



Effects of the use of digital technology on children's empathy and attention capacity

NESET Analytical Report No 4/2019, 2020
Summary

While the use of digital technology is widespread in most educational settings, there is rising concern over the effects of its use on children. In our digitally transformed societies, such technology has become a crucial means for learning and education. However, it has also given rise to major changes in approaches to learning and the learning environment. The aim of this report is to present evidence on the effects of the use of digital technology (in the form of digital tools and software/applications) in relation to children's empathy (social competence), and their capacity to concentrate (attention) at school.

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Context

The effects of the use of digital technology in education are still underexplored in relation to several dimensions of student learning and development. Until now, most studies have focused on how such use affects students' academic learning outcomes. However, knowledge is lacking as to the consequences on students' empathy and attentional capacity of using digital technology, with both dimensions being critical for students' development and success in formal and informal learning.

The report

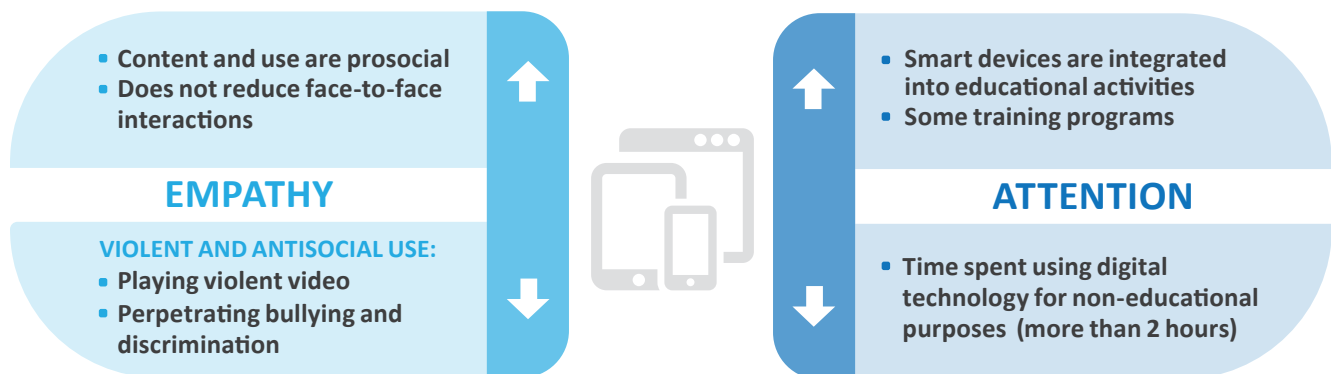
To address this knowledge gap, this analytical report presents the state of the art on the effects that the use of digital technology has on children's empathy and attention capacity. We also explore how those effects depend on use, approach and agency, in order to provide useful recommendations to parents, teaching professionals and other members of the community. Our review includes studies whose target populations are children in primary and secondary education, both within the EU and internationally.

Key findings

The use of digital technology increases empathy and attention capacity in some cases, and decreases them in others. Research shows that which of these two effects is achieved depends on how the technology is used, for how long, and to what end.

Digital technology has the effect of increasing children's empathy when its content and use are prosocial. Prosocial attitudes and behaviours can be promoted through academic activities, training programs, digital communication and the choices of digital technology children use for leisure purposes. Digital technology has the effect of reducing children's capacity for empathy when it involves violent and antisocial uses. Playing violent video games and using digital technology to perpetrate bullying or discrimination desensitises some children and negatively affects their capacity for empathy. The length of screen time also affects the development of empathy if it prevents children learning empathy from others in real-life contexts.

The integration of smart devices into educational activities in the classroom has the effect of improving students' capacity for attention. The extent of such improvement depends on the learning approach and instruction model applied. Mobile devices, video games and computers have a distracting effect on children's capacity for attention when the time spent using digital technology for non-educational purposes each day exceeds two hours.



Recommendations

Digital technology can have the effect of increasing children's capacity for empathy when interactive learning environments are promoted, coherence is ensured throughout all learning activities, and media literacy is developed. The use of digital technology should not be to the detriment of interactions that promote the learning of empathy from others, and the perils associated with the use of such technology should be taken into account.

With regard to children's capacity for attention, the evidence supporting the effects of training programs should always be considered before implementation, and digital technology should be well integrated into classroom activities. To minimise the power of digital technology to distract children's attention, effective strategies should be elaborated collaboratively between students and their peers. Time spent using digital technology for non-educational purposes should be controlled.

