UNICEF
for every child

Digital technologies, child rights and well-being

The State of Children in the European Union 2024

The issue

- The lives of everyone have been transformed by the revolution in digital technologies over the past two decades. Digital technologies bring huge benefits for children and young people, but also present them with risks and challenges.
- In 2006, when the oldest of today's children were born, over half of the population of the European Union (EU) already had access to the internet.[1] A year later, the first smartphones were put on the market. By 2019, 83 per cent of people in the EU had access to the internet.
- Many aspects of the Convention on the Rights of the Child are relevant to digital technologies:

    - Articles 19, 34, 35, 36, 37(a) place importance on the protection of children from violence, abuse and exploitation. This also includes economic exploitation (art. 32) and a fundamental right to privacy (art. 16).
    - Articles 13, 15 and 17 focus on the rights to freedom of expression and information, freedom of association, and access to mass media.

- Therefore, digital technologies encapsulate the common dilemma that parents and governments face: how to empower children to learn and develop, while also protecting them from harm.

The picture in the EU

In this brief we present the most up-to-date evidence on:

1. Digital access and inequalities
2. Digital skills
3. Digital benefits
4. Digital risks

Digital access and inequalities

There are a shortage of definitive data on children's digital access in the EU, but the following provides insights for different age groups:

- For young people aged 16 to 19, the proportion in the EU 27 accessing the internet daily was already 89 per cent in 2014 and increased to over 97 per cent by 2023.[2]
- For young people aged 15, in 2022 across 25 EU countries, 98 per cent lived in homes with internet access, and 95 per cent had access to a computer that they could use for schoolwork.[3]

Figure 1. **Inequalities in digital access at 15 years old, 2022**
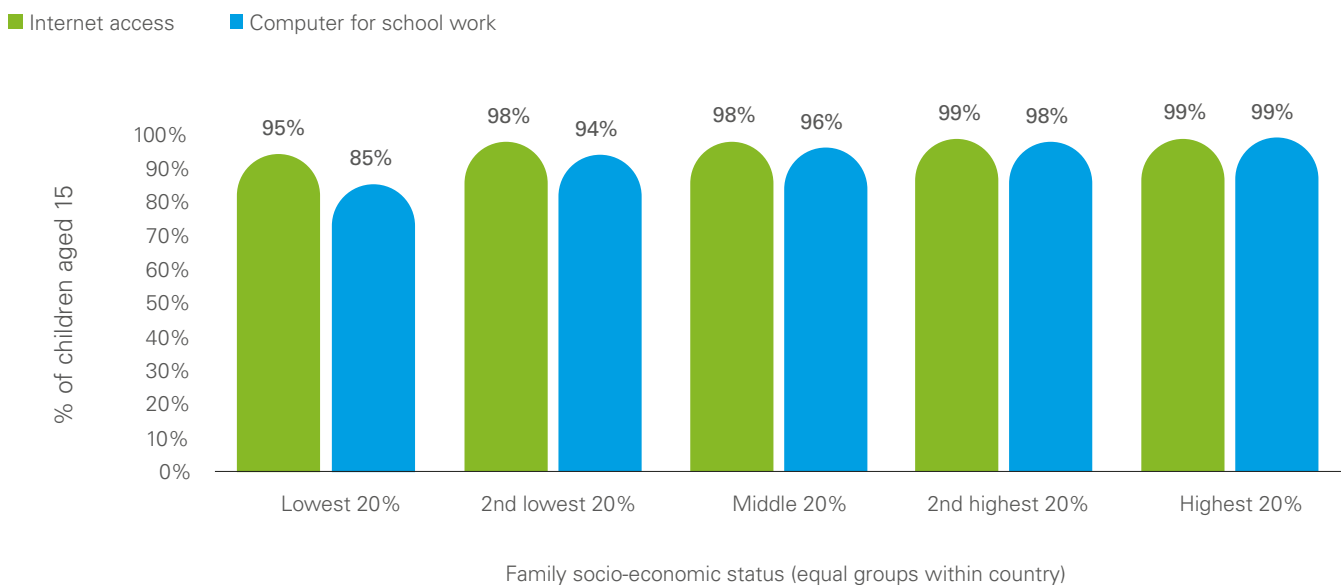
■ Internet access   ■ Computer for school work

Source: PISA: Programme for International Student Assessment, 'PISA Database', https://www.oecd.org/pisa/data/, accessed 15 January 2024.
Note: Covers 25 EU countries – missing are Cyprus and Luxembourg (data not available).

