Transformation of Universities to Build Innovation Ecosystems that Drive Industrialisation for SADC's Sustained Economic and Social Development

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ABSTRACT
Current education systems in the Southern African Development Community (SADC) and the broader African regions remain misaligned with the continent's urgent demand for industrialisation and socio-economic transformation. These education systems, mostly inherited from Africa's colonial past, are predominantly structured to prepare individuals as employment seekers rather than equipping them to drive innovation, entrepreneurship and industrial growth. This mismatch perpetuates vicious cycles of poverty and hunger, leading to a dependency syndrome and fuelling conflicts, despite the region's wealth of natural resources and resilient populations. To unlock Africa's potential, a radical transformation of its education is required—one that prioritises critical thinking, creativity, problem solving and digital literacy, as well as fostering an entrepreneurial mindset and competencies. Such transformation must cultivate sustainable production systems and innovation ecosystems capable of generating new industries, technologies and goods and services that match societal needs and aspirations. Education should not merely serve as a pipeline for jobs but as a catalyst for industrialisation and prosperity. Zimbabwe's pioneering heritage-based Education 5.0 philosophy is a compelling case study for such transformation for Africa. By positioning universities as engines of innovation and industrialisation, this model has begun to yield tangible results in modernising Zimbabwe's economy and fostering self-reliance. This demonstrates that when education is purpose-driven and context-sensitive, it can become the fulcrum of national and regional transformation. We, therefore, propose that purpose-driven education systems should be at the centre of all obtaining regional opportunities to drive SADC's industrialisation and socio-economic development.

Keywords: education transformation; heritage-based Education 5.0 philosophy; resource endowment; science, technology and innovation; industrialised SADC

Introduction

The Southern African Development Community (SADC), similar to other regions in Africa, continues to pursue industrialisation as a cornerstone for transforming its economies, improving livelihoods and meeting the aspirations of its citizens. Some of the region's noble aspirations include poverty eradication, food and

nutrition security, peace and stability, and the creation of opportunities for people to better their lives through employment, healthcare and modern infrastructure. The region also aims to promote freedom and social justice, and allow for self-actualisation and attainment of varied developmental goals at individual and national levels. SADC has developed an industrialisation strategy to boost its economic growth and development through technological advancement, increased global competitiveness and regional integration (Southern African Development Community [SADC], 2015). The strategy is aligned with the African Union's (AU) Agenda 2063, which envisions a prosperous, integrated and peaceful continent with a strong cultural identity (African Union [AU], 2015). Despite these ambitions, the pace of SADC industrialisation remains slow, hindering the region's technological advancement and socio-economic transformation.

SADC's industrialisation agenda, set in 2015, is yet to translate to meaningful progress despite the availability of all the region's requisite industrialisation ingredients and the region's potential to be the centre for Africa's industrialisation. SADC countries are not only endowed with resilient and hardworking people as a critical asset, but also have abundant natural resources including climatic conditions suited to agriculture. The region also boasts of diverse crops, animals, forests and mineral resources, the latter including gold, diamond, copper, lithium and platinum. SADC is also endowed with wildlife, natural wonders and climatic conditions that are conducive to the growth of the tourism industry. In addition, given its youthful population, the region has time to advance its goals, provided a clear succession plan is in place. With these vast resources, the major question is why SADC has not fully realised its industrialisation goals to advance its socio-economic development.

This paper postulates that SADC's and, by expansion, Africa's slow industrialisation and socio-economic transformation, stem from archaic colonial education systems designed to hinder innovation, self-reliance and pride in the recipients. This has left the region trapped in cycles of dependency and underdevelopment despite its vast potential. SADC's industrialisation ambitions require human capital with critical thinking capabilities, problem-solving, digital and entrepreneurial skills and competencies for accelerated industrialisation and socio-economic development. These characteristics are only attainable through radical transformation of education systems in the region.

