

## Tracer Study of 2017-2019 NAMCOL TVET Graduates

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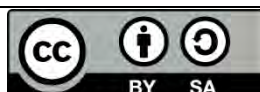
**Abstract:** This article focuses on the outcome of a tracer study of former NAMCOL TVET trainees who completed their training in 2017, 2018 and 2019 in the following trades: automotive mechanics, welding and metal fabrication, office administration and plumbing and pipe-fitting in terms of their employment profile, and opinions on the quality and effect of training they received in light of their employment experiences. The study adopted a mixed methods design, and it is based on Prosser's Theorems on vocational education. The study revealed that former trainees were well equipped with relevant knowledge and skills needed by the job market. However, the majority were unemployed, and among the employed, others were employed outside their specialisation. Furthermore, the study revealed some challenges that former trainees encountered while studying with NAMCOL, among others, inadequate equipment, lack of job attachment opportunities, financial constraints, and the delay of equipment and material supply. The study further made recommendations that could improve TVET quality and delivery at NAMCOL.

**Keywords:** tracer study, employability, TVET, employer satisfaction, TVET programmes, skill mismatch.

### Introduction

The growing trend of unemployment in Africa has prompted a shift from academic career streams to job creating career streams. Technical and Vocational Education Training (TVET), due to its ability and contribution regarding job creation, has become an important strategy in both developing and developed countries. It is an initiative that responds to demands of Namibia's labour market and is a driving force for sustainable development. UNESCO (2001) defines TVET as the education and training aimed at the acquisition of practical skills, attitudes, understanding and knowledge needed for employment in a particular occupation (Holander & Mar, 2009). Nilsson (2014) considers TVET as a tool for combating unemployment. As stipulated in Namibia's Fifth National Development Plan (NDP5), a nation's blueprint for national development between 2017-2022, skills improvement stands as one of its game-changing strategies through the transformation, upgrading and expansion of TVET institutions. NDP5, among others, aims at creating a pool of skilled workers that respond to Namibia's industrial needs (Namibia, 2017).

The Ministry of Higher Education, Technology and Innovation (MHETI) comprises five directorates, and the Directorate of Technical Vocational Education and Training (TVET) is one of them. The TVET directorate's mandate, among others, is to formulate and review TVET policies and regulations; develop and review TVET curriculum, standards and qualifications and ensure adherence to the set standards and ensure that quality examination and assessment are conducted as per TVET standards and regulations (MHETI). Two autonomous bodies, the National Training Authority (NTA) and the



National Qualification Authority (NQA) play an important role in the development of the VET system in Namibia (Namibia, 2005, VET Policy).

The NTA, a statutory body, was established by an act of parliament through the Vocational Education and Training Act No. 1 of 2008. Its powers among others include ensuring that vocational education and training programmes and services meet the current and emerging needs of industry, business and the broader community, and endeavour to increase employment and self-employment opportunities. The Vocational Education and Training Act of 2008 also allows NTA to issue awards and certificates and negotiate articulation arrangements between vocational education and training programmes and other education and training programmes. To promote VET, NTA may provide financial and technical assistance to employers, vocational education and training providers, and fund VET programmes and projects. The NTA may enter into agreements with any person or body for the provision of goods or services or the performance of functions that the NTA considers necessary. NAMCOL is among the TVET service providers.

### **Technical and Vocational Education at NAMCOL**

NAMCOL is a semi-autonomous education institution created by an act of parliament (Act 1 of 1997) and falls under the jurisdiction of the Ministry of Education Arts and Culture. NAMCOL offers programmes for adults and out-of-school youth to further their education and training. NAMCOL plays an integral role in the development of the country's human resources and continues to help the nation achieve the national development goals of Vision 2030. NAMCOL offers its programmes in three categories, namely: secondary, tertiary and vocational.

As part of its strategy to address training needs in the market, NAMCOL, in 2013, introduced a number of TVET programmes developed by NTA, which are as follow: Automotive Mechanics (Level 1-3), Welding and Metal Fabrication (Level 1-3), Plumbing and Pipefitting and (Level 1-3), and Office Administration (Level 1-3).

