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Factors Influencing Workforce Development of TVET Graduates: A Case Study of Electrical Engineering Students in a TVET College in South Africa

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Abstract

Developing the workforce is integral to individual, community, and organisational economic development for current and future businesses and industries. This qualitative case study explored factors influencing the workforce development of Technical and Vocational Education and Training (TVET) college graduates. The research sample was drawn using purposive and convenience sampling. The data was collected through semi-structured interviews with ten participants (five Electrical Engineering students, two lecturers, one head of department, and two Human Resource managers). Thematic analyses were used to analyse data. The findings revealed that the TVET curriculum needs to be more responsive to the needs of the students. In addition, the study showed that the Electrical Engineering course lacks the practical component, and the course's brief duration makes it impossible to finish the curriculum. This study recommends that the curriculum used in TVET colleges be revised continuously to ensure that students acquire the appropriate and relevant skills that will prepare them for employment. The practical component of the curriculum should be prioritised. Furthermore, a coordinated approach involving stakeholders (TVET colleges, industries, and students) should be followed to strengthen relationships and ensure that students are prepared to meet the demands of the labour market. If current TVET actors do not act, current TVET trends and practices could impact the local economy and the availability of skilled workers.

1. Introduction

A nation can only remain competitive if its workforce has the right skills, and it is the responsibility of the education and training system to ensure that workers have acquired the right abilities and capacities (Chijioke, 2013). Olojuolawe and Fadila (2019) argue that a country's skilled and productive workforce is necessary to grow. This implies that the economy's growth depends on the skilled workforce in that country. Workforce development refers to an interconnected set of strategies to satisfy employment requirements (Jacobs & Hawley, 2009) and contributes to nation-building and economic sustainability (Bhurtel, 2015). Although education plays a significant role in workforce development, individuals find it challenging to secure employment regardless of their level of education, owing to a deficit of skills relevant to the employment market (Bhurtel, 2015). Workforce development is getting worldwide attention because the global economy and the workforce skills and knowledge needed are constantly changing (Hassan et al., 2021).

TVET is described differently in different countries. Concepts such as Career and Technical Education (CTE), Workforce Education (WE) and Workforce Development (WD), Occupational Education (OE), Vocational Education (VE), and Apprenticeship Programs are used by other countries in various contexts (Salleh & Sulaiman, 2020). The central efficacy of TVET colleges has been documented in the literature. TVET offers a variety of learning experiences that take place in various settings and are focused on developing the skills required for specific occupations (Alagaraja & Arthur-Mensah, 2013), promoting skill workers (Salleh & Sulaiman, 2020); giving students the practical know-how and skills necessary for specific occupational skills thus preparing them for the workforce prepare learners for the world of work by providing them with the practical knowledge and skills related to a particular vocational sector (SAQA) (2006), means of getting students ready for the workforce (UNESCO, 2015). In South Africa, TVET is seen as a solution to poverty, unemployment, and the declining economy (DHET, 2012).

Previous research has focused on employability skills in TVET (De AlMunifi & Aleryani, 2019; Ismail & Mohammed (2015); Nugraha et al., (2019); Lolwana, (2016) and industrial attachment, Dondofema et al., (2020), but there is a paucity of research that focuses on the factors that influence workforce development among TVET graduate. TVET graduates found themselves needing work despite their qualifications. Although TVET institutions were established to promote sustainable development and aid in preparing people for professions in the workforce, many people, particularly young people, still struggle to obtain employment (James, 2022). Salleh and Sulaiman (2020) contend that although companies need employees with technical and soft skills, there is a severe worldwide skills gap. Producing a skilled workforce with the necessary abilities is difficult, according to Hassan and Awan (2019). This assertion suggests that TVET is not fulfilling its mandate of developing skills needed for workforce development.