Africa's Tragedy of a Wrong Education Manual

Most African countries inherited education models designed under colonial development architecture. Over the years, these education models have promoted rote learning and literacy, and produced compliant employees without fostering innovation or critical thinking. These education models revolve around three pillars: teaching, research and community service, but in practice they have been teacher- and examination-centred, limiting creativity and problem-solving abilities (Woldegiorgis *et al*., 2025). Owing to archaic education systems, the region's realities do not reflect its abundant natural resources and resilient

population. Development in the SADC region is occurring at a pace that does not reflect its population demography and rich natural resource endowment. SADC is home to over 460 million people, 32% of the African population, but experiences low intra-regional trade, resulting in the region being a net-importer of goods and services made predominantly from its exported raw materials (Trade Map, 2025). To compound this situation, the region produces educated graduates who face unemployment and dependency, and farmers who struggle to feed themselves and are dependent on handouts. All these paradoxes reflect the type of education that inevitably breeds poverty and hunger, unemployment, dependency and conflicts (Aina, 2010), all of which have become synonymous with Africa. African people have been schooled and socialised to accept that they come second, third and beyond, to the extent that they often lose their natural endowments, identity, self-esteem, dignity and pride. Furthermore, they tend to get socialised to ordinarily seek validation from their former colonial powers or their proxies.

Education systems are only capable of delivering the outcomes they are intentionally designed to achieve. Therefore, colonial education, by its very nature and architecture, was never intended to empower African societies to achieve scientific, innovative and technological advancement and industrialisation as an expression of self-determination. This raises a fundamental question: if inherited colonial education systems were purposed for colonial goals, are the same systems expedient vehicles for the attainment of the SADC region's industrialisation goals? The answer is a resounding NO!! A change in fortunes requires the region to reimagine and deliberately design and purpose its education to advance knowledge that yields beneficial and life-changing outcomes for its diverse people. Academics in the region should position themselves to advance new knowledge and create relevant content towards writing Africa's own development manual. This approach does not diminish the value of education systems in other continents and regions, as these are understandably meant to serve a different purpose. It is not a matter of competition or emulating others, rather, education is consciously designed and purposed to achieve intended outcomes and achievements for specific communities and people. The region needs to intentionally transform its education to handle these demands and realise the pace of development that its people desire.

Purpose-driven education must be designed to cultivate relevant skills, knowledge, creativity and innovation (UNICEF & African Union Commission, 2021). These competencies are required to drive industrialisation and adequately respond to contemporary global challenges such as climate change, financial mechanisms, geopolitics and conflicts. Such an approach should enable the generation of new knowledge products and new industries that draw their competitiveness from their own realities and heritage. This transformative education ought to integrate teaching and learning with research and innovation to respond to community needs, promoting a clear connection between education and socio-economic development. This transformative education, therefore, demands new pedagogies, including new and technology-driven and research-inspired teaching

and learning, and assessment methods. Investing in research, science, innovation and technology should be at the centre of the new education architecture to propel Africa's development and enable the production of a critical mass of scientists and innovators. The envisioned education system needs to empower local communities and foster a culture of innovation and entrepreneurship, intentionally demonstrating the connection between education and economic prosperity.

A Compelling Case Study of the University of Zimbabwe's Implementation of a Heritage-based Education 5.0 Philosophy

Inspired to provide purpose-driven education, the Government of Zimbabwe introduced the heritage-based Education 5.0 philosophy. This initiative was in direct response to the Presidential challenge for a Zimbabwean education system that promotes the production of goods and services to propel the attainment of the country's socio-economic development aspirations. The primary focus of Education 5.0 is the production of goods and services meant to address challenges at community and national levels. Education 5.0 has five pillars, namely, research, teaching and learning, innovation, industrialisation, and community engagement. The philosophy has redefined education as a process whose aim is to produce individuals equipped with relevant skills and an entrepreneurial mindset. The objective is to promote the generation of innovations as well as new regimes of industries, and the production of new goods and services based on the heritage and dynamic needs of citizens. Education 5.0 goes beyond just being a curriculum; it represents a comprehensive philosophy. It is designed to foster innovation at all its levels, and also drive industrialisation and modernisation. Education 5.0 has been a catalyst in advancing the country's vision of becoming a 'Prosperous and Empowered Upper Middle-Income Society' by the year 2030.

Inspired by the new education philosophy, universities and other tertiary education institutions in Zimbabwe have undergone a fundamental transformation by reconfiguring their curricula to foreground the production of goods and services. The University of Zimbabwe, the country's founding university, has undergone a radical transformation through the introduction of a programmatic approach to research, innovation and industrialisation, intertwined with a programmatic approach to teaching and learning. The objective of this transformation is the production of creative graduates equipped with critical thinking and entrepreneurial skills and competences. The two programmatic approaches are heavily intertwined, allowing the advances in research to be propagated through the new type of graduates who are well equipped to address the needs of industry, business and commerce. The programmatic approach entails that research and academic programmes are tailored towards the efficient utilisation of a country's resources and heritage. For instance, if a country has significant access to the sun's solar system, then its research and academic programmes should be designed to trap solar energy; if a country has access to large coal reserves, there is need to find ways of utilising the coal in a sustainable manner. The same applies to the utilisation of Africa's rich mineral resources. In other words, a university's degree programmes should be tailored to answer a simple

question: 'What do our people want?' That question is answered when new knowledge is created through research, science, innovation and technology.