The ultimate aim of these programmes is to alleviate the high unemployment rate in the country. As employment in the formal sector shrinks, the acquisition of business management and entrepreneurial skills for self-employment becomes crucial. The development of entrepreneurial skills for self-employment is part of these programmes. The objectives of these programmes are to equip trainees with knowledge and skills to become competent artisans; produce competitive artisans for the job market; produce entrepreneurial artisans and; assist entrepreneurs with skills upgrading. The target groups for these programmes are existing NAMCOL trainees, unemployed youth and adults, and artisans seeking to upgrade their skills.

This article reports the findings of a tracer study, also referred to as graduate survey, alumni research or follow-up study (Schomburg, 2003). Tracer studies are identified by Schomburg (2003) as one form of empirical study providing important information when an educational institution requires responses on the quality and relevance of its programmes, or possible deficits in a given programme for future planning.

A graduate tracer study is considered instrumental in evaluating the output, outcome and impact of VET interventions; their relevance, and effectiveness. It serves as a tracking tool of VET graduated trainees (Macci, Jenny & Wilhelm, 2009). Recognising the crucial role tracer studies play, NAMCOL

has in the past conducted different tracer studies (Fertiman, 2007; Murangi & Kulobone, 2016; SAIDE, 2010). These tracer studies focused on NAMCOL Secondary School learners and Tertiary Programmes graduates. No tracer study so far has been conducted on TVET graduates since NAMCOL's introduction of TVET into its programmes in 2013. Similarly, at the national level, apart from a tracer study conducted by NTA (NTA, 2018) there is a dearth of literature in Namibia. This study, therefore, is aimed at making a contribution to the Namibian literature.

This TVET tracer study is pivotal to NAMCOL as it is the first of its kind to provide feedback on the employability status of its former TVET graduates. Furthermore, it responds to NTA's call for registered, credible TVET providers to conduct graduate tracer studies (May, 2022). NTA ensures that vocational education and training programmes and services are responsive to the emerging needs of industry, and increase employment and self-employment opportunities. Through this tracer study, NAMCOL seeks to find out what has happened to former NAMCOL TVET trainees who completed their training in 2017, 2018 and 2019 in the following trades: automotive mechanics, welding & metal fabrication, office administration and plumbing and pipe-fitting. The tracer study aimed to explore TVET graduates' employability and solicit their opinions on the quality and effect of training they received in light of their work experiences. The study objectives were to:

- explore the relevance and effectiveness of NAMCOL TVET programmes in relation to employability;
- establish challenges relating to programme delivery, and explore possible solutions;
- establish the employment status of TVET graduates;
- establish employers' opinions with regard to NAMCOL TVET graduates' abilities and capabilities;
- identify possible skills mismatch between training received and skills and knowledge employers require.

## **Literature Review**

TVET refers to "aspects of the educational process involving, in addition to general education, the study of technologies and related sciences, and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupants in various sectors of economic and social life" (UNESCO, 2006, p. 7). In addition to technical knowledge and aptitude, an increasing emphasis is on soft skills – communication, negotiation and teamwork (Hashim, 2015); social skills, communication, creative, innovative, problem solving, and critical thinking (Nugraha, Kencanasari, Komari & Kasda, 2020) and innovation skills, critical thinking skills, creativity skills, problem-solving skills, communication skills, and collaboration skills (Oviawe, 2020).

## **Vocational Education Challenges**

TVET continues to steadily gain popularity worldwide (Marope, et.al., 2015); it is highly considered in the strategic and operational priorities of nations as well as multilateral organisations such as the International Labour Organization (ILO, 2005) and UNESCO (Paryono, 2017). TVET is well promoted by UNESCO as an integral part of education (Rawashdeh, 2020) and an indispensable component of developing trainees' competences in their areas of specialisation (NTA, 2021). Regardless of its role

and contributions towards nations' economies, TVET providers and trainees continue to face challenges.

The first study, the TVET graduate survey, the first of its kind in Namibia (NTA, 2018) revealed the majority of TVET graduates remain unemployed, while smaller fractions are either contractually, or occasionally employed. Challenges included unemployment, and a mismatch between training skills and knowledge obtained and industry requirements. TVET graduate employers called for an enhanced industry collaboration and curriculum transformation and renewal to ensure training relevance. Further recommendations included, TVET institutions to adapt market-driven TVET as a method of developing high-skilled workers who can adapt to labour market demands. Lastly, the NTA (2018) study recommended an exploration through research to establish saturated TVET trades in the labour market to avoid prioritising and producing graduates in saturated market areas.