The South African government has invested heavily in strengthening and expanding public TVET colleges to turn them into attractive institutions of choice for school leavers (DHET, 2013). However, TVET colleges face many obstacles and unemployment of TVET graduates is increasing especially among the Business and Engineering graduates (Mama, 2019). TVET plays a crucial role in South Africa, ensuring that there is continued production of skilled graduates (DHET, 2013). However, the relevance and responsiveness of the TVET programme and other systemic constraints continue to hinder the delivery of well-prepared graduates for the world of work (DHET, 2013). The TVET College needs to produce graduates with saleable skills. According to Afolabi (2014), the goals of the technical education curriculum have yet to be attained because graduates are unemployed. This study explored the factors influencing the workforce development of Technical and Vocational Education and Training (TVET) college graduates. The study answered the following research question: What factors influence the workforce development of TVET graduates? Understanding the factors influencing the workforce development of TVET college graduates will assist policymakers and curriculum developers in ensuring that they prepare students to meet the demands of the labor market. If the current status of TVET is not addressed, the current trends and practices could impact the local economy and the availability of skilled workers. Another implication is that the research results will add to the current debate on TVET education and workforce development. TVET graduates must be employable and relevant for the growing and changing job market. The study findings must be interpreted cautiously, as a small sample was used. Therefore, the results might not be generalisable to a broader scope. Future research must examine the relationship between TVET colleges and industries to ensure that the discrepancies between supply and demand are alleviated. The current research was based on a single TVET college. Still, multiple case studies might be used for future research to compare different cases and explore the challenges students face in workforce development.

2. Literature Review

2.1 Workforce Development

Workforce development is essential to individual, community, and organisational economic development for current and future businesses and industries (Haralson, 2010). The concept of workforce development needs to be consistently defined, as it means different things to different people, depending on the context. Workforce, according to Jacobs (2000), includes people from the following categories: People who are starting their careers; people who are currently employed full or part-time; people going through a change in employment, such as job seekers, the unemployed, and people who have previously worked but are now looking for a job; people who have worked in the past but are not currently working and people who have been recruited from other locations for employment, such as guest workers, immigrants, and invited permanent residents. Workforce development connects individual, organisational, and societal objectives (Harris & Short 2014). Holland (2016) states that workforce development aims to increase employment seekers' employability through human capital investment. Holland (2016) sees workforce development as preparing individuals for employment-related occupations. Workforce development strongly emphasizes economic development (Jacobs & Hawley, 2009). As a result, employment seekers, employers, and educational institutions are the primary stakeholders in workforce

development. The primary workforce education and training provider is the government, assisting employment seekers through public employment and social services (Holland, 2016). According to Harris and Short (2014), workforce development is a "whole-of-organization" comprising human resource development, human resource and management, workforce planning, and workforce capability planning. This is because workforce development extends beyond training, overlaps with numerous other organisational policy and practice strands, and aligns with the organization's mission and goals.

2.2 TVET in the South African Context

As amended, the Technical and Vocational Education and Training (TVET) Colleges Act, No. 16 of 2006, governs the management of TVET colleges in South Africa. There were 50 public TVET colleges in 2019, with 253 registered campuses and other delivery sites for qualifications, part qualifications, and other programmes (DHET 2021). A Grade 9 or Grade 12 certificate is required for admittance into the TVET colleges' qualifications and programs. Programmes offered at the colleges include The National Certificate (Vocational) [NC(V)] with 19 vocational programmes offered at NQF levels 2, 3, and 4, Report 190/1 part-qualification, commonly known as the NATED programmes, which are provided at six N levels (N1 to N6) for Engineering Studies and three or four N levels (Introductory, N4 to N6) for Business and General Studies and the Pre-Vocational Learning Programme (PLP). The NATED course is offered from levels N1 to N6. Each level is supposedly covered in a single trimester (10 weeks), within which a national examination is written (DHET, 2021). By contrast, the NC(V) qualification is a full-year program at each of the National Qualifications Framework (NQF) levels (2, 3, and 4) of study, and a certificate is issued on completion of each level. NC(V) has seven subjects in total, which comprise four vocational subjects and three fundamental subjects (Language, Mathematics, and Life Orientation) (DHET, 2014).