The role of universities in Zimbabwe has, therefore, completely changed. While students still frequent the library, read, attend lectures and listen to their lecturers, the university, however, is now a place where students are being prepared to go out into the world to create employment and generate wealth for the nation. Universities are meant to be places where societal solutions are provided through research and innovation. Additionally, universities are repositioned as hubs for the 'how' part. When a policy is announced, a university should convert it into actionable steps. The government has been supporting universities and other tertiary education institutions to actualise the heritage-based Education 5.0 philosophy by supporting innovation ecosystems through relevant policies. There is now a more vibrant link between universities and industry and business partners on the back of government support in the establishment of innovation hubs, industrial parks and industrial incubation centres. The establishment of this modern infrastructure has provided a conducive environment for new intellectual property (IP) and innovations, and the nurturing of new entrepreneurs and start-up companies. The establishment of innovation hubs at universities has served as a means to foster creativity and problem-solving skills, linking academic research with practical applications in industry and commerce. Political will, guidance and sustained government support have been essential ingredients for the effective implementation of the new education philosophy. Universities are now at the forefront of national transformation. The country has departed from an education system primarily designed to produce workers, to one whose primary objective is to produce think tanks, leaders and its industrialists. The heritage-based Education 5.0 philosophy has started to bear fruits. Universities and other tertiary education institutions have nurtured innovations across the country's major economic sectors, as well as new regimes of entrepreneurs. They have also established new regimes of industries, and produced a range of knowledge-based products, goods and services that are increasingly penetrating the market. We, therefore, propose that the purposed education philosophy should be at the centre of all obtaining regional opportunities to drive SADC's industrialisation and socio-economic development.

Preconditions for Industrialisation of SADC and the African Context

SADC possesses potential for industrial growth, driven by its human capital and natural resources. To accelerate the pace of industrialisation, there is an urgent need for effective education and research. The diverse people of the region, in themselves, represent a critical anchor for the necessary innovation ecosystem that advances the SADC industrialisation agenda. Anchored on the proposed transformed education architecture, the region should be bold enough to define its development manual and its units of measurement. The actualisation of the manual depends on the level of self-organisation and self-mobilisation of SADC countries. SADC populations should cultivate boldness, courage and the self-belief to do what is necessary to ensure the region's survival, development

and prosperity. This may include starting an industry, creating a business or establishing own education institutions.

Fostering research, science, technology and innovation (RSTI) in Africa's development manual is critical to propel industrialisation. Science and technology expand horizons, possibilities and opportunities by developing new models for industrialisation, new production value chains and new products and services on the market. Building innovation ecosystems to connect universities, businesses, entrepreneurs, government departments, development agents and communities would leverage outputs and outcomes from RSTI towards the achievement of the region's industrialisation goals. SADC countries should specialise at different levels and build capacity, capability, commitment and investment to develop regional and continental markets. Trade routes in Africa have been limited as demonstrated by SADC's engagement in higher volumes of exports and imports from the rest of the world than from within Africa (Figure 1). The promotion of regional markets will deepen integration and minimise competition among member states.

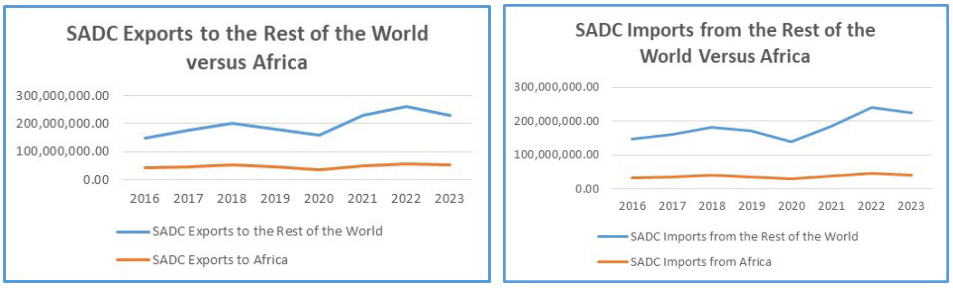


Figure 1: SADC Exports and imports between Africa and the rest of the world
Source: Trade Map, 2025

