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BRIGHT KIDS

Finding the right balance

By SRIMAYEE SEN SARMA

TECHNOLOGY has become an integral part of our daily lives and no one can deny the necessity of incorporating it into education. In fact, the introduction of technology in schools is possibly the biggest change the global education system has gone through in the last decade. However, with children now being exposed to technology at home as well as in school, are we overexposing them, and can there be adverse repercussions?

Louis Lai Sheng Ren, supervised psychologist at International Psychology Centre, agrees that bringing technology into educational settings has its advantages but believes integration of technological use has to be viewed with caution.

“While technology can allow for more

According to Christina Tan Su Liang, optometrist and honorary secretary of Association of Malaysian Optometrists, there has been a marked increase in the number of children coming to her with vision problems.

She associates this surge with technology overexposure, saying, “Children are exposed to digital screens in two ways: one is through the long-range devices such as smartboards used in schools, and another is through close-range devices such as smartphones, tablets and laptops.

“As long as the lighting is optimised, exposing children to long-range screens should not be a cause for concern. What’s more harmful are close-range devices, because staring at these screens for a long time without blinking can cause digital eye strain. Children may experience symptoms



games and spend most of their time glued to touch things because that is how they learn

active learning and increase student engagement, it can also distract them from paying attention to their studies. The use of technology should not be banned from classrooms completely, since we live in a digital world and being digitally literate is a life skill needed for almost any future career. However, children could be overexposed to technology if the devices available are not used in a manner that fosters learning.

"Technology exposure becomes overexposure when it interferes with the child's other activities and daily life. The moment a child disengages from usual activities such as playing sports or meeting with friends to instead spend time on the Internet or play games by themselves, their technology use can be classified as harmful overexposure."

The harm this overexposure can cause is already evident in children as obesity, vision problems, depression, anxiety and social isolation continue to rise. There have been numerous studies that link technology overuse to these health issues in children.

It is about time we ask ourselves where to draw the line to safeguard our future, because technology overexposure is a black hole in which children can get lost if left unattended.

Eye on their future

One of the main mediums of interaction between technology and humans is vision, and, often unknowingly, we strain our eyes too much while using smart devices. Children's eyes are immature and exposure to too much screen time from a young age can cause vision problems.

without technology can cause digital eye strain. Children may experience symptoms such as blurry vision, itchy eyes, shoulder pain and headaches."

Tan also warns that too much screen time can directly or indirectly cause vision problems, including dry eyes, short-sightedness and even severe eye nerve damage later in life.

"It is easy to ignore the signs of vision problems in children because they don't understand it themselves and don't tell their parents. There have been many instances where parents reprimand children for performing poorly in school, when the real reason is that these children cannot see clearly."

She acknowledges that it is difficult to limit screen time, especially for older children, because they need the Internet for studies and homework, but she insists that they be encouraged to take frequent breaks to relax their eyes.

"There should be a balance between technology exposure and other activities, which is easier to achieve at school but harder to enforce at home. Nonetheless, parents need to supervise and ensure that this balance is not disrupted."

Balancing the scales

Malaysia is bestowed with the not-so-flattering title of most obese nation in South-East Asia by British medical journal *The Lancet*, with a whopping 11.9% prevalence of obesity in children below 18 years old. While many people blame poor diet choices as the main reason for this endemic, technology is just as much to blame.

Assoc Prof Dr Muhammad Yazid Jalaludin, Malaysian Paediatric Association president, says, "Obesity occurs when one's food intake is much greater than his energy expenditure. High-calorie food is not always a bad thing, but you must ensure that energy intake is equal to energy output. This is not the case anymore with children binging on junk food without getting sufficient exercise."

According to him, even primary school students spend too little time playing outside, which hampers their fitness levels.

"There is too much screen time, more than the recommended amount that is provided by the American Academy of Pediatrics but not many people know about it or follow it."

He believes that children today are more addicted to online games rather than outdoor

games and spend most of their time glued to the screen.

Technology is contributing to rising obesity in children not just by making them inactive, but also by disrupting their sleeping patterns.

Smart devices emit blue light, which can disrupt sleeping patterns, according to a 2013 study titled *Light level and duration of exposure determine the impact of self-luminous tablets on melatonin suppression* published in *Applied Ergonomics*. This and other studies show that blue light significantly suppresses the release of melatonin (a chemical that induces sleep), causing us to become more alert and wakeful.

"Not many people know that lack of sleep can also cause obesity. A lot of Malaysian children are not getting enough sleep. One of the reasons is because they stay glued to smart devices till late at night," he concludes.

To combat this growing problem, schools need to ensure children get enough physical exercise and parents need to exercise control over their children's screen time.

It's all in their heads

Dr Rajini Sarvananthan, consultant developmental paediatrician and Malaysian Paediatric Association member, believes that some schools are introducing technology to children at far too young an age, and it may have negative consequences on their mental well-being.

"We cannot run away from technology and children should be allowed to interact with it, but I do not understand the need to introduce technology to preschoolers. When you introduce a child to technology at a very young age, you risk her getting addicted in the long term, especially if she is unsupervised."

The biggest bane of technology is that it is addictive, so much so that the term "technology addiction" has been coined to address the issue. There are even boot camps that provide rehabilitation services to manage this particular addiction.

However, she believes that technology overuse in schools is not as serious as that at home since schools regulate the exposure, but screen time often goes unsupervised at home. A small child sitting quietly with a smartphone or tablet in her hand is a common sight in restaurants, on public transport and even at clinics. Parents consciously or unconsciously hand their children such devices to make them sit still.

Dr Rajini admonishes such parents, saying, "Children are supposed to run around and

touch things like that is how they learn about and interact with the world around them. If parents make their children sit in one place with a digital device in hand, they are narrowing the child's horizon and limiting it to the screen of a smart device. Technology should be used for interacting with children and not as babysitters, because such children could grow up socially isolated – lost in their virtual world."

This unsupervised overexposure to technology can spell even greater danger in older children, who are likely to be exposed to cyberbullying, pornography and violence. Another addictive aspect for older children is social media.

Lai thinks that social media is good if it is used to connect with friends, since it can contribute to social and psychological well-being by extending social networks. However, it is more often chosen over in-person interactions, and this can affect children's mental health by isolating them from their peers, causing depression and anxiety.

"The Internet is available at all times and is full of information, both good and bad. When children are confronted by this information overload, they face a constant struggle to stay updated and it manifests as fear of missing out. Overexposure to technology, especially the Internet, can substantially increase states of subconscious stress and anxiety in children."

Constant vigilance

It is not that the parents aren't aware of such adverse consequences of technology overexposure. It is just that the awareness is highly polarised, according to Lai.

"Technology is seen either as a helpful tool in education and upbringing with great benefits, or as an isolating activity that worsens children's school performance. It needs to be weighted in terms of which types of technology use are beneficial and which types are damaging to children's mental health and education," Lai concludes.

Dr Rajini surmises that the solution to technology overexposure is adult supervision. Children should never be left alone with a digital device, whether for research or leisure. Parents need to keep tabs on the amount and kind of technology their children are being exposed to, and schools need to do the same. It could be the only way to find the subtle balance between the right amount of technology exposure, which helps children grow, and overexposure, which can harm them.

