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A Critical Review of the Technical and Vocational Education Training (TVET), as a Catalyst for Skills Enhancement in Rural Industrial Development: A Case of Bulawayo Polytechnic

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Abstract

The reality that the Technical and Vocational Education and Training (TVET) can be adopted as a catalyst for skill enhancement in rural industrial development needs no contestation. There are numerous socio-economic challenges faced by rural areas that characterize the rural communities, resultantly the study sought to establish whether TVET programs at Bulawayo Polytechnic effectively crafted so as to equip students with the appropriate skills for success in the rural industrial sector. With these skill it is envisaged that the students will be sufficiently gravitated so as to deal with the many challenges that are faced by their communities. The study also sought to examine the challenges encountered and explore opportunities for improvement of TVET programs for Skill Enhancement in Rural Industrial Development. A mixed-methods approach was used in this study. Research subjects included staff and former students from Bulawayo Polytechnic, selected through probability and non-probability sampling. Data was collected using questionnaires and interviews, with quantitative results presented in graphs and qualitative data presented in themes. Descriptive statistics was used for quantitative analysis, while thematic analysis was used for qualitative data. The findings highlighted the crucial role of TVET programs at Bulawayo Polytechnic in fostering skills for rural industrial development. The study showed that programs at Bulawayo Polytechnic provided students with practical skills such as machinery operation, welding, and electrical installation, aligning with local industry needs, enhancing employment creation soon after graduation. However, challenges like inadequate funding, limited access to modern equipment, outdated curricula, and weak local industry partnerships while at school hampered internship and training opportunities. The research identified areas for improvement, such as modernizing the curriculum, strengthening business relationships, and adopting innovative training techniques. Recommendations to enhance TVET effectiveness included establishing dedicated funding, regularly updating curricula, and fostering industry collaborations, leveraging technology, and ensuring ongoing professional development for instructors. Implementing these strategies could significantly improve Bulawayo Polytechnic's TVET programs and better prepare graduates for the rural industrial sector.

Keywords: Skill Enhancement, Rural Industrial Development, TVET.

Introduction

Technical and Vocational Education and Training (TVET) which is an intervention in sync with the Education 5.0 model has gained recognition as an essential solution to challenges that have bedeviled the world such as poverty, unemployment, and sustainable economic development. The significance of the philosophy has undeniably extended beyond merely transferring to all those that come through the institution practical skills. Empirical evidence now has it that it plays a crucial role in fostering individual empowerment and promoting societal progress which reached astronomical levels. The United Nations underscored TVET's contribution to enhancing livelihoods and improving workforce readiness, emphasizing its impact on achieving Sustainable Development Goal 4, which aims at providing inclusive and equitable quality education while promoting lifelong learning for all (Howell, 2010). TVET has been seen to equip individuals with relevant skills and knowledge necessary for success in a competitive job market, which ultimately contribute to economic resilience and social inclusion. As various nations across the globe strive to meet these global objectives, TVET has visibly and convincingly emerged as a foundational element in human capital development which aptly drives innovation and enables communities to adapt to changing economic demands, trends and expectations.

In the African context, TVET has been seen and ascribed

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significant importance in advancing the African Union Agenda 2063, which seeks to promote economic growth and reduce unemployment (African Union, 2015). The focus of TVET seeks to enhance skill sets, especially in local communities which are rich in untapped human capital potential. Resultantly, the investment in TVET not only transforms lives but also strengthen communities by improving employability and bridging skills gaps. Such initiatives are vital in realizing the vision of Agenda 2063, as they provide individuals and communities with the tools necessary to maximize their potential (African Union, 2015). This investment in skills development has proved essential for unlocking opportunities and ensuring societies are equipped sufficiently to thrive in an evolving economic landscape. Prioritizing TVET, therefore has to enable nations to foster a robust workforce aligned with contemporary industry demands and to contribute effectively to sustainable development.

