

Is SA ready to be a knowledge economy?

 By [Richard Firth](#)

12 Mar 2015

Much has been made about South Africa's impending transition to a knowledge economy. In fact, it was the focus of 2012's National Science Week. While government initiatives set to improve the country's science and technology output are laudable, the question must be asked: is SA ready to transition to a knowledge-based economy?

There is no doubt that such a move has myriad advantages. Statistics show that a knowledge-based, rather than a resource-based, economy is ultimately more beneficial to the citizenry, and more sustainable, since innovation is an infinite resource.

But that's not to say South Africans are incapable of innovation. Pringles is the only SA product to have been on the moon, Nobel-prize-winning Allan McLeod Cormack helped develop the CAT scan, and the importance of innovators like Christian Barnard and Elon Musk cannot be overstated. But a huge part of the country is lacking many basic academic skills.

Innovation can't be forced

Initiatives like the Square Kilometre Array radio telescope project show that there is hunger and opportunity in SA for R&D, but the failure of the Joule electric car shows that regardless of how much incentive and support is given, innovation can't be forced. If the country's education issue is not addressed from the grassroots level, the majority of the population, with a basic education, will find themselves unemployed and alienated in an economy based largely in science, technology, engineering and maths (STEM), which will be peopled entirely by the privileged few.

Even access to knowledge is proving somewhat difficult - few public schools have a comprehensive computer literacy programme, and its prohibitively high price and below-average quality mean internet access is limited. In fact, South Africa is only fifth on the continent in terms of access to broadband. To create a generation of learners who will benefit from a knowledge economy, SA first needs to create an environment in which a STEM education is attainable for the average citizen. To make science and technology a part of life, it has to be accessible.

Countries such as India and China have managed to grow their economies drastically by focusing their efforts on one crucial element to creating a knowledge economy - equipping the workforce with appropriate skills. In India, the number of institutes of technology more than doubled from 2007 to 2012, from seven to 15. There has also been a steep rise in the number of people enrolled in engineering: in 2007, they were 13% of students. By 2012, this was 25%.

Lacking in certain skills

Maths and science skills are neglected in South Africa, with disheartening statistics emerging every year. The level of English education is also lacking. Mother-tongue education is crucial in SA, but it's undeniable that English is the lingua franca of modern business. Most computer languages require a level of understanding English just to become a computer programmer. We need to make the hard decisions now, as we are not big enough like China, who can drive its own language into the technology arena.

If SA is to become a knowledge economy, we need to start at the beginning: the lofty aim of a knowledge economy is admirable, but we need to address the fundamentals - the future workforce.

ABOUT RICHARD FIRTH

A stalwart of the South African IT industry, Richard has been involved in the technology arena since 1989. With diplomas in Information Technology and Business Process Re-engineering, his successful career in IT has spanned various roles, including programming, IT implementation, and various management positions culminating in his current responsibilities as Chairman & CEO of MP Holdings. He sits on the Boards of both Iterate and Waytag.

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