The second study by Wilson (2016) revealed some such challenges: a shortage of job attachment places, financial problems, inadequate training, and inadequate training equipment as well as recommendations to arrest such challenges. To arrest the challenge of the shortage of job attachment places, Wilson (2016) recommended that TVET institutions and providers develop partnerships with industries. Developing and enhancing partnerships with prospective TVET employers and industries was further corroborated by Rawashdeh (2019) who underscored the need for TVET providers to form effective partnerships with industries.

The third study on Ghana by Dasmani (2011) focused on the challenges of practical skills acquisition. The study revealed various factors that hinder the successful acquisition of practical skills by the trainees, *inter alia*, inadequate supply of instructional materials, large class sizes, inadequate training facilities, and weak linkages with local industries for hands-on-experience for both instructors and trainees. To arrest these challenges, Dasmani (2011) recommended that stakeholders should complement the government's effort in the provision of training resources; trainees should be encouraged to purchase their own basic tools; the establishment of effective industrial attachment schemes should provide trainees with the needed practical knowledge and skills, improvement in instructional quality through instructor training initiatives, and the establishment of a tool-acquisition scheme to assist trainees purchase and own basic tools.

### **A Summary Matrix of TVET Challenges and Mitigation Strategies**

The outcome of the reviewed literature on TVET challenges and mitigating strategies culminates in the summary matrix below:

**Table 1: TVET Challenges and Mitigation Strategies Summary Matrix**

<b>Challenges</b>	<b>Mitigation Strategies</b>
Unemployment	<ul style="list-style-type: none"> <li>• enhanced industry collaboration</li> <li>• curriculum transformation and renewal in order to ensure training relevance.</li> <li>• TVET institutions to adapt market-driven TVET</li> <li>• exploration through research to establish saturated TVET trades in the labour market</li> <li>• TVET institutions and providers to develop partnerships with industries.</li> <li>• the establishment of effective industrial attachment schemes that will provide trainees with the needed practical knowledge and skills,</li> </ul>

Skills mismatch	<ul style="list-style-type: none"> <li>enhanced industry collaboration</li> <li>curriculum transformation and renewal in order to ensure training relevance.</li> <li>TVET institutions to adapt market-driven TVET</li> <li>TVET institutions and providers to develop partnerships with industries.</li> <li>the establishment of effective industrial attachment schemes that will provide trainees with the needed practical knowledge and skills,</li> <li>improvement in instructional quality through instructor training initiatives,</li> </ul>
Shortage of job attachment places/ weak linkages with local industries for hands-on-experience for both instructors and trainees.	<ul style="list-style-type: none"> <li>enhanced industry collaboration</li> <li>TVET institutions to adapt market-driven TVET</li> <li>TVET institutions and providers to develop partnerships with industries.</li> <li>the establishment of effective industrial attachment schemes that will provide trainees with the needed practical knowledge and skills,</li> </ul>
Inadequate training,	<ul style="list-style-type: none"> <li>enhanced industry collaboration</li> <li>curriculum transformation and renewal in order to ensure training relevance.</li> <li>TVET institutions to adapt market-driven TVET</li> <li>the establishment of effective industrial attachment schemes that will provide trainees with the needed practical knowledge and skills,</li> <li>improvement in instructional quality through instructor training initiatives,</li> </ul>
inadequate training equipment/ inadequate supply of instructional materials,	<ul style="list-style-type: none"> <li>stakeholders should complement the government's effort in the provision of training resources</li> <li>trainees to be encouraged to purchase their own basic tools;</li> <li>the establishment of a tool-acquisition scheme to assist trainees purchase and own basic tools.</li> </ul>
Practical skills acquisition	<ul style="list-style-type: none"> <li>enhanced industry collaboration</li> <li>curriculum transformation and renewal in order to ensure training relevance.</li> <li>TVET institutions to adapt market-driven TVET</li> <li>TVET institutions and providers to develop partnerships with industries.</li> <li>the establishment of effective industrial attachment schemes that will provide trainees with the needed practical knowledge and skills,</li> <li>the establishment of a tool-acquisition scheme to assist trainees purchase and own basic tools.</li> </ul>