The Southern African Development Community (SADC) region is not lagging having adopted policies that focused on harmonizing TVET systems to enhance industrialization, improve employability, and align skills with labour market demands. The SADC TVET Strategic Framework (2018-2027) and the SADC Futures of Higher Education and TVET Framework guided the Regional policy, focusing on quality assurance, modernization, and digital transformation (Onatere-Ubrurhe, & Ubrurhe, 2025). Key initiatives included the SADC Qualifications Framework, which promote the regional recognition of qualifications, facilitating labour mobility and establishing comparative skill standards. Reforms shifted from supply-driven models to demand-driven systems, increasing industry involvement in curriculum design and training. Policies also emphasized access and inclusion for marginalized groups, youth, and women, advocating for the integration of Open and Distance Learning (ODL) (Subrahmanyam, 2013). Significant investment in Monitoring and Evaluation (M&E) systems and research have been seen as crucial for ensuring high-quality, evidence-based vocational training. Main priorities include boosting artisanal development to meet industrial demands, incorporating green and digital skills into curricula, and fostering entrepreneurship to address youth unemployment effectively.

In Zimbabwe, TVET has assumed a pivotal role in addressing economic challenges and enhancing workforce readiness, especially against a backdrop of high unemployment rates. This educational approach equips individuals, particularly the youth, with practical skills that directly improves employability while fostering entrepreneurship by providing essential tools for business establishment (Ramkissoon-Babwah. 2021). The design of these programs aligned closely with industry demands, focusing on critical sectors such as agriculture, manufacturing, and construction to tackle existing skill shortages.

The Zimbabwean government has dedicated itself to enhancing TVET through strategic policies aimed at expanding opportunities and improving infrastructure. This commitment has proved crucial for elevating the quality of training offered to prospective students. The government has established a robust framework guided by the National Development Strategy Two (NDS 2), which seeks among other things to foster economic growth while prioritising practical skills training necessary for driving industrialization (Onatere-Ubrurhe & Ubrurhe, 2025).

Among the cornerstones of this framework, the Manpower Planning and Development Act [Chapter 28:02], alongside its significant amendments in 2020, plays a vital role in regulating technical and vocational education, apprenticeship training, and the operations of the Zimbabwe Manpower Development Fund (ZIMDEF). These regulatory mechanisms aim to fortify national skills development, ensuring that the workforce align with industry needs, thus contributing to sustained economic progress. Emphasizing clarity of policy, enhancing infrastructure, and providing legislative guidance has allowed the Zimbabwean government to equip individuals with the skills necessary for a dynamic job market. This strategic initiative not only fostered national development but also stimulated industrial growth, reflecting a proactive approach to preparing the youth with relevant skills pivotal for creating a competitive workforce (Ramkissoon-Babwah. 2021).

Furthermore, the TVET policies underline the importance of entrepreneurship by encouraging students to develop entrepreneurial skills (Howell, 2010). This focus on practical skills and entrepreneurship is vital for nurturing a workforce capable of driving industrial development and adapting to the ever-evolving economic landscape in Zimbabwe. As the economy transforms, fostering self-employment opportunities through entrepreneurial education which dovetails with the ideals of Education 5.0 as become essential.

The urgency to cultivate a skilled workforce that responds effectively to local industrial needs has become increasingly critical. Research reveals that a lack of technical skills among the workforce significantly hampered local industries, thereby stifling sustained economic growth (Subrahmanyam, 2013). Rural communities, in particular, faced distinct challenges, including high unemployment rates, inadequate infrastructure, and limited educational resources. These conditions necessitated tailored vocational training programs that effectively addressed the specific needs of these areas.

Institutions such as Bulawayo Polytechnic exemplified the critical role of TVET in rural regions. Through developing and delivering programs that bridged the gap between education and local industry requirements, Bulawayo Polytechnic enhanced the employability of its graduates. The institution prioritized practical, hands-on training, empowering individuals with the skills necessary to improve their livelihoods and contribute meaningfully to community development. However, despite the recognized potential of TVET programs at Bulawayo Polytechnic, the effectiveness of its impact in transforming the rural industrial landscape has inadequately been researched. Many challenges faced by these programs that include inadequate funding, outdated course content, and insufficient collaboration with local industries, received inadequate attention in the scholarly discourse.

