

DO WE KEEP GETTING FASTER?



The reading of books is replaced by electronic media such as television, Internet and social media platforms.

How self-optimisation went digital

In addition to endurance, power, coordination and flexibility, speed is one of the five pillars of the human motor skills that form the basis for athletic movements. Unfortunately, one's own speed is limited by genetic predisposition. In addition, factors like a person's constitution, age, gender or muscle fibre type distribution also affect their speed. If our share of fast twitch (FT) fibres is large, then we can achieve top speeds. A well-pronounced sensomotor-cognitive ability, i.e. the ability to quickly absorb and process information, is also beneficial in this regard. The result of the aforementioned facts is that we can only increase our performance in terms of speed by 15-20%. This means that anybody can complete a marathon, but only a few people can become outstanding sprinters.

But if we can't all train our body to deliver top physical performances, what about our mind? Can we train it to absorb and process information much more quickly? There are many classic methods to train the mind – and the digital world also plays an increasingly important role in this area as well. The reading of books is replaced by electronic media such as television, Internet and social media platforms. Critics argue that young people who spend a lot of time online are ►

only looking for small, easily digestible bits of information in "real" life. But do fast-paced video games and short TikTok videos really reduce the attention span of children and teenagers and hurt their ability to focus? In spite of all of the criticism, the average IQ has actually increased in recent years. The mechanisation of our everyday life seems to keep our grey matter active and forces us to keep learning new things.

firework that they are exposed to actually prepares their generation very well for the requirements of the modern world. Employees are increasingly expected to multitask, i.e. to work on multiple things at the same time. And some video games foster precisely this skill. In another US study, the test subjects who played video games performed significantly better in virtual tests, such as mental arithmetic, remembering sequences of letters while reacting to visual and acoustic stimuli, than non-gamers. In addition, people "trained" by playing video games also performed better in visual tests and also scored well when it came to quickly process stimuli. Can this type of test result simply be dismissed as a pure training effect? An alternate explanation could be that people with an especially



high visual perception and awareness are particularly attracted to playing video games. However, the study also showed that non-gamers were able to significantly increase their potential by playing action games. The study concluded that stimuli accompanied by a direct reward, such as reaching the next level of a video game, facilitate new neural connections.

This is not only true for young people but can also be detected in older people. And it doesn't have to be a video game. Actively using the Internet and frequently looking up things on search engines is sufficient for activating the regions of the brain responsible for complex decision-making processes. The frontal lobe, the frontal temporal lobes and the hippocampus are all involved in controlling our ability to make decisions

and to connect information more quickly. And these are exactly the regions of the brain that are stimulated.

Electronic media can apparently foster individual aspects of our thinking and therefore prepare our brain for some of the requirements of our daily lives. However, some of the skills of processing information more quickly are merely superficial. For example, "googling" something does not help to immerse yourself in longer texts. Electronic media hardly give users enough time for critical thinking since the very next click already offers new stimuli.

While the Internet, video games and TV can produce impressive results in terms of visual intelligence, these gains come at the cost of a more in-depth cognitive processing of information. Just like with many other things, a healthy mix of the use of electronic media and human interaction is the perfect combination for the development of all of our abilities. UA ■



Electronic media can apparently foster individual aspects of our thinking and therefore prepare our brain for some of the requirements of our daily lives.

A US study published in 2009 shows that not all types of intelligence have increased equally. In particular, non-language-based tasks that need a high figurative intelligence are being solved more quickly, i.e. the comparison of complex patterns or graphic figures. Video games foster spatial thinking and therefore also figurative intelligence. That means the screen-based world in which children and teenagers are growing up in these days is not necessarily harmful and might even be beneficial. The media



COGNITIVE ABILITIES

Visual perception (from the Latin word videre: seeing) refers to the intake and processing of visual stimuli. Relevant information is extracted via the eyes and the brain, elements are recognised and interpreted and then compared to memories. This means that visual perception goes far beyond merely taking in information.

Humans take in information via

