech adapts to users — not the other way around.

What research says:

Technology can both reinforce and reduce inequality (5Rights Foundation, 2026b). When designed without consideration of context, it can deepen existing disparities and misrepresent the lived experiences of young people, particularly in underrepresented regions (Ayalew et al., 2024; Garcia & Lee, 2020; Stoilova et al., 2025). Conversely, when intentionally designed, it can expand access and inclusion, for example by supporting visually impaired learners, simplifying complex content, and offering alternative formats for diverse learning needs (Atabey et al., 2025).

What this means for us:

Our responsibility is to build products that expand access, participation, safety, and opportunity across diverse identities, abilities, and educational contexts. We design products that adapt to the diverse contexts in which young people live and learn. Our products are accessible to neurodiverse audiences, responsive to different cultural and linguistic settings, and flexible to local needs. We do not assume constant connectivity, high digital literacy, or uniform educational environments. We take responsibility for ensuring our technology is usable and effective across contexts, and we support the skills and capacity-building for educators and young people to use our products safely and confidently. We assess our products for bias and accessibility using established frameworks and standards, such as the [Web Content Accessibility Guidelines](#).

See also: [Our accessibility policy](#)

7. We are transparent and accountable

We use simple language to communicate clearly with children, educators, and caregivers about our edtech products, how they work, and what their rights are.

What research says:

The UN General Comment No. 25 explicitly highlights the responsibility of companies to be accountable and transparent in their assessment of how well they are acting in children's best interests. This includes completing public assessments, as well as providing age-appropriate and contextually relevant ways of communicating with children, educators, and caregivers (UNCRC, 2021; Ayalew et al., 2024). Edtech in particular has been accused of shifting responsibility to caregivers and educators, burying critical information in legal terms and contracts (5Rights Foundation, 2026b; Livingstone et al., 2024).

What this means for us:

We communicate in age-appropriate, culturally relevant language so users understand their rights and how our products work. We are transparent about our design choices, data use, and safeguards, avoiding unnecessary complex or legal jargon. We provide clear mechanisms for users to question, challenge, or appeal decisions made by our systems. We take responsibility for addressing issues promptly if they arise.

See also: [Our safeguarding policy](#)

8. We apply the highest standards of children's rights globally

We apply a children's rights-centred approach across all markets, while recognising local legal, cultural, and operational contexts.

What research says:

Research paints a picture of a fractured international landscape, which ultimately creates an inconsistent and unequal experience for young people: those who happen to live in markets with stringent child protections will have a different experience than those who do not (Atabey et al., 2025; 5Rights Foundation, 2026b; Pothong & Livingstone, 2025). The UN General Comment No. 25 proposes 'by-design' frameworks as a solution, which embed core principles into the design of digital products (UNCRC, 2021); the Digital Futures Commission's [Child Rights by Design](#) framework strongly influenced these principles.

What this means for us:

We regularly review and align with international frameworks and best practice, going beyond minimum legal compliance. We embed children's rights into our design processes across all markets, ensuring a consistent standard of protection regardless of geography. Where local regulation conflict with our standards or values, we assess risks carefully and seek approaches that best uphold children's rights in context. We operationalise this through regulatory mapping, risk assessments, and establishing processes that guide how our products are designed, delivered, and maintained in the markets we operate in. We are part of a wider ecosystem and we actively advocate for creating a safe, equitable, and responsible digital environment for young people.

Conclusion

We acknowledge that figuring out how to design technology for young people and educators safely and responsibly is not a one-time project — it is ongoing work. We are committed to continuously improving our approach by working with experts, partners, and peers to share knowledge, raise standards across the sector, and contribute to a more equitable and responsible digital environment for young people.

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