Methodology

A mixed-methods approach was employed in this research to gain a comprehensive understanding of the research topic. For the qualitative aspect, the population consisted of 184 former students of Bulawayo Polytechnic. Utilizing purposive non-probability sampling, 20 former students were deliberately selected based on their relevant experiences with TVET programs. Data were collected through in-depth interviews, allowing participants to share their insights and experiences. This qualitative data were analyzed thematically, with the findings organized into key themes that highlight the impact of TVET on skills enhancement in rural industrial settings.

The quantitative component focused on a population of 156 lecturers at Bulawayo Polytechnic, employing stratified

random sampling to ensure a representative selection of respondents. From this population, 20 lecturers were randomly chosen to participate in the study. Data were gathered through structured questionnaires, enabling the collection of quantifiable information regarding the role of TVET in skill development. The quantitative data were then presented using graphs to illustrate key findings, and analyzed using The Statistical Package for the Social Sciences (SPSS), providing a statistical framework for interpreting the results. This mixed-methods approach facilitated a richer understanding of the interplay between technical training and rural industrial development, combining qualitative insights with quantitative evidence.

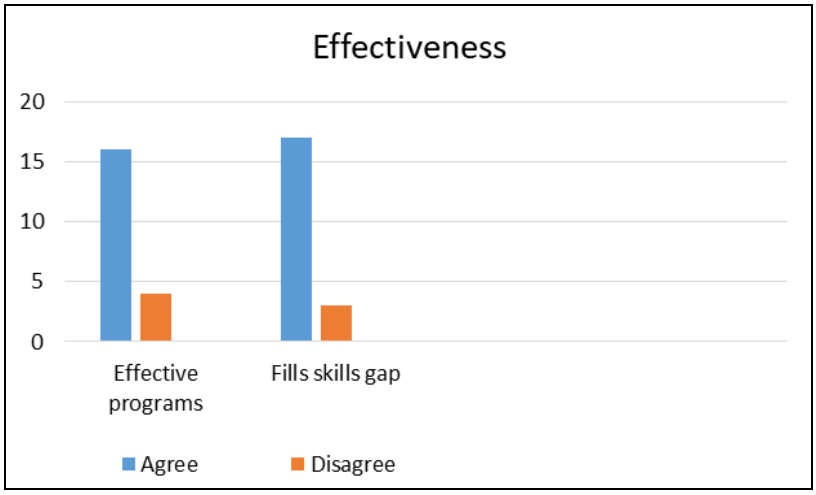
Findings

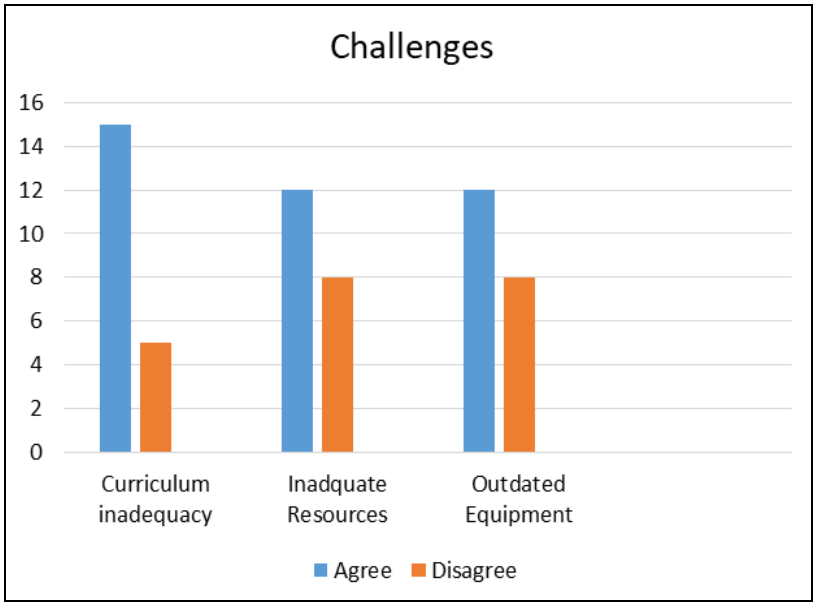
The significance of Technical and Vocational Education Training (TVET) was recognised as crucial, particularly in addressing local employment needs and stimulating economic growth. It provided insights from both former students and lecturers concerning the impact of these programmes on skills acquisition, employment readiness, and rural industrial development.

