Children’s data and privacy online: Exploring the evidence

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To provide evidence on children’s understandings, practices & vulnerabilities

To enhance support by developing an online toolkit for children

To identify lessons for policy and practice informed by children’s views and experiences
Workshops with children aged 11-16 (years 7, 9, 11), parents and teachers

Child deliberation panels for policy and educational recommendations

Literature review and expert consultation to identify what we know
• Privacy is “neither a right to secrecy nor a right to control, but a right to appropriate flow of personal information” (Nissenbaum)

• Privacy vital for autonomy, identity, intimacy, responsibility, trust, pro-social behaviour, sexual exploration

• Online platforms provide opportunities for development but introduce & amplify risks; overprotection hinders expression

• Understanding of privacy becomes more complex with age; the desire for privacy also increases

• Understanding varies by data type
Interpersonal privacy
- Data given

Institutional privacy
- Data given
- Inferred data

Commercial privacy
- Data given
- Data traces
- Inferred data
Systematic evidence mapping:

• How do children understand, value and negotiate their privacy online?
• What are the digital skills, capabilities or vulnerabilities with which children approach the digital environment?
• What are the significant gaps in knowledge about children’s online privacy and commercial use of data?

Search: 19 databases yielded 9,119 search items + 279 expert suggestions
• Analysis: 131 empirical studies, 266 framing studies
Children’s privacy protection

- Children as ‘naïve experts’: lack of concern, oversharing, underestimate consequences
- Children deploy a range of privacy protection strategies
- Privacy concern does not necessarily trigger protective behaviours
- Sense of control over information and audience affect disclosure
- Trust influences disclosure of sensitive information as it minimises perceived risk
Children’s privacy protection

• Controlling parents have suppressive effect—reducing privacy risk BUT also frequency of use, digital skills and online opportunities

• Active mediation is more empowering: more autonomous decisions, coping and learning from mistakes

• A parent-centred approach, however, reinforces existing privileges
Differences among children

- Child development
- Media literacy
- Socio-economic inequalities
- Gender differences
- Vulnerability
5-7 years

• Can identify some information as sensitive (and hide from parents) (Kumar et al 2017)
• Tracking or monitoring initially not seen as a privacy concern (Gelman et al 2018)
• Gradually developed sense of ownership and independence
• Confident users but narrow range of activities, low risk awareness
• No clear understanding of online privacy protection (Chaudron 2018)
8-11 years

• Struggle to identify risks or distinguish what applies offline/online

• Gaps in ability to decide about trustworthiness or identify adverts (Ofcom 2017)

• Privacy risks associated with ‘stranger danger’ (Raynes-Goldie & Allen 2014, Children’s Commissioner 2017)
8-11 years

- Starting to understand risks of sharing (Kumar et al 2017)
- Gaps in understanding privacy terms and conditions
- Privacy management is rules not internalised behaviour
- See monitoring more positively than adults (e.g. safety)
- Interactive learning shown to improve awareness and transfer to practice (Zhang-Kennedy et al 2016, 2017)
12-17 years

- Older teens share more, to more people, and across different platforms (Xie & Kang 2015)
- Privacy risks mainly seen as interpersonal, not commercial or institutional (Steijn & Vedder 2015)
- Not oblivious of privacy risks: careful consideration of information disclosure (Wisniewski et al 2015)
- Weighing risks and opportunities, BUT: decisions influenced by immediacy/desire for benefits more than distant/uncertain risks
- Online as ‘personal space’ for self-expression, socialising, with concerns about parental intrusion
- Understanding of online restrictions and monitoring by the school (Cortesi et al 2018)
12-17 years

• Awareness of ‘data traces’ (e.g. ads) and device tracking (e.g. location) BUT hard to make personal connection

• Little knowledge of data flows and infrastructure - data as static (Bowler et al 2017)

• Little awareness of future implications of data traces

• Mixed evidence about feeling in control of data – ‘in control’ (Chi 2018), ‘little control’ (Emanuel & Fraser 2014)

• Privacy risk as a ‘learning process’ - retrospective behaviour
Challenges

- Children’s online activities are the focus of a multitude of monitoring and data-generating processes
- Children aren’t able to fully understand and consent
- Children and adults differ in views of privacy online, risks and protection
- Design and architecture can incentivise disclosure and risk-taking or prevent privacy protection
- Longer-term implications are hard to predict
- Some children are more vulnerable than others
- Children are rarely involved in decision-making
Recommendations

- An age-appropriate approach to data and privacy online
- Vital balance between protection and autonomy
- Media literacy and privacy education at an early age
- Focus on individual differences and psychological factors
- Support children by supporting adults
- Improve the privacy affordances of the online environment
- No discrimination based on personal data
- Better evidence base, including children’s voices