WHAT ARE THE POSSIBLE HEALTH EFFECTS (PSYCHOSOCIAL)?
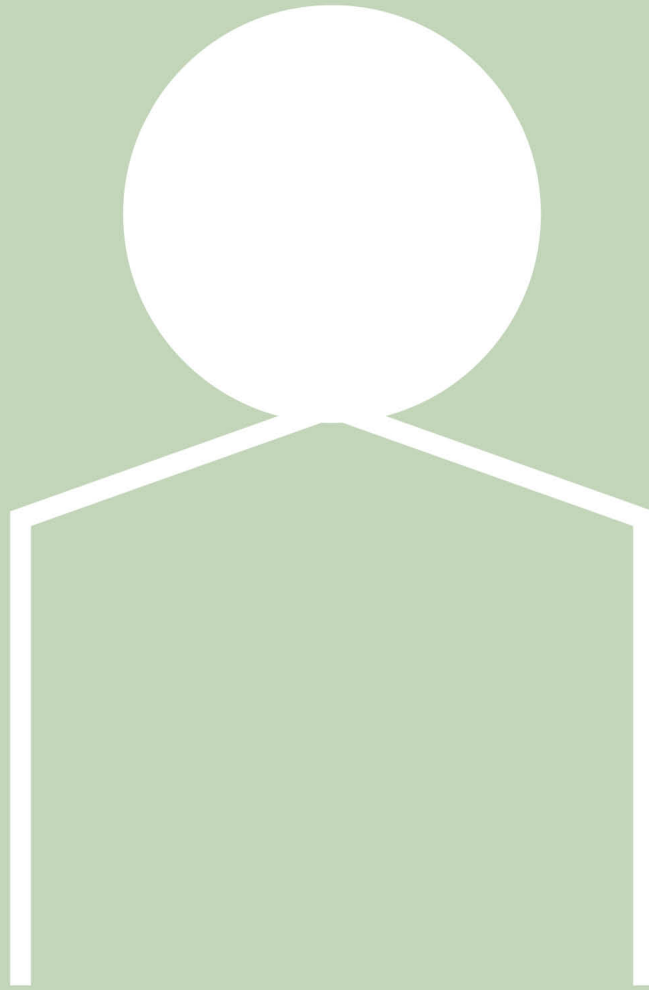
Digitisation & health ⟶ ⟫ Education

In the context of the "digital society", it is crucial to consider two issues that are interrelated in a complex manner: the use of digital screen media both inside and outside of educational institutions. The field of media effects studies has already been examining these issues for four decades, but generally places the focus on the recreational use of digital media.

State of research

Scientifically proven psychosocial health consequences of using screen media include:

- Loss of empathy and fewer inhibitions regarding the exercise of violence
- Delays in language development and literacy
- Concentration disorders (up to ADHD level).

Further known risks include: 'corruption' of the psychological reward system (getting used to rapid reward stimuli); addictive use (cyber disorders); loss of distinction between on- and offline experiences. Overall, it can be said that health risks of using digital media that we know of so far affect younger children significantly more than older children. In the context of educational institutions, digital media bring chances for improving learning outcomes in some areas. However, they also bring risks detrimental to the learning process. This includes increased stress through frequent and fragmented feedback (which not only affects academically weak students but particularly affects stronger students via the 'pressure for self-optimisation'), and distractions (see example 3).

Prevention

Decades of research have shown: To prevent problematic behaviour patterns, it is crucial to start fostering certain life competencies from early age onward and to support the ability to say 'no' (social resistance). Cognitive approaches relying on deterrence and raising awareness, in contrast, are usually ineffective. For example, studies have shown that certain anti-bullying programmes have in fact increased bullying. Also, high-level technical skills do not protect against the risks of using digital media. On the contrary: In the group of 'vulnerable youth' in the EUkidsonline study, strong technical skills were associated with a higher risk for internet addiction. In the same way, Asian adolescents with high-level 'technical use skills' were internet-addicted more often and had more contact with problematic online content (violence, pornography, etc.) than their less technically versed peers.

Digital amplifiers of social disadvantages?

In Germany, children from socially disadvantaged backgrounds are, on average, 'better' equipped with games consoles (four times more), TVs (three times more) and own their first smartphone at an earlier age. As a result, usage times are about twice as high and the use of content that is problematic for child development is about six times as high as that of their peers. This contributes to poorer grades and increases existing educational inequality.