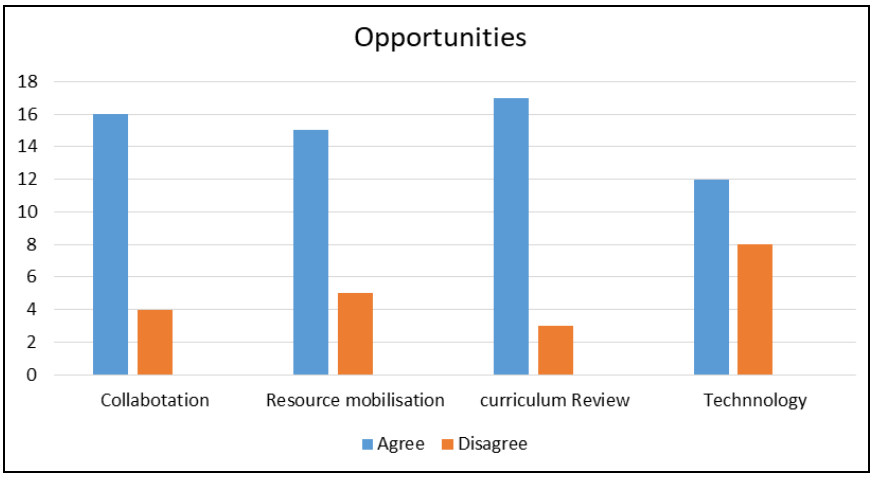
Interviews were conducted with 20 former Bulawayo Polytechnic students who had established small businesses or found employment in rural areas such as growth points and townships. Among these 20 interviewed graduates, a notable majority, specifically 17 individuals, reported improvements in their technical skills and practical knowledge, which proved essential for securing employment. These skills were grounded in real-world applications, which students found especially advantageous. Furthermore, 16 participants emphasised the necessity of practical engagement with local industries during their training. Such engagement was deemed vital for bridging the gap between academic learning and actual workplace skills.

Despite these positive outcomes, challenges persisted among the graduates. A significant 19 out of 20 students highlighted limited access to modern equipment as a major barrier affecting their learning experience. Furthermore, they identified gaps within the curriculum, indicating that course content did not fully align with industry standards or current technological advancements.

Nonetheless, all 20 graduates acknowledged that the skills they acquired made a positive contribution to local business growth and job creation. They observed a direct correlation between their training and the capacity of local businesses to thrive, attributing this success to the practical skills and knowledge gained through the TVET programmes. In light of these experiences, the graduates collectively recommended the establishment of robust partnerships with local industries to enhance the practical relevance of their training further. They also stressed the importance of developing entrepreneurial skills among students, suggesting that such competencies would better prepare graduates for self-employment opportunities.







The perspectives of lecturers at Bulawayo Polytechnic further illustrated the effectiveness of the TVET programmes. The lecturers who participated in the study demonstrated a predominantly positive outlook, with 80% highlighting that the TVET programmes were relevant to contemporary industry needs while 85% of the respondents acknowledged that TVET programmes provided the much needed skills in the rural areas. This consensus highlighted the importance of aligning educational offerings with the skill requirements of the job market.

However, 75% of the lecturers identified significant gaps between the curriculum and actual industry demands, underscoring a disconnect that could frustrate the efficacy of the training. Challenges such as inadequate resources and outdated equipment were reported by 60% of respondents, drawing attention to systemic issues that adversely affected instructional delivery. These challenges ultimately compromised the quality of education and the success of skill development initiatives.

Regarding industry collaboration, 80% of the lecturers acknowledged its importance for enhancing training outcomes. This awareness suggested a shared understanding of the necessity for partnerships with local businesses to ensure that students received relevant, up-to-date training. Furthermore, 90% believed that TVET graduates effectively filled existing skills gaps within rural economies, further emphasising the critical role of these programmes in promoting local economic growth.

Several lecturers recommended increasing investment in educational resources and involving employers in curriculum development. Such an approach would facilitate programmes' responsiveness to industry requirements and enhance the overall efficacy of the training provided.