### Theoretical Approach

The study is underpinned by Prosser's Sixteen Theorems on vocational education (Prosser & Quigley 1949). The focus is on one the Sixteen Theorems, "vocational education, will be efficient if the environment in which students are trained is a replica of the environment in which they will work" (Prosser & Ougley, 1950, p. 3). Despite the time that has elapsed, Prosser's theorems remain valid especially to this study because the theoretical principles provide solutions to TVET challenges identified in the literature, a mismatch between training skills and knowledge obtained and industry requirements (NTA, 2018), inadequate training (Wilson, 2016), and practical skills acquisition (Dasmani, 2011; Holande & Mac, 2009) amongst others. Vocational education should be market driven (NTA, 2018); an emphasis in Prosser's theorems. The theoretical principles of his theorems underscore the notion of skills transfer, and the replication of the environment of work (Camp & Hillison, 1984), i.e., to ensure that training environments are identical to that of the workplace. Training environments identical to workplace environments reduce skills mismatch as trainees perform actual jobs and not

pseudo jobs (Prosser, Moore, 2003). Trainees would be equipped and ready for work with little adjustment once in the workplace (Prosser & Quagley, 1949). Prosser's theorems provide a lens for understanding how vocational education should operate as well as overcoming the skills mismatch problem commonly encountered in vocational education.

## **Methods**

The tracer study adopted a mixed method design (Creswell & Clark, 2017) of using a combination of qualitative and quantitative data collection and analysis approaches and techniques. Through the adopted research design, the study provides answers to the central question: What happened to former NAMCOL TVET trainees who completed their training in 2017, 2018 and 2019 – specifically graduates' employment profile and employers' opinions on their job abilities and capabilities. Data were collected through an on-line questionnaire (McMillan & Schumacher, 2010).

The population consisted of former NAMCOL TVET trainees who completed their training in 2017, 2018 and 2019 in the following trades: automotive mechanics, welding & metal fabrication, office administration and plumbing and pipe-fitting. Employers who employed these graduates also formed part of the study.

### **Data Collection and Analysis Procedures**

A WhatsApp group was created and all graduates who completed their training from 2017-2019 and who had Smartphones were added to the group. Questionnaires, for both former trainees and former trainees' employers, were created using Microsoft (MS) Forms, a web application that creates surveys, among others. The questionnaires for graduates and employers were comprised of both closed and open-ended questions. Open-ended questions, mostly 'why' and 'how' questions, sought clarity on some issues.

A questionnaire link was shared with the group. Those without Smartphones were contacted telephonically by a data entry clerk who completed the questionnaire on their behalf. The questionnaires were developed around the key variables of investigation, namely, employment status of TVET graduates, relevance and effectiveness of learning at NAMCOL, challenges encountered by trainees while studying at NAMCOL and employer satisfaction with regard to Vocational Training graduates' skills and performance levels, including skills mismatch. The questionnaire remained active online for two months (September to October). A total of forty-nine (49) respondents completed the questionnaire. To identify employers, former trainees were also asked for details of their employers. This did not yield much data as some were either self-employed, or unemployed. Similarly, the same data collection procedures were followed.

Thematic content analysis (Neuendorf, 2018) was employed to analyse qualitative data; and Microsoft (MS) Forms assisted with the analysis of quantitative data. MS Forms automatically analyses data and organises it visually into graphs and charts, making data interpretation easier.

## **Findings**

### **Graduates' Employment Status**

One central aspect of this tracer study was to establish former TVET trainees' employment status. The outcome was displeasing as the majority (65%), at the time of data collection, were not employed. Reasons why they were still not employed included, among others, lack of job opportunities, and

others attributed this lack to the COVID-19 pandemic; others were still studying, and some were still searching for employment opportunities. A few of them worked as contract workers and their contracts had elapsed. In the absence of jobs, the majority of former TVET trainees earned a living by doing part time jobs at people's homes and garages, others engaged in various entrepreneurial activities, some claimed they had salaries but they were reluctant to disclose sources; meanwhile others were desperate.

The remaining 45% was employed, though it took a long time for them to find employment. More than two thirds (69%) took between one and two years to find employment; 23% took between six months to one year to find employment; and a handful (8%) was employed in less than six months. Difficulties encountered in looking for employment varied. The majority (38.2%) cited 'limited employment opportunities' in their area of specialisation. This was followed by 'lack of experience' (31.6%). The least (2.6%) was 'employers not interested in my area of specialisation'. The remaining 5.3% of the respondents cited other reasons such as favouritism: "Since I don't have connections with employer... because nowadays jobs are given through connections". Some cited skill mismatch: "Employer tested me on something I didn't learn at NAMCOL". Others cited financial constraints to fund job related selection processes.

