

Paying attention pays off

Are mere mortals whose minds wander at the slightest distraction bound to be low achievers? Not necessarily so, **Shirley Lau** finds out

During one lunch break during high school, Tseng Chia-huei and her classmates launched into a rowdy volleyball session inside the classroom.

As the ball was tossed about from one corner to another, the teenagers cheered and screamed. But in the midst of the fun, one student remained oblivious.

"She was a quiet girl who loved maths," recalls Tseng, who teaches psychology at the University of Hong Kong.

"While we were playing, she was reading her maths textbook. At one point, the ball fell onto her seat and the whole class screamed. But she remained unmoved and didn't even look up. That was impressive."

Such a remarkable level of attention, according to Tseng, often bodes well for personal achievement – the maths-loving girl later made it to Harvard and then became a professor at an Ivy League university.

But for many of us mere mortals who will react to a ball falling on our desk, are we bound to be low achievers?

Tseng, whose research interests include visual attention and perceptual learning, reassures that there are ways to enhance one's attention span and, consequently, fare better academically or at work. But a good understanding of our attention system is called for.

"Attention is a mental resource that helps us select important information," Tseng says. "There are two kinds of attention. One is of the top-down type, whereby I have to make an effort to concentrate my resources in a specific area, such as when I talk to someone I have to consciously listen and ignore other things around me.



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"The other type is bottom-up attention, which is built into our genes to help us survive. When you walk along the street and suddenly a car honks, you instinctively and inevitably turn around and look. This is something we cannot control."

The key to focusing better on what we do, therefore, is to work on our top-down attention, since this is within our control.

One way of doing it, says Tseng, is to minimise elements in our surroundings that may arouse our bottom-up attention.

In the case of students, an example would be to study in a quiet library. This is no rocket science and does not sound like hard work, but even in the absence of any distraction and in complete silence, our attention may still lapse. In this regard, the solution lies in self-awareness, Tseng says.

"We have to be constantly aware that attention is a limited resource," she says. "It



Willie Lam has been learning to keep his hyperactivity in check with help from the Hong Kong Family Welfare Society. Photo: Paul Yeung

is just like we have to be aware that we cannot live forever, and there comes a time when we have to die, and therefore we should cherish life before that moment comes. So we should know it is impractical to think that our attention is unlimited.

“You cannot expect to open various browsers on your computer while working on a task at the same time. So far all studies have shown that multitasking is never quite as effective as when you finish one task after another. There is always a sacrifice to make.”

Once this awareness is ingrained, one needs to be clever with time in order to optimise one’s attention level. When a task requires a significant amount of time to complete, it is most effective to divide the work schedule into small chunks of time and intersperse them with short breaks.

“It is much easier to focus on a task for 40 to 50 minutes, which is close to the limit [for



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optimal attention], rather than three hours in a row,” says Tseng, a native Taiwanese who came to Hong Kong in 2009. “Break for five minutes, walk around, go to the bathroom or stretch your body to recharge.

“The human brain is like a motor. If a motor runs for long hours without a pause, it will break down easily. Besides, our brain responds better to changes. When we attend to a task for a prolonged period without any change involved, our brain gradually

becomes less sensitive to the situation and our attention drops.”

Yet change should not occur too frequently, in the sense that taking too many breaks may upset one’s attention level.

“We must remember there is always a switch cost when you focus on something and suddenly switch to something else,” Tseng says. “Nowadays, many social media and mobile communication tools have an alert function to inform you when a message from someone arrives. You may think: ‘I’ll just check it for one second and then get back to my work right away’. But you will have to pay a switch cost, meaning if your attention level is at 100 before checking that message, you will be down to 80 when you return to your task. It may take another five minutes or more to get back to 100. I would say it is best to turn off all the alerts when you want to get a job done.”

In a digital age where distractions are ten a penny, attention is not easy to maintain, especially among the younger generation.

“When you compare university students today with those 20 years ago, the latter were actually pretty okay,” Tseng says. “At least they would sit through a lecture and listen to the professor. Today, we are facing a multimedia generation that needs to have all sorts of audio-visual stimulations in a lecture. Just a human figure talking to them is not enough to grab their attention.”

But there is hope, thanks again to technology.

“The study of attention only began about two decades ago,” Tseng says. “Attention is science about the brain, the study of which was not easy in the past because you could not just open up someone’s brain and see how it worked. Today we have a variety of tools and procedures such as MRI (magnetic resonance imaging) and EEG (electroencephalography).

“In the 21st century, we can definitely get a deeper understanding of the brain. In education, we might eventually be able to design specific curriculum for individual students with different attention spans. That could counteract the negative effects of those technological distractions. That’s all very exciting.”