According to the Framework for Education and Training Colleges Act 16 of 2006 (SAQA, 2006), TVET colleges must prepare their students for work, a vocation, occupation, trade, or higher education by giving them knowledge, practical skills, and applied vocational and occupational competencies (DHET, 2019). In addition to preparing students for college, colleges should help students make a smooth transition to the workplace by ensuring that their programmes are relevant to the workplace (Papier et al., 2016). TVET engineering graduates are required to have specific employability skills. To be absorbed by industry, Electrical Engineering graduates need to have a thorough knowledge of Electrical Technology education and be competent in the electrical discipline, knowledge of contemporary issues in electrical engineering, and knowledge of Sciences, Technology, Engineering, Mathematics (STEM) (Ismail & Mohammed, 2015; Olojuolawe & Fadila, 2019). For Engineering Studies students, obtaining the National N Diploma requires a minimum of 24 months (2670 hours) of relevant work experience or a certificate from a relevant trade exam (DHET 2019).

2.3 Challenges Facing TVET Colleges in Workforce Development

TVET plays a critical role in shaping the economic landscape and providing skilled workers in a country. However, TVET colleges do not command respect from community members, students, and employees (Zain, 2020). Zain (2020) argues that TVET is perceived as an educational path for students who cannot develop good academic skills. Despite the significant changes to TVET colleges in terms of increasing enrolments and improved infrastructure, industries still have varying views on the competency of TVET graduates (Chijioke, 2013). According to Harum et al., (2020) challenges facing TVET colleges include negative employer perception and the mismatch on what the market demand and what TVET is supplying. Wedekind (2013) argues that although new policies have been developed, TVET colleges are struggling with the following problems: poor quality of education and training, lack of articulation, poor alignment with economic priorities, and poor linkages with industries. Some of the challenges facing TVET colleges in workforce development are discussed below.

2.4 Quality of Education and Training

Practical training forms an integral component of student's academic programme. Practical training is sometimes referred to as industrial attachment and work-based learning (Haruna et al. (2019), and it equips the student with work-based skills. Training is a crucial component of vocational or career development in every work environment and every industry (Dondofema. et al., 2020). The literature identifies several benefits of practical training. Trainees can examine theory through practice and enhance integration possibilities (Otieno & Onyango,2021). Additionally, industrial attachment exposes students to practical work experiences (Matamande et al., 2013) and helps improve communication skills, teamwork, and self-discipline (Otieno & Onyango, 2021). Dondofema et al., (2020) further contend that industrial attachment is essential for trainees, host organization, training institutions, and employees. For the trainees, it allows them to apply theoretical knowledge in practice, while host organizations and employees benefit from the increased productivity and potential contributions of the trainees. The industrial attachment also builds the relationship between the industry and the trainees' training institutions.

2.5 The Poor Linkage Between TVET and the Labour Market

One of the difficulties the African Union Commission (AUC) (2007) identified is the lack of connection between the TVET colleges and industry. The White Paper states that TVET colleges must collaborate with businesses and industries. According to Albashiry, Voogt, and Pieters (2015), the importance of collaborative cooperation between TVET colleges and other parties cannot be overstated. They contend that if the partnership is insufficient, then the TVET curricula will not be able to meet the requirements set forth by the stakeholders. Terblanche (2017) states that there is a lack of company participation in establishing and evaluating TVET curricula. However, industry cooperation is only one of the identified challenges. Mukora (2009) argues that TVET colleges cannot align their course offerings with market demands. As a result, the quality of the TVET graduates falls short of what is required in the workplace. According to the DHET (2012), the connection between TVET colleges and the industry should be symbiotic and based on a value proposition in which each party benefits from the partnership.

