How not to use AI is a skill Singapore must master
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Artificial intelligence is here to stay. Knowing when not to use it is as vital as knowing how.

Lim Sun Sun

In a speech heavy on nostalgia as Prime Minister Lawrence Wong recalled the simpler, halcyon days of his youth, the undercurrent of uncertainty and disruption was equally strong. As his former schoolmate in Victoria Junior College, I found his recollections at the National Day Rally of growing up in the 1980s could just as well have been mine. Back then, we engaged with computers in labs in school or community centres. Making video calls on personal handheld devices was the stuff of science fiction.

Close to four decades on, most of us are now in our 50s, bearing the responsibilities of the sandwich generation, caring for our elderly parents as we prepare our children for an artificial intelligence-driven future with its contours yet unfolding.

Here, too, PM Wong acknowledged the very real anxieties of a changed world, citing the multifarious threats of geopolitical strife, economic uncertainty, climate change and technological disruption.

One challenge stands out. While we celebrate Singapore's successes on its 60th anniversary, there are clear trials ahead, especially when it comes to technology and, specifically, AI. This powerful technology, ripe with possibility yet replete with risks, is here to stay. Evolving our education system across every life stage is more vital than ever, to level everyone up and prevent the widening of divides.

IT STARTS IN PRE-SCHOOL

Consider young families where pre-schoolers are growing up in environments where digital devices are scattered about the home. In research I conducted with Professor Jean Yeung Wei-Jun, who is now at A*Star, we found that young children from lower-income families are more likely to spend longer unsupervised time on these devices compared with those from higher-income families, and hence are at greater risk of excessive use and exposure to adverse content.

Throw AI-powered apps into the mix and what you get is children potentially drawn into interacting with highly sophisticated but largely unregulated chatbots that could engage minors in age-inappropriate ways.

A Reuters report worryingly exposed how Meta's chatbot guidelines allow its AI creations to engage in "sensual" conversations with children and "generate false medical information". Prioritising user engagement over online safety remains a business tactic of many technology companies which consumers must guard against.

Young families across the socio-economic spectrum must thus be actively supported in grasping the potential and pitfalls of AI-powered apps and devices so that parents can make judicious choices on their children's device use.

The landscape is changing quickly and more challenges lie ahead – today there are even toys linked to the internet that come with AI chatbot companions children can literally talk to.

Parents thus need to be well apprised of how to select suitable devices and toys, which apps to allow, and how to set parental controls and filters, while establishing healthy routines that balance device use with social interaction, tactile stimulation and outdoor play.

Besides the Digital for Life movement that the Ministry of Digital Development and Information (MDDI) drives to educate the public, targeted engagements to work with pre-schools and childcare centres should also be mounted to disseminate practicable advice and raise parental awareness of optimal device use. Pre-school teachers should especially be equipped to guide parents in this area and tech companies should step up to resource such efforts.

CONTINUES INTO PRIMARY AND SECONDARY SCHOOL

Moving into the formal schooling years at the primary and secondary levels, the burden on parents grows yet further. At this stage, schools begin to incorporate technology into the educational experience, and rightfully so. Since Generation Alpha kids are constantly enveloped by technology, schools provide them with a scaffolded environment for learning how to engage with AI sensibly and productively.

For primary school pupils smack in their formative years and developing lifelong learning habits, they must be taught when and why to use AI – and equally importantly, when and why not to.

Mastering difficult concepts and complex skills requires effort and industry, and here, teachers must help students recognise that offloading critical learning tasks to AI impedes their intellectual development.

Alongside parents, teachers are crucial stewards in this endeavour for which they need support to help their students make sense of AI. Teachers must be brought up to speed on AI to ensure that they remain ahead of their students. SMU Academy's ChatGPT for Educators course has been particularly well received as it empowers teachers, many of whom are not AI natives, to harness generative AI to automate tasks and improve learning experiences.

Notably too, MDDI and the

Ministry of Education have proactively collaborated to develop the Smart Nation Educator Fellowship programme. Within each school at the primary, secondary and pre-university levels, teachers identified as tech friendly are selected for this fellowship to receive training on AI while forming a community of practice.

Because generative AI is dynamic, rather than predictive, everyone's experience using it will vary and no one can claim a monopoly of understanding. Hence, teachers should be encouraged to experiment and share their takeaways within and across disciplines, and within and across their teaching at different educational levels. To that end, structured programmes like the fellowship should be complemented with spaces for peer-to-peer sharing of pedagogical experimentation with AI.

At the heart of this stands one truth: We must not allow the AI tail to wag the education dog. Education has been and always will be about more than technology and AI.

As societies embrace advances in technology, distinctively human attributes and strengths must be reinforced within classrooms and workplaces. Schools should introduce more components to boost cross-cultural literacy, critical thinking and inclusivity while creating opportunities for students to explore collaboration and creativity. It is these human qualities that will bring us closer to a "we first" mindset outlined in PM Wong's speech.

POST-SECONDARY EDUCATION AND LIFELONG LEARNING

Moving to institutes of higher learning, as young people edge closer to obtaining the credentials needed to enter the workforce, the central challenge turns into whether AI will be a leveller or a divider. As AI providers charge for more advanced models with higher computing power, how do we ensure that the growing incorporation of AI use in projects and assessments does not disadvantage students from less-privileged backgrounds?

American academic Toby Stuart recently cautioned that with AI use being so prevalent in admissions essays, assignments and, of course, job applications, organisations struggling to identify the best candidates will resort increasingly to connections, networks and pedigree.

Hence, even as we democratise access to AI, we must also seek to equalise access to internships and traineeships that pave the way towards employment opportunities.

Finally, with technological transformation happening at such a breakneck pace, lifelong learning has never been more vital. Singapore's adults generally performed well in numeracy, literacy and adaptive problem-solving in the recent OECD Programme for the International Assessment of Adult Competencies. Worryingly, however, the effects of ageing on literacy skills kick in earlier than in many other countries, with glaring declines starting as early as at 27 to 34 years old.

This stands to reason as general literacy and numeracy skills are taught and tested more systematically at school, whereas a narrower range of skills may be exercised in the workplace. Disuse or underuse then leads to atrophy.

The knowledge that skills decline as early as the late 20s indicates that upskilling and reskilling should be encouraged sooner, especially in an employment landscape like Singapore's marked by rapid change and digitalisation.

It's a reminder that AI adoption is critical in any economic growth strategy, but its success relies on retraining workers and getting graduates AI-ready. This demands a collective effort from businesses, unions, educational institutions and the Government.

PM Wong painted a picture of cautious optimism and, indeed, Singapore needs to do what we do best – to have a clear-eyed view of the challenges before us in this era of precarity and rapid tech advances and get to work on developing a robust response. Seeking to make our education system exceptional across all levels should be our foremost priority.

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