

Continuous training needed to help workers displaced by artificial intelligence IPS

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Imagine a scenario where the Government imposes a quota system — like the one used to manage vehicle population — on firms that own artificial intelligence (AI) technologies in a bid to quell the grievances of workers displaced by AI.

Such populist and protectionist measures, coupled with countries such as China pushing ahead to develop sophisticated AI capabilities, could reduce Singapore's competitiveness, resulting in a workforce poorly prepared for an AI-dominated world.

In addition to this, locals who feel that such measures restrict career and business opportunities might choose to leave for greener pastures.

This is just one of multiple scenarios laid out in a report published by local think-tank Institute of Policy Studies (IPS) as it seeks to present how Singapore's landscape — in the areas of innovation, skills and population longevity — might turn out over the next decade and what strategies could be introduced given those scenarios.

When it comes to innovation, the new sharing economy and AI technologies are disrupting conventional business operations and displacing workers.

In light of these trends, the report proposed that a new scheme — the Stay Ahead Scheme — could be introduced to replace ad-hoc training programmes with continuous and mandatory skill-enhancing courses.

The scheme could also identify and train Singaporeans in key skills and competencies that would enable them to operate in a world with AI and technologies that reduce the use of intermediaries between producers and consumers.

The report, which gathered input from about 100 people over two months, including IPS researchers, voluntary welfare organisations and businesses, also proposed a new roadmap that could anticipate the changes in jobs and skills affected by the proliferation of AI technologies.

Another suggestion was a framework to support workers displaced by AI technologies, including systems for welfare support for a limited duration, greater subsidies for reskilling programmes and improved jobs-to-company skills-matching platforms.

The strategies come with five-year targets leading up to 2026. For instance, by December 2018, reports on which jobs and skillsets are at risk of being disrupted by AI would have been completed.

And to get Singaporean workers and students to be ahead of the curve, 50 per cent of small- and medium-sized enterprises (SMEs) in the healthcare, hospitality and manufacturing sectors should have adopted AI-augmented jobs by the end of 2022.

At the end of the decade, in 2026, the report said such measures would “successfully accentuate the positive impact of AI and mitigate the negative impact of AI”.

IPS senior research fellow Faizal Yahya, who led the discussion on innovation and its impact on Singapore’s future economy, said innovation has become even more important to Singapore’s economy but raised the question of whether businesses and workers can absorb as well as take advantage of disruptive trends.

“Or more profoundly, we have to ask if they can be the ones proactively generating such innovation and change; if they are positioned to take full advantage of the new technologies,” he added.

Changes to the employment landscape notwithstanding, Dr Faizal noted that there was also a need to upgrade social policies to mitigate the adverse impact of disruption.

For example, companies may need to support unemployed workers as they retrain for new jobs, and to design a training curriculum that is relevant to the workplace.

On this note, the report proposed a system of “PracAdemia”, driven by a group of hybrid educators who are both practitioners and academics.

The aim is to bridge the gap between the workplace and the school by identifying, teaching and assessing the soft and practical skills that are also relevant to industries’ needs.

“Skills that employers need are not the skills that people are graduating with, causing inefficiencies where companies have to spend resources conducting training for new staff — something that they may not even be willing to do,” said the report.

Another target proposed is a White Paper by next year to guide the piloting of such practices within the educational system, with 150 model “PracAdemics” to be identified through a new accreditation system. And by 2026, the aim would be to have 10,000 PracAdemics trained.

IPS research fellow Teng Siao See said there might now be a strong industry-academic nexus in certain sectors, so “instead of duplicating efforts in those instances, they can be shared as best practice across other industries and to skills-training providers”.