2.6 Skills Mismatch

The World Economic Forum (2013) states that equipping the workforce with job-relevant knowledge, skills, and abilities is one of the biggest challenges facing countries worldwide. Hassan and Awan (2019) share the same sentiments that producing skilled workers with the necessary skills for the sector is challenging. As a result, persistently high levels of skills mismatch result in considerable economic and social costs, negatively affecting individuals, the economy, and society as a whole (Brunello & Wruuck, 2019). The term "skills mismatch" refers to the situation in which workers have either too few or too many skills that employers need (World Economic Forum, 2013). Skill mismatch is a product of training programs created without a consistent and comprehensive evaluation of labour market needs. TVET is expected to match supply with demand (Nyongesa & Makokha,2021). Various factors contribute to a skills mismatch in the industry. According to Nyongesa and Makokha (2021), mismatches between TVET skills development and labour market demands are caused by the results of types of courses offered, skills developed in light of industrial needs, and trainees' exposure to real-work situations. Papier (2017) argues that the possible explanation for the skills mismatch between the industry and TVET colleges is that lectures in those institutions do not have relevant qualifications and practical knowledge. It should be noted that skills mismatch contributes to unemployment as graduates will not have the required skill set for sustainable employability (Mesuwini et al., 2020).

3. Methodology

This study followed a qualitative approach. Creswell (2016) states that qualitative research is a method of systematic inquiry that seeks to obtain information about human beings and their understanding. Using a case study, this study explored factors influencing the workforce development of Technical and Vocational Education and Training (TVET) college graduates. The case study allowed the researchers to obtain detailed information about the phenomenon under study (Yin, 2018). One TVET college in the province of Mpumalanga in South Africa was selected. This study's location was chosen because it was close to two large companies expected to hire newly qualified electricians.

3.1 Participants and Sampling Techniques Sample

The study population for this research consisted of N5 Electrical Engineering students (these students completed levels 4, N2, N3, and N4, and they can join the workforce), two lecturers, and a head of the department from Engineering department were purposively selected in one TVET college in South Africa. Purposive sampling was employed in the present study as its logic and power lie in selecting cases that contain much detailed information (Patton, 2015). In addition, two Human Resource managers from neighbouring industries considered to be the potential employees of the graduates from the TVET college participated in the study. The number of years participants had worked at the institution and been employed played a role in their selection. Students have been at the college for more than two years, and lectures, the head of the department, and human resource managers have been employed for more than five years at different places. All participants were guaranteed privacy and anonymity. The choice to leave the study at any moment was made clear to participants. Pseudonyms used to describe the participants were Lec1 and Lec2 for lecturers, STUD A to STUD E for students, and HRM1 and HRM2 for Human Resource managers.

3.2 Methods of Data Collection and Data Analysis

This study collected data through semi-structured interviews. According to De Vos et al. and Delport (2011), semi-structured interviews are designed to provide a detailed overview of participants' beliefs, experiences, and perceptions of a specific topic. With the consent of the participants, interviews were recorded via audio (Adams, 2015). Data were inductively analysed following Braun & Clarke's (2022) approach to thematic analysis.

Qualitative data categories and themes were developed. The inductive analysis allowed themes and categories to emerge from the data based on frequent and significant events in the raw data (Nieuwenhuis, 2007). To ensure the credibility of the finding, member checking was done.

4. Findings

Broad themes emerged from the analysis. These were a lack of employment opportunities, curriculum unresponsiveness, insufficient infrastructure, absence of a practical component, and course duration.

4.1 A Lack of Employment Opportunities

The participants were asked about the challenges they encounter in workforce development. The majority commented that the lack of employment opportunities was a serious issue. Most students revealed they were not working and decided to further their studies instead of sitting at home.

> *"I have not bothered to look for a job since most students I studied with work for retail stores, and some are qualified electricians from university. I then decided to further my studies to get a better chance of employment".* [STUD A]

> *"I want a job, but other classmates have advised me to complete my N6 to trade. I am unsure how that will assist me in finding a job if people with a university degree in Engineering, like my half-sister, sit at home. I can only hope"*. [STUD D]

Students noted that some of their fellow students who had completed their N5 Electrical Engineering qualification were either not working or were working for retail stores and not as electricians. Students were not excited about completing the programme as they would only join the ranks of unemployed youth in the country once they had qualified. The students' views showed they wanted to be employed and were still seeking employment opportunities. They believed that furthering their studies would increase their chances of finding employment.

