Reducing unproductive screen time may have less to do with devices and more to do with what happens when a teacher speaks, listens, and connects with students in the classroom. The real solution isn't fewer screens – it's more meaningful learning, says the writer. ST FILE PHOTO

Why the screen time debate misses the real classroom problem

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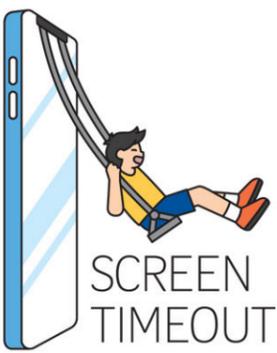
SCREEN TIMEOUT

John Wang

Few issues spark as much anxiety among parents and educators today as screen time. From tablets in primary schools to laptops in secondary classrooms, the worry is that students are spending too many hours staring at screens – distracted, passive, and disengaged. Policies are debated, limits imposed, and devices blamed for everything from poor attention spans to declining academic performance.

But what if the screen time debate is missing the real issue?

A recently-published study by this writer, among others (Wang et al, 2025), compared the sedentary and physical activities of secondary school students across a 15-year span. While students in 2021 did spend more time on sedentary activities such as gaming, homework, listening to music, and phone use than their 2006 counterparts, they watched less television. More importantly, the 2021 cohort reported higher participation in physical activity and used computers more for academic purposes than for gaming – a reversal from 2006. In other words, not all screen time is created equal, and the context of use matters far more than the sheer number of hours logged.

This should prompt us to ask: Is screen time itself the problem, or is it a symptom of something deeper?

When students are deeply engaged in learning and motivated by what they are learning, screens become tools – windows to knowledge, creativity, and collaboration. When students are bored or disconnected, screens become an escape. The urgent question, then, is not how much screen time students have, but what happens in classrooms when learning no longer feels meaningful or motivating.

Motivation is one of the strongest predictors of learning, persistence, and well-being. Educational psychology research consistently shows that students thrive when classrooms support their sense of autonomy, meaning, and relevance. When teachers explain why tasks matter, acknowledge students' perspectives, offer appropriate choices, and use encouraging rather than controlling language, students are more likely to be intrinsically motivated and actively engaged.

Singapore's education system has long championed holistic development and student engagement. Yet supporting motivation at scale remains challenging. Lesson plans and assessments can be reviewed, but the moment-to-moment interactions between teachers and students – the language teachers use, the choices they offer – are fleeting and often invisible. These subtle cues shape how students experience learning, but they are difficult to capture and reflect upon systematically.

HOW AI CAN HELP

This is where artificial intelligence, used thoughtfully, can make a difference, not by increasing screen exposure, but by strengthening teaching practices that reduce reliance on screens in the first place.

At the National Institute of Education, an ongoing research project funded by an internal grant (I3G) explores how AI can support teachers through formative feedback, not surveillance. The Teacher Observation Platform (TOP), co-developed with Amazon Web Services, uses machine learning trained on real classroom data to analyse teachers' instructional language.

Drawing on self-determination theory (Deci & Ryan, 1985), the system identifies whether teachers' language supports or undermines students' sense of autonomy, competence and relatedness.

Crucially, it's not about ranking teachers or replacing professional judgment. Instead, it offers feedback that helps teachers reflect on their practice and make small, meaningful changes.

Early results are promising: The system achieves over 85 per cent accuracy in identifying autonomy-supportive teaching language. This suggests that AI can reliably complement human judgment, offering insights that would be difficult to generate consistently through manual observation alone.

The relevance to the screen time debate is subtle but profound. Tools like TOP do not put more screens into students' hands. They operate behind the scenes, supporting teachers rather than students directly. By helping teachers foster more engaging, autonomy-supportive classroom environments, such tools address one of the root causes of excessive, unproductive screen use: disengagement.

When students are cognitively and emotionally engaged, they are less likely to retreat into passive screen behaviours. Attention is sustained not because devices are restricted, but because learning itself is compelling. In this sense, improving classroom motivation may be one of the most effective, and least discussed, ways to address concerns about screen time.

For teachers, the value of AI lies in feedback and reflection. Teaching is complex work, and in the flow of a lesson, it is unrealistic to expect teachers to constantly monitor their tone, phrasing, and instructional choices. AI can reduce this cognitive burden by highlighting patterns that teachers may not notice, supporting professional growth without adding administrative load.

Looking ahead, such platforms could be extended beyond language alone. Other teaching behaviours, such as tone of voice, pace of speech, and body language, also influence students' motivation and engagement. With careful ethical design, transparency, and consent, future iterations could provide more holistic feedback aligned with the Singapore Teaching Practice, supporting teacher education, practicum assessment, and ongoing professional development.

Of course, legitimate concerns about data privacy, consent, and misuse must be addressed. AI should never become a tool for surveillance or high-stakes judgment. Teaching remains a deeply human profession, grounded in relationships, trust, and professional expertise.

But to reject AI outright because of screen time anxieties is to miss the point. The real issue is not whether technology enters education, but how it is designed and for whom. AI that replaces interaction with more digital content risks deepening disengagement. AI that supports teachers in creating more motivating classrooms does the opposite.

Ironically, the most promising use of AI in education may be the one students hardly notice. By helping teachers reflect on how everyday interactions shape motivation, AI can strengthen the human core of teaching, ensuring that screens serve learning, rather than substitute for it.

In the end, reducing unproductive screen time may have less to do with devices and more to do with what happens when a teacher speaks, listens, and connects with students in the classroom. The real solution isn't fewer screens – it's more meaningful learning.

● John Wang is a professor at the National University of Singapore's Department of Physiology and the inaugural E.W. Barker Chair Professor in the Physical Education and Sport Science Department at the National Institute of Education, Singapore.