Discussion of Findings

The findings from this study aligned closely with a substantial body of literature concerning the transformative impact of Technical and Vocational Education and Training (TVET) programmes on employment readiness and local economic development. A significant majority of former students, precisely 17 out of 20, reported that they had developed enhanced technical skills and practical knowledge essential for securing employment. This observation resonated with Shahidul (2020), who found that TVET graduates equipped with practical, industry-relevant skills achieved an impressive 89% employment rate within six months of graduation. Similarly, Howell (2010) had emphasised that the incorporation of real-world applications within TVET curricula significantly improved graduate employability by effectively bridging the theory-practice divide.

The strong endorsement for practical engagement with local industries, indicated by 16 out of 20 respondents, further corroborated the findings of Bashar (2011). He documented that collaborations between TVET programmes and industry stakeholders enhanced workplace readiness by 78% through initiatives such as apprenticeships and internships. However, the challenges that were prevalent in this study—namely, limited access to modern equipment, as reported by 19 out of 20 students, and gaps in the curriculum—mirrored persistent systemic issues noted in the literature. Onatere-Ubrurhe and Ubrurhe (2025) highlighted financial constraints and outdated infrastructure in TVET institutions as significant obstacles to effective skill development. They found that 70% of respondents identified equipment shortages as a primary barrier. Similarly, Ahmed (2016) noted that curriculum misalignment with industry standards was problematic, attributing this issue to insufficient collaboration among stakeholders, which undermined training relevance in the face of rapid technological advancements. Despite these challenges, all 20 graduates unanimously recognised that the skills they had acquired through TVET contributed positively to local business growth and job creation. This finding aligned with Ahmed (2016), who linked practical TVET training to increased local entrepreneurship and enhanced economic resilience. As a result, the graduates' recommendations for establishing robust partnerships with industry were well-founded. This was further evidenced by Subrahmanyam (2013), who demonstrated that sustained linkages between TVET programmes and industry significantly reduced skills gaps by 65% and fostered sustainable development. Furthermore, the graduates' call for the development of entrepreneurial skills echoed Ramkissoon-Babwah (2021), who advocated for the integration of entrepreneurship training within TVET programmes to empower individuals towards self-employment, particularly in resource-constrained contexts like Zimbabwe.

Conclusion

This study set out to critically review the role of Technical and Vocational Education and Training (TVET) as a catalyst for skills enhancement in rural industrial development, using Bulawayo Polytechnic as a case study. Overall, the findings confirmed that TVET at Bulawayo Polytechnic has meaningful value for learners and for the rural economies, they returned to after completion of their studies. Most former students reported that the programmes equipped them with practical, job-relevant skills such as machinery operation, welding, and electrical-related competencies, which enhanced

their confidence and employability in rural growth points and surrounding communities. In the same way, lecturers broadly agreed that TVET programmes respond to local industry needs and that graduates contribute to reducing skills shortages in rural settings.

However, the study also demonstrates that the effectiveness of TVET for rural industrial development is constrained by persistent implementation challenges. Limited access to modern equipment, resource shortages, curriculum gaps, and weak industry partnerships were identified as major barriers that reduce the relevance and impact of training particularly in relation to internships, workplace exposure, and keeping training aligned with current technologies used in industry. These limitations weaken the full potential of TVET to act as a direct bridge between training institutions and rural industrial transformation.

Recommendations

The recommendations put forward aimed to address the significant challenges faced by Technical and Vocational Education Training (TVET) programmes at Bulawayo Polytechnic. Regular updates to the curriculum were proposed to ensure alignment with contemporary industry needs, equipping students with relevant skills. Strengthening partnerships with local businesses for internships and resource-sharing emerged as essential, as these collaborations could enhance practical training opportunities. Securing dedicated funding became a crucial step for acquiring modern equipment and providing ongoing training for instructors, which would elevate the quality of education. Integrating entrepreneurial training into the curriculum was highlighted as a vital strategy to encourage self-employment among graduates and promote a culture of innovation. Implementing these recommendations would significantly enhance the impact of TVET programmes on rural industrial development, contributing to economic growth and fostering resilience within Zimbabwean communities. These measures not only addressed the immediate concerns of graduates but also aligned with broader economic objectives, ensuring that the training provided remained practical and applicable in real-world contexts.

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