4.2 Curriculum Unresponsiveness

The TVET curriculum should be responsive to the needs of industries, employers, and students to guarantee that TVET colleges produce graduates who meet the demands of the workplace and can make a smooth transition from college to work. The curriculum should include, for example, the hands-on training required by industries. Most participants felt the curriculum did not equip students with the required skills.

> *"The curriculum is not responsive and needs to be reviewed a little since times are changing. It does not discuss modern technology, as industries are changing now and then". [STUD A]*

> *"The curriculum does not equip students with the full potential to find work after completing the qualification. The NATED TVET system is unlike the university w; you must study for three to four years to complete a qualification. Even if you have N2, you are supposed to get a job because the system allows that. If this curriculum were responsive, we would be employed by now or running our business, but due to a lack of skills, there I am"*. [STUD B]

The mandate of TVET colleges is to produce graduates with skills that are responsive to and aligned with labour market demands and would enable them to join the workforce. The participants felt that the curriculum was not responding to their skills needs, which, once met, would enable them to join the workforce when they had completed their qualifications. The academic staff made the following comments in this regard:

> *"Our current TVET college curriculum, especially in Report 191 N courses, is so outdated. The students are not receiving the best education possible"*. [Lec1].

> *"Our curriculum needs to be updated, though it is 50 percent aligned with industries because industries have advanced more than curricula. Students lack the skills to make them employable later in life. The syllabus is not in line with what is happening in the industry. At this campus, students are only taught theory, whereas, in the industry, there is a need for practical experience"*. [HOD]

Based on the above comments, it is concluded that the curriculum did not prepare students to participate effectively in the job market. There was a mismatch between the curriculum and the actual needs: the TVET

College taught theory, while industries require a practical component or work experience before they can employ TVET students. The HOD asserted that industries were more advanced than the curriculum, and students were not equipped with the skills that would help them secure employment.

Although TVET colleges offer all the subjects required by industry, the curriculum content seems problematic as the graduates do not meet industry requirements when they leave the college. An HRM who participated in the study commented as follows:

> *"I know that TVETs offer the most required subjects, but I am uncertain about their curriculum. Last year the company was looking for young graduates from N2 – N6 level. I was shocked to learn that we had to spend money to arrange training for these kids. I asked them why they seemed so clueless about the machines we use to install plugs"*. HRM1

The above quotes suggest a misalignment between what the college offers and the industry demands. When there is such a misalignment, the industries will not view TVET graduates as having the necessary qualifications to be accepted into the labour market. Human resource managers looking to hire competent workers are concerned about the disparity between the abilities required for the position and those possessed by applicants.

4.3 A Lack of Sufficient Infrastructure

The primary role of TVET colleges is to train and equip students with the necessary skills, knowledge, and attitudes for employment. For this to be achieved, properly built infrastructure is vital. Most participants in this study revealed that infrastructure was one concern that should be taken seriously. They stated that the appropriate infrastructure would improve the translation of their theoretical knowledge into practical competency since they could go to workshops to practice what they had been taught in class. Participants shared the following views:

> *"Our campus does not have enough infrastructure to accommodate the needs of all students. The college has two lecturing sessions, the morning students mostly NC (V) and afternoon classes for the NATED students"* [STUD A]

> *"The fact that most students are forced to attend late in the afternoon clearly shows a shortage of classrooms; hence, we need to wait for the NC (V) to be out at two p.m. and three o'clock we start our lectures. If the college is short of classrooms, it means the issue of building workshops for NATED students is the fastest dream".* [STUD B]

The above participants believed the college lacked infrastructure, so lectures were held in two: a morning session for NC (V) students and an afternoon for NATED students. While the participants voiced their frustration with the college's infrastructure, STUD D made an interesting observation. He said: *Our college has enough workshops, but they are meant for NC (V) students since they are the only ones who can access the workshops, not the NATED students [STUD D*]. The college has workshops, but they are not to be used by NATED Engineering students. This clearly shows that the infrastructure issue is a challenge that affects the quality of students' training.