While these numbers are high, it still means that around 100,000 schoolchildren aged around 15 do not have home internet access and over a quarter of a million do not have a computer at home to do schoolwork.
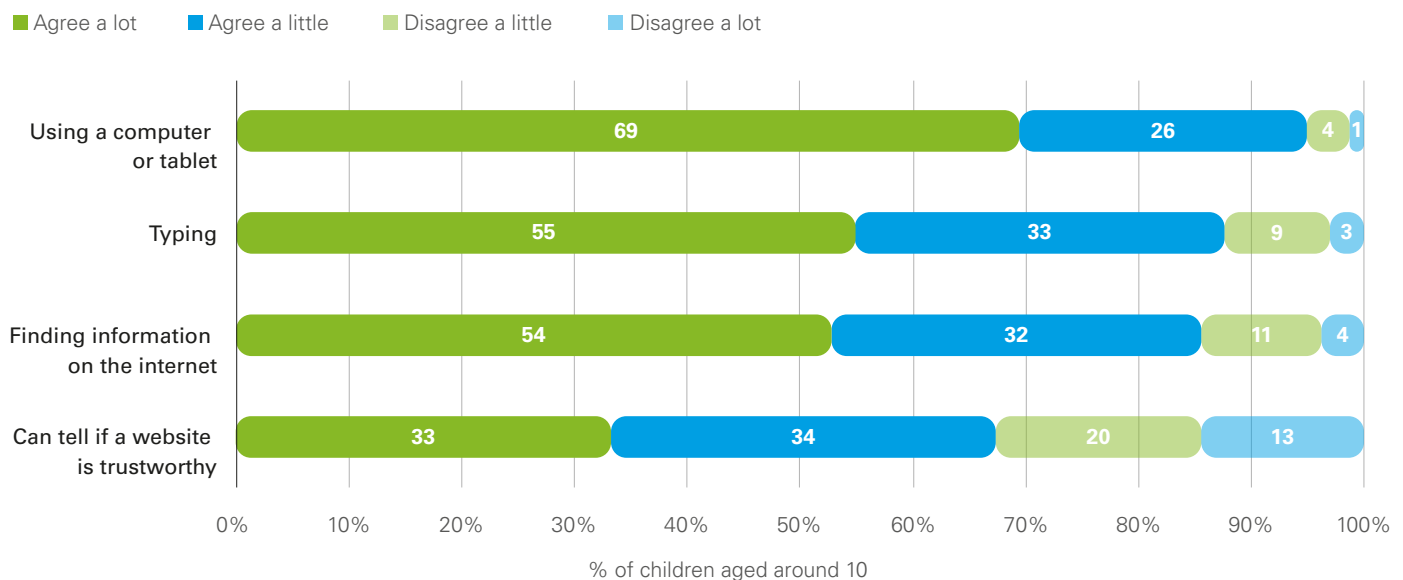
These overall figures conceal major inequalities, as can be seen from the data on 15-year-olds *(see Figure 1):*

- In 2022, around 1 in 20 children (5 per cent) aged 15 living in the most disadvantaged[4] households lacked access to the internet at home, compared to less than 1 per cent in the most advantaged households.
- More strikingly, 15 per cent of those in the most disadvantaged households lacked a computer at home to do schoolwork compared to only around 1 per cent in the richest households.

Digital skills

- Digital skills are becoming increasingly important both during childhood (social inclusion and learning) and for later in life (employability).
- A recent picture of children's self-assessed digital skills at the age of around 10 years old in 21 EU countries is shown in *Figure 2.*

Figure 2. Children's self-assessed skills at around 10 years old, 2021

Legend: ■ Agree a lot ■ Agree a little ■ Disagree a little ■ Disagree a lot

	Agree a lot	Agree a little	Disagree a little	Disagree a lot
Using a computer or tablet	69	26	4	1
Typing	55	33	9	3
Finding information on the internet	54	32	11	4
Can tell if a website is trustworthy	33	34	20	13

% of children aged around 10

Source: 'PIRLS 2021 International Database'. https://pirls2021.org/data/, accessed 2 November 2023.

Note: Covers 23 EU countries – missing are Estonia, Greece, Luxembourg and Romania (data not available).

