

Stop the brain drain and nurture tomorrow's engineers today

By [David Sullivan](#)

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In the face of an ever-changing industrial landscape, businesses must strive to remain at the forefront of technology. A key strategy to achieve this is to invest in talent development and provide the next generation of engineers with practical experience.



Practical experience is the best way to nurture engineers and retain talent. Source: Field Engineer/Pexels

Consider the manifold benefits of investing in customised training programmes for motor, fan, and transformer maintenance for both budding engineers and industrial firms. Such investment not only empowers young engineers to secure employment but also fosters the creation of a new generation of engineers, thereby ensuring a continuous supply of skilled workforce for industries.

South Africa's severe skills deficit, exacerbated by the ongoing emigration of qualified personnel, necessitates urgent attention. It is vital for industrial firms to take the lead in empowering and training young engineers to bridge these gaps.



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Concurrently, it is essential to circumvent a scenario where businesses end up vying for a limited pool of skilled engineers, a situation that could inflate the cost of these skills and potentially jeopardise the sustainability of industries.

Valuable hands-on experience

Through apprenticeship, learners gain valuable skills that enhance their employability, even if they do not transition to permanent roles within the training company. Meanwhile, companies build a pipeline of talent equipped with both technical expertise and familiarity with their organisational culture.

At the end of the training period, the company can select the best talent and incorporate them into positions where they can add value.

Experiential learning is also key to overcoming the challenges faced by most graduates who have the theoretical knowledge but lack the practical experience that employers look for in job applicants. Unfortunately, the industry can be hesitant to give individuals with no experience an opportunity as it is perceived as a greater risk.

However, this perception could be changed if the industry would offer young engineers the opportunity to gain a year or two of practical exposure, especially given that the cost of these programmes is not excessive, and funding is available through the various Sector Education Training Authorities (SETAs).

“ *The benefits of experiential programmes to both businesses and graduates far outweigh the costs.* ”

Understand the funding landscape

The first step for industrial businesses that want to effectively incorporate these training opportunities into their talent development strategies is to understand the landscape around what funding is available, particularly for artisans and technologists and understand the processes that need to be followed and plan for funding upfront.

Another suggestion is for companies to find a mechanism to potentially incentivise mentors on the shop floor – older and more experienced artisans – to take the youngsters under their wing and train them because very often companies hire apprentices merely as cheap labour.

“ *At the end of the programme, these apprentices struggle to find jobs as they have gained little concrete knowledge.* ”

Companies need to understand the significance of nurturing young engineering talent and the value that bespoke experiential training programmes can deliver. A community of skilled individuals can add value to the industrial businesses they work for while nurturing the future of engineering and the industry.

Thus, developing young engineers should not be seen as just an act of goodwill or an effort to increase a BBBEE score, but also as a strategic move that will build a bridge to the future.

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