4.4 The Absence of a Practical Component

The results suggest that the other factor influencing the workforce development of TVET graduates was the absence of a practical course component. Students need the opportunity to put their theory into practice. Here are some of the participants' comments on the issue of the practical component of the course:

> *"I want to be taught how to do things using my hands and operate machines, but this curriculum does not teach me that". [STUD C]*

> *"I want to learn how the machinery works and be able to see and touch them".* [STUD A]

> *"Colleges, especially in the N programmes, focus more on teaching students for exams and ignore the focal point of learning by doing. Their curriculum lacks practical components. These colleges are teaching our kids to qualify to gook for a job. We have plenty of people with this qualification already. Their curriculum encourages these students to be the employees, not the employment creators. There is no way industries will employ all these graduates".* [HRM2]

"At this campus, students are only taught theory, whereas, in the industry, there is a need for practical experience. Due to this lack of experience, students struggle to find internships. In the classroom, for instance, a student might learn about compressors and transformers, but in reality, he or she does not know anything about them". [HOD]

Participants stated that the curriculum did not equip students to join the workforce. HRM2 mentioned that TVET colleges were not developing N5 students to be employment creators but rather as job hunters. As a result, the demand for employment is higher than the number of positions industries need to fill. In light of the high unemployment rate in South Africa, it would be much better to develop and train these students to be entrepreneurs instead of employment seekers, as the country has plenty of employment seekers already.

4.5 Duration of the Course

The Engineering programme runs in trimesters. A recurrent theme in the interviews was a sense amongst interviewees that insufficient time was allocated to study the course. As a result, students did not get time to do their practicals and finish the coursework. Most lecturers did assessment activities with the students to cover the syllabus instead of teaching the content. Participants expressed the following views:

"Studying engineering requires a lot of practice and time. I do not think that with the trimester duration as a student, I know much about Electrical Engineering. Even the lecturers do not have time for us because it is assessment after assessment". [STUD A]

"This is the Engineering we are talking about. There is no way we can learn this qualification in twelve weeks. This needs to be changed to at least a semester". [STUD B]

Interestingly, other participants also raised concerns about insufficient time to study the course.

"We have a trimester issue whereby we need to teach for twelve weeks. I could not cover the whole syllabus if I were to teach according to the textbook. I use mostly previous question papers to teach my students, and I do not give them enough knowledge but teach them to pass the level". [Lec1]

"NATED Electrical Engineering is very short, and the course is complex. This needs to be rectified. We cannot afford to produce graduates with so little knowledge". [HOD]

"The problem we are more concerned about is the issue of the shortness of the trimester. If a child takes a year to develop fully for the next stage, what makes you think you can develop a qualified engineer within twelve weeks? This makes the industries not have faith in TVET students in terms of employment". [HRM1]

Lecturers felt they could not do much in class with so little time; hence, they opted to teach for examinations. The HOD stated that the short duration of the course allowed them to produce graduates with limited knowledge. Practical skills would have assisted these students in starting their businesses based on the experience they gained while still at college, and they would not have had to depend on someone to employ them.

5. Discussion

This study explores factors that influence the workforce development of TVET graduates. TVET graduates must be employable and relevant for the growing and changing job market. The current study found that the lack of employment opportunities among TVET graduates was a serious concern for most participants. Research has shown that theoretical trade qualification does not guarantee that a graduate, mainly not a TVET graduate, will be employed in that particular trade (James, 2022; Vally & Motala, 2013). Concerns are that TVET colleges produce under-par graduates and thus contribute to the labor market's low absorption rate of TVET graduates. According to this study, students' perceptions of workforce development are that they must keep studying and improving their qualifications. They know that even qualified artisans in their communities have remained unemployed. This is supported by the study by Papier et al. (2016), which found that even students with some form of artisan training in presumed skills shortages could not find employment once they finished their training.