- The large majority of children (95 per cent) agreed that they were good at using a computer or tablet.
- Most also agreed that they were good at typing and finding information on the internet. However, more than 1 in 10 children aged around 10 years old did not agree that they could do these things.
- A third of children did not agree that they could tell if a website was trustworthy, which also highlights potential risks for children in this age group.

Digital benefits

The impact of digital technologies on children's health, learning and development is challenging to explore fully because technology develops faster than it is possible to evaluate fully. However, there is evolving evidence that both highlights the benefits and cautions about the risks.

- The COVID-19 pandemic highlighted the potential for children to continue learning while schools were physically closed, but also the issue of digital inequalities.
- Education technologies hold the potential to transform learning and skills development for all children. They can be a great equalizer, especially for the most marginalized.
- Safe and age-appropriate access to digital learning and education technologies can give learning opportunities to children who otherwise would not be able to access them, including children with disabilities, minorities, or refugee or migrant children.
- Accessibility and assistive technology solutions are critical to closing the digital divide particularly for children with disabilities. Digital solutions have been a learning lifeline for children caught in emergencies.

Digital risks

- Digital technologies can pose a risk to a child's safety and well-being when not used in an age-appropriate manner. There are risks in navigating online spaces, including cyberbullying, exposure to unwanted material, misinformation, and sexual exploitation.

Cyberbullying

- Bullying in general can be very damaging to child well-being and its effects can last long into adulthood. Cyberbullying may often be an extension of face-to-face bullying that children experience but it can also exist separately.

- In a 2020 EU Kids Online survey[5], including 13 EU countries, around 10 per cent of children aged 9 to 16 who used the internet said that they had experienced online bullying victimization at least once a month in the past year. Around one fifth of these children reported being "very upset" by the experience. The level of offline bullying victimization tended to be similar and slightly higher.

Harmful content

The 2020 EU Kids Online survey[6] found:

- An average of between 8 per cent and 17 per cent of children aged 12 to 16 saw harmful content online, including 17 per cent who had seen hate messages that attack certain groups or individuals.
- Children also experienced various forms of data misuse, of which the most common experience was a virus or spyware (an average of around 14 per cent of children aged 9-16[7]).
- An average of 4 per cent of children aged 12-16 had experienced unwanted sexual requests at least once a month and a further 13 per cent a few times in the past year. This experience was more common for girls (19 per cent) than boys (14 per cent).

Time spent online

- What children do online is much more important for their outcomes than how much time they spend online.[8] The PISA 2022 report finds that students who spent up to one hour per day on digital devices for learning activities in school scored 14 points higher on average in mathematics than students who spent no time.[9]
- Similarly, while it is often assumed that digital technology is harmful to children's mental health, the evidence is more complex. *Figure 3* shows the average life satisfaction of children aged 15, according to how much time they spend on the internet outside school on a weekday, across 24 EU countries in 2018. The highest average life satisfaction was for children spending up to two hours on the internet each day. While those who spent more than six hours had the lowest life satisfaction, this was not significantly different from children who did not use the internet at all, who also had low life satisfaction. On the other hand, no use may also be detrimental and could be linked to social exclusion.
- While excessive digital use may pose some risks to mental health, estimates of excessive use among children in 15 EU countries[10] suggested that it affects no more than around 2 per cent of children in any country and less than 1 per cent in most.

What children do online is much more important for their outcomes than how much time they spend online.
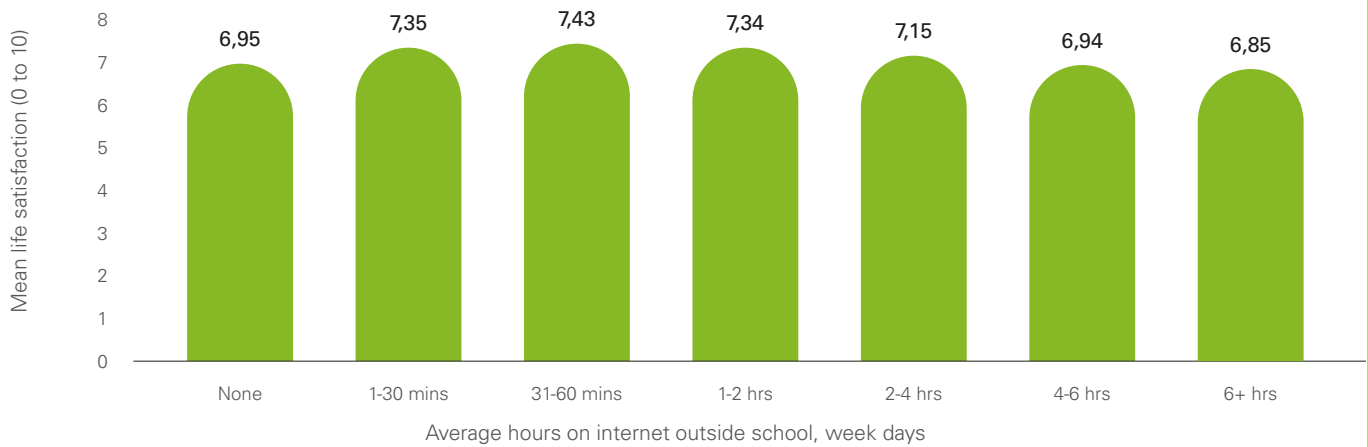
Source: PISA: Programme for International Student Assessment, 'PISA Database', https://www.oecd.org/pisa/data/, accessed 15 January 2024.

