

The Impact of Vocational and Technical Education Training (VTE) on National Development of a Nation

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Abstract

The future of vocational and technical education training holds significant promise for addressing any nation's critical skills and driving national development. With an expanding youths' population and a rapidly evolving global economy, there is need for all nations to equip their workforce with relevant, market-driven skills. There can be no national development without vocational and technical education, and also no vocational and technical education without skills acquisition; therefore, national development is always a continuous process. This study analyses the peculiar characteristics of vocational and technical education in providing necessary skills to the populace of a nation. The conceptual clarification of vocational education, technical education, vocational and technical education, and national development were considered. This paper explores the role of vocational and technical education training (VTE) in bridging the widening skill gap, focusing on key sectors such as agriculture, manufacturing, technology, and construction. It examines the challenges facing vocational training system, including inadequate infrastructure, outdated curricula, and limited industry partnerships, while also highlighting innovative approaches such as public-private collaborations, technology-enhanced learning, and the integration of soft skills. Finally, the study concludes with policy recommendations to strengthen vocational training, promoting lifelong learning and skills development as pivotal components of national transformation.

Keywords: *Agriculture, Economy, Nation, Vocational and Technical Education Training, National Development, Technology*

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Background to the Study

Vocational and technical education training (VTE) refers to educational and training programmes that focus on providing students with practical skills and knowledge that are relevant to specific trades, occupations, or vocations. VTE programmes typically include a mix of classroom instruction, hands-on training, and experiential learning opportunities, and may be offered at the secondary, post-secondary, or higher education level. These programmes are designed to prepare students for careers in a wide range of fields, including manufacturing, construction, engineering, healthcare, hospitality, and information technology. VTE programmes are often seen as an important means of providing individuals with the skills and knowledge they need to enter the workforce and succeed in their chosen careers [African Union, Strategy to Revitalize Technical and Vocational Education and Training (VTE) in Africa, Meeting of the Bureau of the Conference of Ministers of Education of the African Union (COMEDAF II+) 29th – 31st May 2007] (Pavlova, 2009).

Vocational and technical education programme plays a crucial role in promoting national development of nations:

1) Provision of Skills and Knowledge for Individuals

VTE is a type of education and training that focuses on providing students with the practical skills and knowledge needed to perform a specific trade or occupation. This type of education is often seen as an alternative to traditional academic education, and it can be useful for those who want to enter the workforce immediately after completing their education. In terms of the economy, this helps to increase labour productivity and competitiveness, which can drive national growth and development (Kibet and Kibet, 2019).

2) Addressing Skills Shortages and Mismatches in the Labour Market

This contributes to national growth and development by providing a skilled workforce. When individuals have the necessary skills and training to perform a specific job, they can be more productive and contribute to the overall national growth of a country. This leads to increased employment and national opportunities for individuals and communities (Kibet and Kibet, 2019).

3) Improving Social Mobility and Reduce Poverty

Thereby providing disadvantaged individuals with the skills and knowledge they need to access better-paying jobs and improve their national prospects (Kibet and Kibet, 2019).

4) Contribution to Sustainable Development

Helps to train individuals in trades and occupations that are in demand in the green economy, such as renewable energy and sustainable agriculture. This can help to reduce reliance on fossil fuels and promote environmentally-sustainable practices (Paryono, 2017a).

The green economy provides individuals with the skills and training needed to work in environmentally-friendly industries and technologies (Maclean et al., 2013; Rosenberg et al., 2020; Lotz-Sisitka et al., 2017).

5) Promoting Gender Equality

Providing women and men with equal access to education and training opportunities, which can help to reduce gender-based barriers to employment and improve national opportunities for all (Fien et al., 2010).

VTE and National Development

Vocational and technical education (VTE) programmes have contributed to the national development of various countries in the world.

Germany:

Germany has a well-developed and highly respected VTE system that emphasizes practical, hands-on training and close collaboration between schools and industry. The German VTE system has been credited with helping to create a highly skilled and productive labour force, which has contributed to the country's national success.

Japan:

Japan has a long tradition of emphasizing vocational education and training and has a well-developed system of technical schools and vocational colleges that provide students with the skills and knowledge they need to succeed in the workforce. The Japanese VTE system has played a key role in the country's national growth and development (Devine, 2020).

Singapore:

Singapore has a highly developed and successful VTE system that emphasizes close collaboration between schools, industry, and government. The Singaporean VTE system has helped to create a skilled and adaptable labour force, which has contributed to the country's national growth and competitiveness.

Switzerland:

Switzerland has a well-developed and highly respected VTE system that emphasizes practical, hands-on training and close collaboration between schools and industry. The Swiss VTE system has been credited with helping to create a highly skilled and productive labour force, which has contributed to the country's national success (Renold et al., 2016).