### **Graduates' Views about NAMCOL TVET**

#### ***Why former Trainees Studied at NAMCOL***

When asked of why they ended up studying at NAMCOL, the majority (90%) of the respondents indicated that NAMCOL was their only preferred institution. They considered NAMCOL TVET as best for furthering their studies. Others found NAMCOL appropriate for continuing with Level 3 after attaining Level 2 with other service providers. To some, the awarding of financial assistance, and the close proximity between their residences and the College were pulling factors. Fee affordability was another reason that attracted students to solely apply for NAMCOL TVET. Generally, NAMCOL was highly appreciated by many, and as they had hope of better careers and futures. Here is an account to that effect:

NAMCOL has been one of the biggest institutions for opening leaning to which everyone would get a chance to upgrade their studies/grades, thus I applied with a believe-for a better career course.

Because its cheap and affordable to me as a vulnerable person...I am very happy now because I completed my studies without any obstacles during my studies time.

Most graduates from NAMCOL have better futures as well as Grade 10 and Grade 12 repeaters did it through NAMCOL.

The remaining 10% applied elsewhere at first and only applied at NAMCOL after they were rejected. Reasons why they were rejected included not meeting entry requirements, unavailability of space on the course, while others did not know why their applications were rejected.

#### ***Study Provisions at NAMCOL***

When asked to rate the study provisions at NAMCOL, theory classes were rated the highest (98%); followed by consultations with instructors (95.8%), and in third place, unit standards (81.6%). The

study provision rated the lowest was availability of training materials in the library with 63.3%. Overall, it is worth noting that the majority of the participants were satisfied with study provisions.

### ***Challenging Aspects while Studying with NAMCOL***

An open-ended question was posed to respondents about the challenges they encountered while studying at NAMCOL. The responses were coded and analysed, and common patterns emerged and these were quantified. The majority (64%) of the trainees indicated that they encountered challenges while studying with NAMCOL. The majority (22%) of those facing challenges encountered financial problems; whereas 20% were discontent about inadequate equipment, tools and materials. This was followed by 10% who experienced some delays with the supply of equipment, tools and materials. Finding institutions for internship was cited by some 4%, and the rest of the challenges were not that common among former trainees. The remaining 36% of the respondents indicated that they did not face any challenges.

### ***Relevance and Adequacy of Training***

Former trainees were asked to rate the relevance and adequacy of the TVET training they received vis-à-vis their ability to perform the job they were trained for. The majority (90.4%) of the respondents felt that the training was very relevant and adequate. However, a handful (4.1%) of the respondents felt otherwise. They were of the opinion that the training they underwent was irrelevant, mainly, due to lack of employment opportunities in their area of specialisation. Here is an account to that effect:

Because I am not working as a welder; I am doing something different from what I studied.

Because I could not find a job in my area of specialisation which is Automotive Mechanics.

Participants were asked to agree or disagree with the statements on the adequacy of NAMCOL vocational training. The outcome is presented in Table 2 below.

Furthermore, respondents were asked to rate themselves on some aspects of the training they received. The majority (89.9%) of the participants confidently felt that they could easily be trained to improve their level of skills. This was followed by 81.7% who agreed they were confident that the skills they acquired at NAMCOL vocational training was adequate to establish their own company/business, and 61.3% felt that the training they had adequately prepared them for work – implying that they were equipped with skills and knowledge required for work. The remaining indicators scored less than 50% popularity, with the lowest being one that gauged employer satisfaction, with only 38.8%. However, it is worth noting that, 40.8% who indicated ‘not sure’ could be the unemployed since they could not predict.

The former trainees’ satisfaction was again demonstrated by the responses on whether they would recommend the training they underwent to other people. An overwhelming ‘yes’ response of 98% was received. Only 2% of the respondents said ‘no’ because one of them felt that it was worthless as there were no job opportunities in some trades. Here is an account of a welding and metal fabrication former trainee:

Because it waists [sic] someone’s time and the industry is full of unemployed students of that trade.



### *NAMCOL TVET Components Needing Improvement*

As regards NAMCOL TVET components needing improvement, generally the outcome shows that the majority of the components needed improvement. Table 2 below shows a reasonable number of respondents who suggested 100% improvement of some components.