The current study found that the curriculum offered by TVET is unresponsive to the needs of the students and the job market. The current study's findings are consistent with those of Papier (2017), who found that TVET College's curricula are not aligned with the industry's demands. Therefore, the quality of TVET graduates is not required in the workplace. This leads to a mismatch in what colleges produce and what the market demands. Magnus et al. (2013) emphasised that employers reject TVET programmes because they find them worthless. Carl

(2012) posits that curricula should be flexible and adaptable to the changing world. The TVET curriculum should be updated to ensure it is relevant and appropriate. The study revealed that the current curriculum is outdated. As a result, it does not equip students with the skills required by the employment market. It should be noted that skills mismatch contributes to unemployment as graduates will not have the required skill set for sustainable employability (Mesuwini et al., 2020; Papier, 2017).

Another interesting finding in this study is the issue of insufficient infrastructure and tools. Infrastructure is vital in ensuring students have access to the necessary resources. Most teaching and learning activities in the TVET sector are created and carried out as forms of practical work and work-integrated learning (Makgato, 2019). However, this study has found that TVET colleges lack the infrastructure to offer practical training. This result supports Lolwana's (2016) conclusions that the TVET sector lacks enough infrastructure and necessary tools. Badroodien et al. (2006) share that TVET curricula do not stay abreast of companies' ever-changing technologies and production methods. According to Abadzi (2007), learning outcomes cannot be realised successfully without good teaching and learning time. Furthermore, the study shows that the 12-week programme for Electrical Engineering is too short. As the course duration is short, lecturers and students struggle to keep up with all required assessments (Du Plooy & Du Preez, 2022). Lecturers teach for examinations because they do not have enough time to cover the curriculum.

Another important finding was that the practical component of the Electrical Engineering programme received little attention. Although DHET (2018) specifies that the ratio of practical to theory should be 60 to 40, the study's findings showed that students rarely had the chance to complete their practicals. This finding corroborates the ideas of Mdluli (2017), who argued that TVET does not expose students to the practical realities of work; as a result, their graduates do not meet employment requirements. Field et al., 2014) argue that owing to students' lack of practical experience, TVET graduates' employment prospects are generally poor. In addition, the lack of a practical component led to the perception of TVET as a viable pathway and negative educational attainment (Harun et al., 2020). According to Gewer (2010) and Papier (2017), TVET colleges teach theory, yet industries require graduates with practical experience. Electrical engineering graduates must possess technical abilities that will allow them to perform well in the workplace (Olojuolawe & Fadila, 2019; Nugraha & Komaro, 2018). Therefore, denying students the chance to do practical work will prevent them from experiencing real-world scenarios while studying, which is crucial for workforce development. Dondofema et al. (2020) assert that practical experience in a relevant industrial context gives students valuable skills and helps them understand the industry's work before being fully hired after completing their studies. Students who complete their practical work will be familiar with the work environment and will not need to be trained when they enter the job market.

6. Conclusions and Recommendations

The main goal of this study was to explore the influence of workforce development of Technical and Vocational Education and Training (TVET) colleges. The finding suggests that the current curriculum is unresponsive and does not equip students with the skills and knowledge required by industries. This is associated with an outdated curriculum. The interesting finding from this study is that the Electrical Engineering programme lacks the practical component critical for the students to get an orientation to the job market. The curriculum placed greater emphasis on theory-based courses than those that taught practical skills essential for employment. This study recommends revising the TVET curriculum continuously to ensure students acquire appropriate and relevant skills to prepare them for the job market. In addition, the practical component of the curriculum should be prioritised. The findings of this study have several implications for future practice. Understanding the factors influencing workforce development in TVET graduates will assist policymakers and curriculum developers in ensuring that TVET colleges prepare students to meet the labour market demands. Another practical implication is that the research results will add to the current debate on TVET education and workforce development.

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Conflict of Interest

The authors declare no conflict of interest regarding the paper's publication.

Author Contribution

The authors confirm their contribution to the paper as follows: ***study conception and design:*** *Zameka Ntetha, Matshidiso Joyce Taole;* ***data collection:*** *Zameka Ntetha;* ***analysis and interpretation of the results:*** *Zameka Ntetha, Matshidiso Joyce Taole,* ***draft manuscript preparation:*** *Zameka Ntetha; Matshidiso Joyce Taole. Both authors reviewed the results and approved the final version of the manuscript.*

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