Australia:

Australia has a well-developed VTE system that includes a range of vocational education and training programmes that are delivered by both public and private providers. The Australian VTE system has helped to create a skilled and adaptable labour force, which has contributed to the country's national growth and development (Kanwar et al., 2019).

Challenges of Vocational and Technical Education Programmes

There are several challenges and barriers to the effective implementation of vocational and technical education and training (VTE) programmes for national development (Mao et al., 2016):

Funding:

One of the main challenges facing VTE programmes is a lack of adequate funding. Many VTE programmes struggle to secure sufficient resources to cover the costs of instructional materials, equipment, faculty salaries, and other expenses (Paryono, 2017b).

Quality:

Ensuring the quality of VTE programmes can be a challenge, particularly in developing countries where resources may be limited. Quality issues can include inadequate facilities and equipment, untrained or poorly qualified instructors, and a lack of industry engagement (Paryono, 2017b).

Relevance:

Another challenge is ensuring that VTE programmes are relevant to the needs of the labour market and that they provide students with the skills and knowledge they need to succeed in their chosen careers. This requires close collaboration between schools, industry, and government to ensure that VTE programmes are responsive to changing national and labour market needs (Caves et al., 2021).

Access:

Many individuals, particularly in developing countries, face barriers to accessing VTE programmes, including financial barriers, geographic barriers, and cultural barriers. Ensuring that VTE programmes are accessible to all members of society is an important challenge (Pavlova, 2014).

Stigma:

In many societies, vocational and technical education training is often viewed as a less desirable option compared to a traditional university education. This can lead to a stigma surrounding VTE programmes, which can make it difficult to attract and retain high-

Green Skills Programme

An example of a successful VTE programme that promotes national development is the "**Green Skills**" programme in Australia. The programme was developed by the Australian government in partnership with industry, education and training providers, and community organisations.

The Green Skills programme aims to build the skills and knowledge of workers in the clean energy and sustainability sectors, with a focus on meeting the needs of small and medium-sized enterprises (SMEs). It provides training and education in areas such as renewable energy, energy efficiency, and waste management.

The Green skills programme has several key features that contribute to its success in promoting national development:

(i) Demand-driven in Nature:

The programme is designed to meet the specific needs of employers in the clean energy

sectors. This helps to ensure that the skills and knowledge developed through the programme are relevant and in-demand in the job market, which can help to increase employment opportunities for programme graduates.

(ii) Capacity Building

The Green Skills programme focuses on building the capacity of small and medium-sized enterprises (SMEs) to adopt clean energy practices. This not only helps to promote the use of clean energy practices in these companies, but also supports the overall national development of the region by helping these businesses to grow and thrive. There is evidence that the Green Skills programme has had a positive impact on national development in Australia.

In terms of national development, the programme has contributed to the growth and development of the clean energy and sustainability sectors in Australia, which has created employment opportunities for graduates (Green Skills Inc. <https://greenskills.org.au/> (accessed 10th October 2022)). According to the Australian government, the clean energy sector has experienced strong growth in recent years, with employment in the sector increasing by more than 20% between 2015 and 2019. The Green Skills programme has played a role in building the skilled workforce needed to support this growth (Green Skills Inc., <https://greenskills.org.au/> (accessed 10th October 2022)).

Conclusion and Recommendations

The study so far has discussed the impact of VTE in national development of nations. It has addressed the importance of a demand-driven approach to VTE, which ensures that the skills and knowledge provided are relevant to the needs of the local job market. In addition, the role of VTE in supporting the growth and development of small and medium-sized enterprises (SMEs) has been highlighted including the benefits of partnerships between VTE programmes, industry, education and training providers, and community organizations in promoting national development of nations.

In the case study presented on the Green Skills program in Australia has exhibited a successful VTE program that has contributed to national development with important implications for policy and practice in the promotion of VTE for national development.

There are several areas where further research on VTE and economy development could be valuable:

- 1) Evaluating the impact of VTE programmes on national development: More research is needed to understand the specific ways in which VTE programmes contribute to national development and sustainable development, as well as the factors that contribute to the success or failure of these programmes in promoting these outcomes.
- 2) Developing best practices for VTE programmes: Further research could help to identify the key features of successful VTE programmes that contribute to national development and provide guidance on how these best practices can be replicated in other contexts.

- 3) Exploring the role of VTE in promoting the transition to a green economy: As the world transitions to a low- carbon, sustainable future, VTE programmes have an important role to play in building the skilled workforce needed to support this transition. Research could help to identify the specific skills and knowledge needed for the green economy, and how VTE programmes can best support the development of these skills.
- 4) Examining the role of VTE in promoting gender equality and inclusion: VTE programmes have the potential to promote gender equality and inclusion by providing opportunities for marginalized groups to access education and training. Research could explore the specific ways in which VTE programmes can support the empowerment of women and other marginalized groups.

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