Education

Example 1

The use of the tool "Antolin" for supporting children's reading development creates unintended social stress as pupils constantly compare their marks with one another. Teachers report the emergence of a competitive atmosphere which adversely affects the social cohesion of the class.
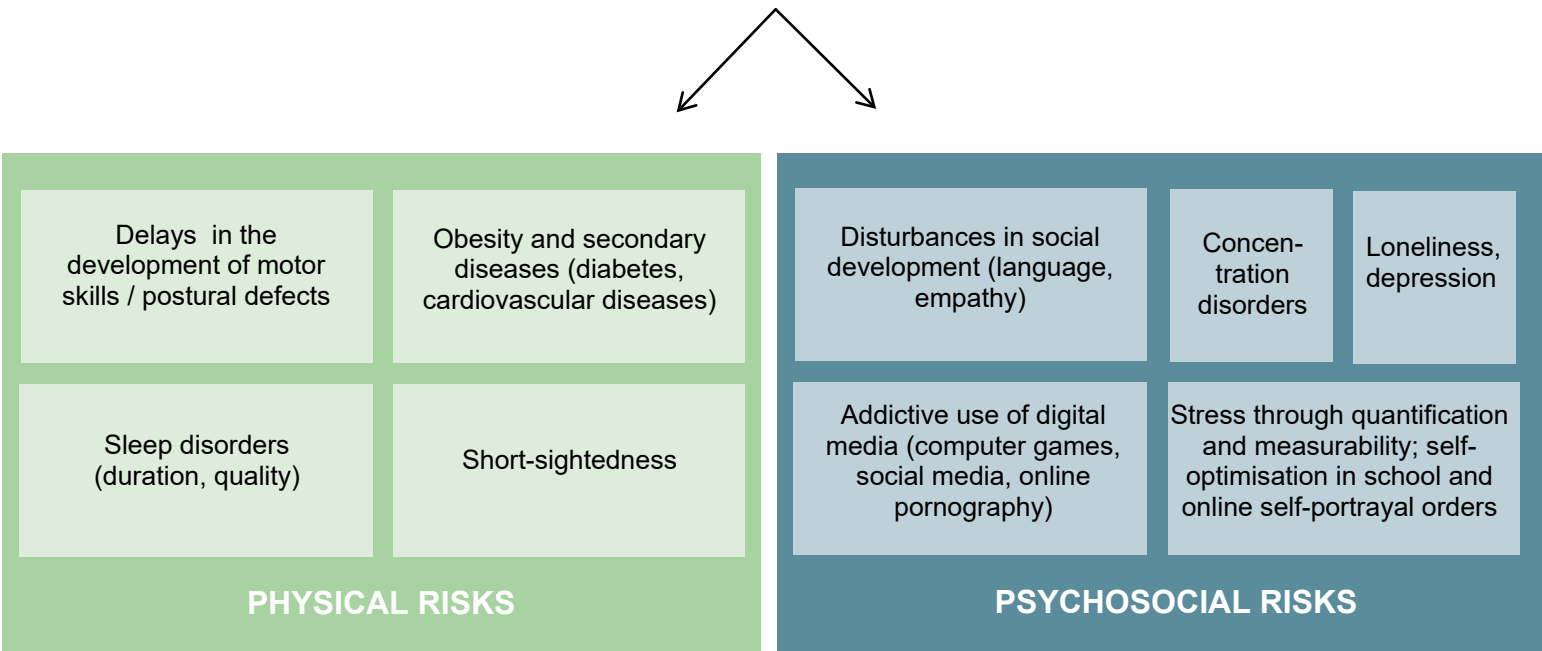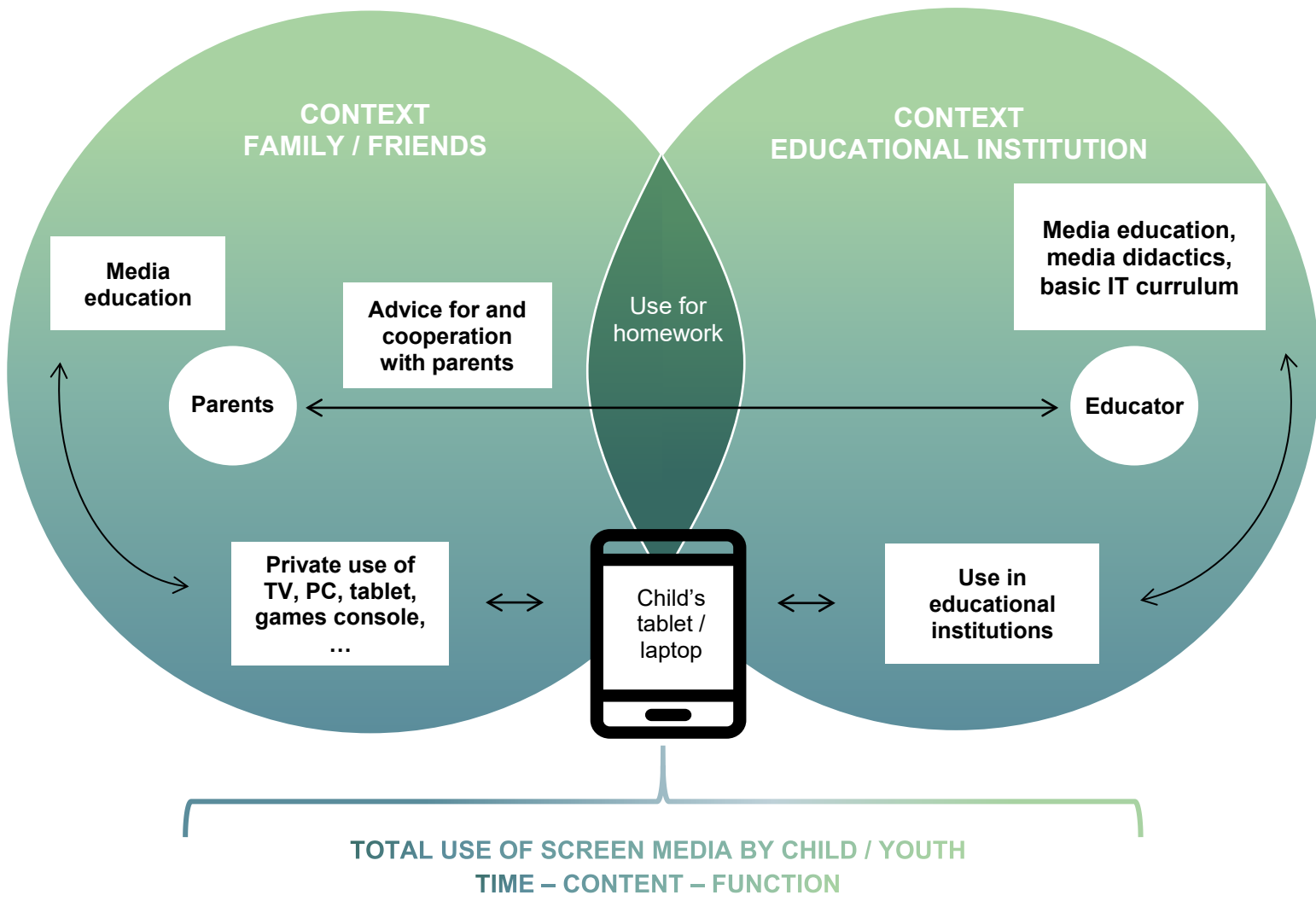
Example 2