Note: Chart shows marginal effects controlling for age, gender, socio-economic status and country. Covers 24 EU countries, excluding Belgium, Cyprus and Denmark (data not available)

What can the EU do to ensure children are safe and thrive online?

1. **The EU should update and enforce legislation to protect children from recognized and emerging risks of violence in the digital environment.** This includes: a clear legislative framework for the development and deployment of technological tools to prevent and respond to online child sexual abuse; alignment of national laws with international and regional international human rights standards; and sufficient investment in law enforcement and social services to ensure victims and survivors receive swift and appropriate support and have access to justice.

2. **In the area of Artificial Intelligence (AI) systems, the EU should call for mechanisms for assessing and continually monitoring the impact of AI policies and strategies on children.** AI systems can and must protect, provide for, and empower children.

3. **The EU must adopt a balanced approach to risk management and barriers to access.** The EU needs to invest in digital empowerment so all children, including those in situations of vulnerability, acquire the necessary skills and competences to make sound choices and express themselves in the online environment safely and responsibly.[11]

4. **The EU needs to fully implement and monitor the implementation of the Better Internet for Kids (BIK+) strategy, this includes:**

   ◆ **Addressing the digital divide to enable equitable access to quality and inclusive learning opportunities for all children.**

Promoting accessibility and assistive technology solutions for children with disabilities and offering multiple and flexible learning pathways to reach and empower marginalized children and youth.

- ◆ **Promoting digital skills, but also literacy, so children can get the most out of tools while still understanding the risks.** Promoting development of age-appropriate digital learning content, platforms and solutions. Encouraging member States to share best practices and to accelerate the implementation of curriculum development and the capacity building of teachers' digital competencies.

Endnotes

1. https://ourworldindata.org/internet

2. Eurostat: Data browser, 'Individuals - frequency of internet use', https://ec.europa.eu/eurostat/databrowser/view/isoc_ci_ifp_fu__custom_9441151/default/table, accessed 21 January 2024.

3. PISA: Programme for International Student Assessment, 'PISA Database', https://www.oecd.org/pisa/data/, accessed 15 January 2024.

4. The measure used in the PISA survey is 'economic, cultural and social status' and is calculated based on child reports of parental employment, parental education and the presence/absence of various items in the home.

5. Smahel, David et al, 'EU Kids Online 2020: Survey results from 19 countries, EU Kids Online', 2020, https://eprints.lse.ac.uk/103294/ This survey included 15 EU countries and 4 other European countries. The statistics cited are for all countries which provided data for each topic.

6. Ibid.

7. Some countries only asked this question from 12 to 16.

8. Stoilova, Maria et al.,' Investigating Risks and Opportunities for Children in a Digital World: A rapid review of the evidence on children's internet use and outcomes, Innocenti Discussion Paper 2020-03', UNICEF Office of Research – Innocenti, February 2021, https://www.unicef-irc.org/publications/1183

9. OECD, 'PISA 2022 Results (Volume I): The State of Learning and Equity in Education', PISA, OECD Publishing, Paris, 2023, https://doi.org/10.1787/53f23881-en.

10. EU Kids Online 2020

11. European Commission, 'A digital decade for children and youth: the new European strategy for a better internet for kids (BIK+)', 2022, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM:2022:212:FIN

unicef

for every child