The SADC region should develop new production value chains and new trade routes in response to the emerging climate change-induced new global order, changing financial systems, artificial intelligence (AI) and global geopolitics. These may include transitioning to green energy, including solar, lithium-based batteries, and nuclear power, alongside a green industrial revolution anchored by SADC. Affordances of research, science, technology and innovation capabilities would be a springboard for the production of new competitive value chains. This will generate new knowledge for unlocking value, including embracing value addition and beneficiation of natural endowments. Financing mechanisms and relevant policies and institutions are required for self-organisation and self-mobilisation to advance the development of the region. Figure 2 shows a conceptual framework depicting the importance of a relevant education philosophy to drive industrialisation and socio-economic development in the region.

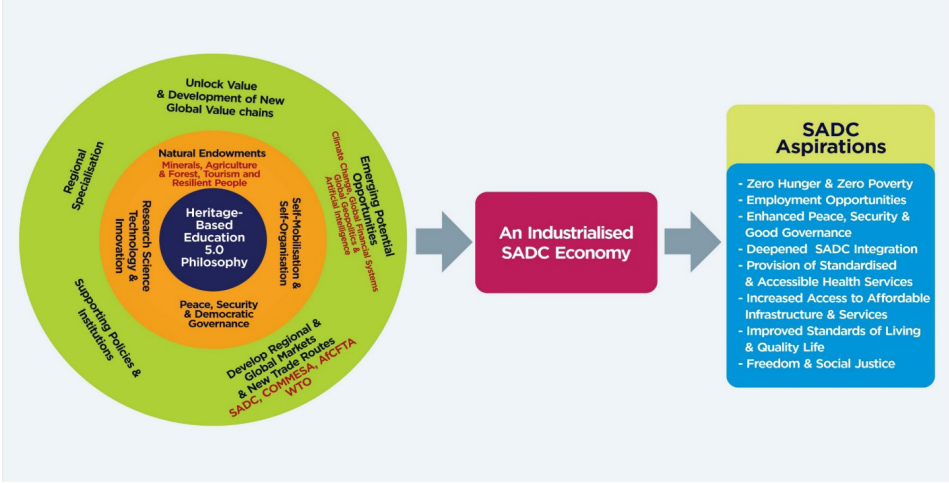


Figure 2: A conceptual framework for an industrialised SADC economy for the social and economic development of the region

Source: Author

Conclusion

The critical and strategic thinking and analysis presented in this paper demonstrate that the current colonial education architecture in SADC countries has remained a major barrier to the region's industrialisation and modernisation agenda. This is despite the region's huge potential for industrialisation owing to abundant natural resources and resilient populations with a quest for development. The colonial education system prioritised the nurturing of employees, job seekers and individuals without an identity, thus fostering the dependency syndrome and breeding vicious cycles of poverty, hunger and conflicts. Consequently, the region's education system must undergo a radical transformation in order to produce graduates who embrace their heritage. The system should engrain critical thinking, problem-solving and entrepreneurial skills that enable the generation of innovations, the formation of new industries and the production of goods and services to improve people's livelihoods. Research, science, technology and innovation (RSTI) should be central in the proposed new education architecture for propelling industrialisation and creating wealth opportunities that meet the aspirations of the region's population.

Zimbabwe has already transformed and purposed its education through the effective introduction of the heritage-based Education 5.0 philosophy. The new education philosophy focuses on research, innovation and industrialisation as anchors for the production of goods and services that meet the needs and aspirations of its population. Political will and sustained government support — the establishment of innovation hubs, industrial parks and industrial innovation incubation — have been masterstrokes in the implementation and actualisation of the heritage-based Education 5.0 architecture. The new education model has

begun to bear fruit, generating new innovations, start-up companies, IPs and a range of goods and services that are changing the market landscape. With the application of relevant knowledge, skills, values and attitudes imparted through a well-configured and well-designed education system, the region will be poised for industrialisation and socio-economic growth. The heritage-based Education 5.0 model is applicable to SADC and other countries in Africa as they seek to write their own development manual for accelerated industrialisation and socio-economic development.

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