"Klasse2000" is a German prevention programme for primary schools that aims to promote life competencies ('life skills training'). Early resource-oriented prevention of digital risks has explicitly been an integral part of the programme for several years now. In the programme, the target group of parents is offered advice on limiting problematic uses of digital media. Pupils are supported and protected by receiving suggestions for screen-free leisure activities with training on general health and social competencies. An ongoing study is examining the programme's effectiveness.

Example 3

The grades of British pupils enrolled in schools with effectively implemented rules for smartphone usage to prevent digital distractions are significantly better than those attending schools without such regulations. Particularly, the grades of academically weaker students suffer whereas stronger students' grades are scarcely affected by the presence of digital distractions.

⟫ Questions

- How can we recognise signs of psychosocial problems related to the use of digital media (cyberbullying, sexting, violence, porn addiction etc.)?
- How do we react professionally and, if necessary, put the student into contact with external counselling?
- How do we strengthen individual learners in real life in order to prevent (digital) risks?
- How can we further prevent risks through raising awareness and empowering for digital 'self-defense'?
- How do we limit the measurability of learning to protect against stress related to self-optimisation and constant comparison?
- How do we support the learners' development of identity in the interplay of online and offline worlds?
- From which age do we recommend digital devices to be used - both in and outside of our educational institution?
- How do we involve and support parents – also via child protection software support, if required?

CONTEXT FAMILY / FRIENDS

CONTEXT EDUCATIONAL INSTITUTION

Media education

Media education, media didactics, basic IT currulum

Advice for and cooperation with parents

Use for homework

Parents

Educator

Private use of TV, PC, tablet, games console, …

Child's tablet / laptop

Use in educational institutions

TOTAL USE OF SCREEN MEDIA BY CHILD / YOUTH
TIME – CONTENT – FUNCTION

PHYSICAL RISKS

Delays in the development of motor skills / postural defects	Obesity and secondary diseases (diabetes, cardiovascular diseases)
Sleep disorders (duration, quality)	Short-sightedness

PSYCHOSOCIAL RISKS

Disturbances in social development (language, empathy)	Concentration disorders	Loneliness, depression
Addictive use of digital media (computer games, social media, online pornography)	Stress through quantification and measurability; self-optimisation in school and online self-portrayal orders	

Chart showing the physical and psychosocial consequences of problematic screen media use
in children and adolescents, taking into account the interdependence between and factors influencing their use in private and educational contexts.

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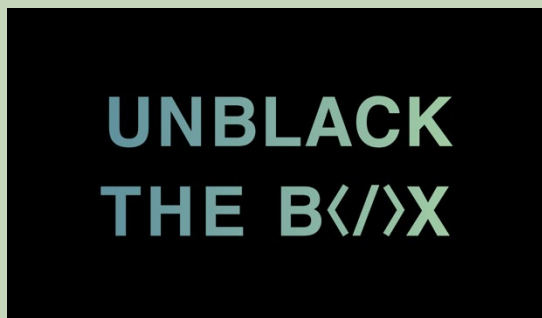
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UNBLACK THE BOX is a network initiative founded in 2019 by researchers from education science, sociology, information technology, media and health education, as well as teachers in schools, universities and pedagogical training. Our goal is to enable educational institutions and teachers to respond to the growing datafication and digitization of education with enlightened, critical and conscious decision-making, even without extensive IT knowledge.
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