



ELIANT Position Paper on Digital Media in Childhood and Education

ELIANT seeks to safeguard the availability of choice in early childhood education and care, in primary and in secondary education. Increasing neurological, psychological and behavioural research evidence guides the alliance in its mission to help children achieve an optimum level of social, emotional, mental and spiritual health. For this reason, ELIANT is soliciting the support of EU citizens with its [petition](#) about screen-free education that runs until autumn 2020.

Early Digital Use and the Impact on Brain Maturation

Independent research has shown how children are affected by the use of digital devices and questions whether their use should be recommended for educational purposes¹.

During early childhood, the developing brain requires the body to be active in a variety of natural (analogue) settings and to engage all the human senses. The child learns to use its brain and navigate the environment by activating its motor functions and sense organs.²

The latest research draws attention to the risk of neuronal over-activation³, which can have a negative impact on forebrain development and increase the risk of a physical addiction to the technology⁴.

Therefore, it is highly appreciated, that the World Health Organisation (WHO), outlines appropriate screen time according to children's age-specific developmental needs and does not recommend any screen time in the first and second years of life.⁵

Cognitive Capacities, Socio-emotional Intelligence and Behaviour

Face-to-face communication with other human beings is essential for acquiring complex cognitive skills. Using digital media to boost human competencies has proven itself to be largely ineffective. Cognitive capacities depend on the healthy development of the brain and the child's socio-emotional intelligence.

Developmental psychology draws attention to the importance of *serve-and-return* practices, which allows the child to observe and learn from the way parents react to its actions. The focus on screen technologies often impairs the learning opportunities for young children⁶. Studies also show that the less young children use digital technology, the more are they able to read and understand diverse human emotions⁷.

¹ Linn, S., Almon, J., & Levin, D. E. (2012). Facing the screen dilemma: Young children, technology and early education. Campaign for a Commercial Free Childhood. Available at: <http://www.commercialfreechildhood.org/sites/default/files/facingthescreendilemma.pdf>

² Teuchert-Noodt: 20 Theses from the perspective of Brain Research, July 25, 2017. Available at: https://eliant.eu/fileadmin/user_upload/Conference2017/Thesepapier_2017_Teuchert-Nood.pdf

³ Hyung Suk Seo et al., (2017). Neurotransmitters in Young People with Internet and Smartphone Addiction: A Comparison with Normal Controls and Changes after Cognitive Behavioral Therapy.

⁴ Sigman A: Screen Dependency Disorders: a new challenge for child neurology. JICNA 2017. Available at: https://www.researchgate.net/profile/Aric_Sigman/publication/317045692_Screen_Dependency_Disorders_a_new_challenge_for_child_neurology/links/5922ef56aca27295a8a7b29b/Sigman-A-Screen-Dependency-Disorders-a-new-challenge-for-child-neurology.pdf

⁵ WHO (2019). To grow up healthy, children need to sit less and play more. News release. 24 April 2019. Geneva. Available at: <https://www.who.int/news-room/detail/24-04-2019-to-grow-up-healthy-children-need-to-sit-less-and-play-more>

⁶ Brandon T. McDaniel, Jenny S. Radesky. Technoference: longitudinal associations between parent technology use, parenting stress, and child behavior problems. *Pediatric Research*, 2018; DOI: [10.1038/s41390-018-0052-6](https://doi.org/10.1038/s41390-018-0052-6)

⁷ Uhls, Y. T., Michikyan, M., Morris, J., Garcia, D., Small, G. W., Zgourou, E., & Greenfield, P. M. (2014). Five days at outdoor education camp without screens improves preteen skills with nonverbal emotion cues. *Computers in Human Behavior*, 39, 387-392. Available at: <https://www.sciencedirect.com/science/article/pii/S0747563214003227>

Current research in behavioural psychology draws attention to the problem of *instant gratification*. Nowadays access to digital entertainment at any given moment, eliminates the need for children to work actively for a reward and impairs their ability to learn patience, determination and self-control. Instead these technologies foster the expectation that every need or want has to be fulfilled immediately, which if they are not, results in overwhelming feelings of frustration, sadness and anger⁸.

Conclusion

The ELIANT Alliance seeks to encourage broad, evidence based, interdisciplinary research into the creation of a healthy developmental process in education⁹. This can best be achieved by meeting the following criteria:

1. To further develop an independent, evidence based, interdisciplinary research programme and a longitudinal study into the impact of these technologies on healthy child development and the role that education could play in providing the conditions most conducive to healthy development.
2. To implement an EU-wide awareness campaign that informs parents, schools and teachers about the impact of screen technology on a child's socio-emotional and brain development.
3. To ensure that parents, teachers and caregivers have the freedom to choose between different pedagogical approaches. These need to be accessible, affordable and include the option of a screen-free approach in ECEC and primary education, so long as pupils meet the general learning objectives of compulsory education by the end of their school time.
4. To establish ongoing dialogue with stakeholders – including CSOs, parents and teachers – to design and implement appropriate policies.
5. To develop educational policies and targets that secure the protection of human health and eliminate the potential health risks to each child. Such risk exclusion should be accepted in the general understanding of the precautionary principle, as stated under [Article 191 of the Treaty on the Functioning of the European Union](#).

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⁸ W. R. Cummings: The negative effects of technology on childhood behavior. Childhood behavioral concerns. PsychCentral. Available at: <https://blogs.psychcentral.com/childhood-behavioral/2017/11/the-negative-effects-of-technology-on-childhood-behavior/>

⁹ Hübner E. (2017): Education for Media Literacy. Media in Waldorf Education. European Council for Steiner Waldorf Education. Available at: <http://ecswe.eu/wp-content/uploads/2019/05/Education-for-Media-Literacy-Media-in-Waldorf-education.pdf>