

Digitisation in education has produced a generation with limited intellectual abilities

by Norbert Häring,* Germany



Norbert Häring.
(Picture ma)

US schools are already spending ten times as much on digital learning software and hardware as they do on textbooks. Instead of increasing pupils' academic achievement, as promised, it has actually declined. An analysis of PISA results confirms that

academic achievement decreases as screen time at school increases.

According to an analysis by the market research firm *NetworkNurture Hub*, US schools had already spent 30 billion dollars on learn software and hardware by 2024,¹ roughly ten times as much as on textbooks.² The sharp rise in the budget for digital learning resources was driven and enabled by funding programmes from the US federal government and the states, similar to those in Germany.

The result: Generation Z, which was unwittingly used as guinea pigs for this field trial, is the first generation in modern times in the US and many other industrialised nations whose cognitive abilities are lower than those of the preceding generation. Neuroscientist *Jared Cooney Horvath* presented this diagnosis and the conclusions drawn from it to a US Senate committee on 15 January.³

The scientist presented findings from international assessments and academic studies showing that increased screen use in the classroom is generally associated with poorer learning outcomes, not better ones. This is because the way digital platforms and learning materials are designed to attract and hold attention does not promote the development of cognitive



There are strong indications that the digitisation of teaching does children and young people more harm than good.

(Picture keystone)

abilities but rather hinders it. He identified the fragmentation of attention and the rapid switching between tasks as the biggest problem.

Furthermore, people are not as good at absorbing screen content as they are at absorbing content presented on paper. And contrary to what one might expect, their ability to do so does not improve as they become more accustomed to reading from screens. A study published in 2018,⁴ which synthesised the findings of studies published since the start of the millennium, revealed a clear advantage in information retention when reading from paper compared to screens.

This advantage is particularly pronounced when time is limited. The disadvantage of screen reading proved to be just as significant for digital natives as for older people who did not grow up with digital media. It has also increased over the years rather than decreased. It is therefore clearly not a transitional problem that resolves itself once people become accustomed to screen reading and have acquired the optimal skills for it.

Whilst in the 20th century, outside of wartime, intellectual abilities steadily increased from one generation to the next, according to Horvath there has been a reverse trend for around 20 years: various indicators showed that in OECD countries, young people's reading and numeracy skills, problem-solving abilities, creativity and

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general intellectual performance were stagnating or declining.

During this period, school teaching became increasingly digitised. According to a survey, as early as 2022, a good quarter of teachers in the US were already allowing pupils to use computers in class for three to four hours a day,⁵ whilst another quarter were allowing them to use them for at least five of the average seven hours of a school day. According to Horvath, pupils used the computers for activities other than those intended for more than half the time.

An analysis of the PISA comparative studies on the performance levels of 15-year-olds in OECD countries revealed that the more intensively computers are used in the classroom, the lower the performance in mathematics, reading and science. For younger pupils, the TIMSS study (*Trends in International Mathematics and Science Study*) yielded the same result, regardless of the income level of the countries surveyed.

Some of the recommendations derived for the US Congress are equally highly relevant and worthy of consideration for German education policy: No funding for school digitisation without scientific proof of effectiveness:

- Ensuring that data on pupils is not misused
- All those involved in decisions regarding the funding or procurement of (digital) teaching materials must disclose any conflicts of interest
- Disclose assessment and evaluation criteria for teaching materials
- Fund research projects focusing on the long-term outcomes of digitised teaching
- Establish a central federal platform where scientific studies on school digitisation are collected and made accessible to all federal states and local authorities.

Conclusion

Given the strong evidence that the digitisation of teaching does more harm than good to children and young people, federal and state funding for digitisation should only be provided if there is valid evidence that the funded measures benefit pupils.

The federal government, the states and local authorities must no longer give in to the lobbying and enticements of IT corporations to the detriment of pupils. Whilst it is highly likely that the excessive use of computers for games, social media and other activities in leisure time is even more harmful to children and young people than the digitisation of teaching, there is little reason to believe that it is helpful to sit pupils who spend far too much time in front of a screen in their free time in front of a screen at school as well.

The basic premise should be that school must be the place where young people learn to concentrate and to tackle tasks that are not broken down into small bite-sized chunks with immediate rewards.

Source: <https://norberthaering.de/news/usabildschirmlernen/>, 1 March 2026

(Translation "Swiss Standpoint")

¹ <https://www.linkedin.com/company/networknurture-hub/>

² <https://www.bloomberg.com/opinion/articles/2026-02-11/education-technology-isn-t-teaching-us-children-more-effectively>

³ <https://www.commerce.senate.gov/services/files/A19DF2E8-3C69-4193-A676-430CF0C83DC2>

⁴ https://www.sciencedirect.com/science/article/pii/S1747938X18300101?ref=pdf_download&fr=RR-2&r=9cbd297cee177d08

⁵ <https://marketbrief.edweek.org/meeting-district-needs/how-much-time-are-students-spending-using-ed-tech/2022/03>