Not everyone looking for a technical career should go to university

Society has arguably spent more time debating the future impact of artificial intelligence on jobs than preparing for the technical labour shortages already affecting critical industries today. That's a mistake, writes Kevin Heunis

The American investor and entrepreneur Tim Ferriss observed that "Life punishes the vague wish and rewards the specific ask". His point was simple: meaningful progress rarely comes from broad intentions alone. It's driven by clearly identifying problems and responding with deliberate action. That principle applies directly to one of the most significant (and until recently underappreciated) workforce challenges facing the global economy: the growing shortage of skilled automotive technicians. And yet, as I say this, I am all but convinced that most people reading this will know that this is a very real issue.

This isn't a niche industry issue. It's a structural economic challenge that affects everyone who builds, sells, services, finances, owns or drives a vehicle. It affects customer experience, business productivity, transport reliability and, increasingly, the broader transition toward a more technologically advanced mobility economy.

We also need to see it in the context of skills development globally. The World Economic Forum estimates that 65% of children entering primary school today will eventually work in jobs that don't yet exist. Few sectors illustrate that transformation more clearly than automotive retail and servicing, because modern vehicles are no longer purely mechanical. They are increasingly complex, digitally enabled and diagnostics-heavy technology platforms. Electric drivetrains, advanced driver assistance systems, connectivity features and onboard computing systems are fundamentally reshaping the skills required to maintain them.

So the automotive industry no longer needs only mechanics in the traditional sense. It increasingly needs diagnosticians, technologists and problem-solvers; and that shift is happening faster than many education systems can adapt. What this does is take a problem, and effectively make it a crisis.

Across global markets, the shortage of qualified technicians is becoming alarming: The American Transportation Research Institute found that 65.5% of diesel repair shops were understaffed in 2025, with nearly one in five technician positions vacant. Alarming, yes. But the reasons aren't difficult to identify.

An ageing workforce is approaching retirement. Fewer young people are entering vocational trades. Technical education often remains overly theoretical and misaligned with rapidly evolving industry realities. Meanwhile, the vehicles themselves become more sophisticated every year. The result is a widening gap between the skills the industry needs and the skills many training systems still produce. South Africa is by no means exempt from this. The automotive sector faces rapid technological change, evolving workplace requirements and growing pressure for continuous learning. Employers require increasingly specialised capabilities, and industries like ours must rethink how they attract, train and retain talent.

The same urgency being applied to future workforce planning around the emergence of AI must be directed toward technical skills development. If anything, the automotive industry offers an important lesson about the future of work itself: technology doesn't eliminate the need for human capability. It changes the nature of that capability, without reducing the demand for these skills.

Even in an increasingly automated world, human judgement, diagnostic reasoning, problem-solving ability and work ethic remain central to what keeps vehicles safely on the road. In many ways, the modern workshop is becoming closer to a technology lab and clean-room environment than the stereotypical grease-stained garage of the increasingly distant past.

That stereotype matters because perceptions continue to shape career choices. For too long, technical trades have been treated as secondary pathways rather than high-value professions. Yet today's technicians increasingly work with software systems, robotics, advanced diagnostics, electronics and connected technologies. The future automotive technician may begin with robotics kits and coding exercises long before touching a vehicle.

This also demands that the industry rethinks how it identifies talent. Traditional recruitment models often overemphasise academic results, formal CVs and conventional interviews. But technical potential frequently reveals itself differently. It shows up in curiosity, experimentation, practical intelligence and the instinct to build and fix things. This shift sits at the heart of the introduction of the Autotechnician Apprenticeship Scholarship at Ford Motor Company.

This falls in line with our investments in education, which recognise that in driving growth in South Africa, we must nurture an ecosystem that builds and grows talent all the way from early childhood development through to vocational skills and employment. Growth in our country will only come from growing technical skills.

Not surprisingly, many apprenticeship systems globally struggle because students are insufficiently supported once they enter these technical pathways. Young people often require mentorship, structured guidance, real workplace integration and a sense of belonging within the industry. Without that support, dropout rates rise and long-term retention suffers. Technical careers aren't built through qualifications alone; they're built through ecosystems. You could even say it takes a village.

That's where deeper collaboration between industry and education becomes critical. It's also why a programme like the Autotechnician Apprenticeship Scholarship works.

The scholarship is a three-year programme where future technicians are employed by a Ford dealership. They spend time in the workshop learning from master technicians and time at a technical college for formal theory. Its goal is to take someone as a school-leaver and transition them formally to a fully qualified, trade-tested motor mechanic.

The reality is that automotive companies can't afford to wait passively for traditional curricula to catch up with technological evolution. Increasingly, OEMs and dealer networks are being forced to redesign training systems themselves. That shift reflects a broader truth: industry transformation now requires education transformation — and it requires it urgently.

It comes with a possibly harsh truth: not everyone is meant to go to university, and a vocational career path is not less than. This seems almost counter-culture to the prevailing South African narrative. The country has both high youth unemployment and significant technical skills shortages. It's a contradiction that highlights how disconnected parts of the labour pipeline have become. But within that contradiction also lies enormous opportunity.

Technical education, when properly supported, can create meaningful career mobility. Modern technicians can progress into advanced specialist roles, become master diagnosticians, work internationally and participate directly in the future mobility economy. These aren't dead-end careers. They're globally relevant, future-oriented professions.

So the automotive sector offers something larger than a workforce discussion: a model for how societies may need to think about skills development in an era of technological disruption. The lesson isn't simply that industries need more workers. It's that industries need different workers — and different ways of finding, training and supporting them.

If South Africa aims to compete in the industries of the future – and there's no reason it can't – then technical education can no longer be treated as a secondary pathway. The next generation of diagnosticians, engineers and innovators may already be sitting in technical classrooms today, waiting and hoping for industry, educators and society to recognise their potential. In time, they could become globally mobile innovators and, importantly, role models for those who follow them.

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