**Table 2: Components of NAMCOL TVET Needing Improvement**

<b>The extent of improvement required</b>	<b>100%</b>	<b>75%</b>	<b>50%</b>	<b>25%</b>	<b>0%</b>
Knowledge (Theory)	36.7	26.5	4.1	30.6	2
Training in practical skills	36.7	30.6	8.2	24.5	0
Industrial attachments	24.5	20.4	28.6	16.3	10.2
Course content	20.4	44.9	18.4	16.3	
Instructional manuals	28.6	36.7	10.2	20.4	4.1
Textbooks	38.8	16.3	12.2	20.4	12.2
Workshop equipment	24.5	34.7	50	18.4	
Teaching and delivery methods	37.7	30.6	10.2	26.5	
Instructor's theoretical knowledge	40.8	20.4	4.1	32.7	2
Instructor's practical skills	38.8	26.5	4.1	26.5	4.1
Increase duration of training	20.4	20.4	34.7	22.4	2

The following components topped the list: instructor's theoretical knowledge, instructor's practical skills, textbooks, training in practical skills, knowledge (theory), and teaching and delivery methods. Despite the fact that the extent of improvement required varied per component, generally, the majority of the components identified in the table were deemed by the participants as needing to change. Only a very small percentage of participants was satisfied with some components — the highest being textbooks, where 12.2% indicated 0% improvement was required.

Some components needing improvement were further reiterated in responses to an open-ended question posed to former TVET trainees to further gauge their opinion on TVET services and areas of training needing improvement.

*Organising job attachments for trainees* appeared common to most participants. Due to the challenge of finding institutions for job attachment, former trainees felt that the College should find such platforms for them.

*Expanding levels* as well appeared common to most of them. Participants felt that the College should increase levels from level 3 to 4 across all trades. They indicated that they aimed at continuing level 4 with NMACOL, however, its absence forces them to apply at other institutions to continue with their trades.

*Providing trainees with resources* also appeared common. ICT gadgets cited included laptops and computers. Other needs included sufficient workshop equipment, and materials. They felt that needed equipment and materials did not sufficiently respond to their needs, i.e., they were not enough for all trainees.

*Timely supply of equipment, tools and materials* was another area that former trainees felt needed improvement. Former trainees were in dismay that during their training, some equipment, tools and materials reached the College very late and this was an inconvenience to them and in some ways affected assessment outcomes.

*Expansion of workshop facilities*, former trainees felt, also needed attention. The participants felt that the workshops should be expanded to accommodate more trainees. This, they felt, would increase the intake across trades.

*Enhancing the time for practical sessions* came out strongly. Former trainees were discontent that during their training, focus was more on theory than practice. They argued that TVET should expose trainees more to skills than theory or aim to strike a balance.

*The quality of instructors in terms of knowledge and skills* was also attested to by some participants. They called upon NAMCOL to always ensure that they appoint well qualified and professional instructors with appropriate and relevant knowledge and skills.

*Hiring former trainees for (small) TVET related jobs* was also suggested by some participants. They argued that such opportunities would help former unemployed trainees get a little income.

*Lastly, building a hostel* was another suggestion. Participants bemoaned how they struggled financially to find affordable accommodation as well as money for transport to and from the College. Providing accommodation to trainees, they felt, would alleviate all financial struggles most trainees encounter.

Similarly, some issues were again reiterated when asked for recommendations, and these are presented in Table 3 below:

**Table 3: Respondents' Recommendations**

<b>Suggestion</b>	<b>Representative Voice Extract</b>
To extensively market NAMCOL TVET	“NAMCOL must learn a way to expose us at companies and at government institutions that require our skills, companies really want employees but they find it difficult to take us since they don't know us... some questions are asking specific to people who are currently employed but I just answered them because they are compulsory to be answered even though I'm unemployed” “I suggest that TVET must start going around industrial area to introduce its vocational since most of the companies does not know that NAMCOL do offer vocational courses, and that's the reason we are not getting job, company are considering NIMT students first because they have introduced their vocational at the beginning”
To put more emphasis on practice than theory	“Trainees doing level 2 should spend more time on practical than the theory”.
To find job attachments for students	“NAMCOL should find Job attachments for the trainees”.
To increase the number of instructors	“NAMCOL should employ more Instructors, especially that there is morning and afternoon classes. Instructors are sometimes exhausted”
NAMCOL to consider former trainees for vacancies at NAMCOL	“To look for old students when there is post in NAMCOL”
NAMCOL should introduce Level 4	“Level 4 or certificate in vocational instructor is needed at NAMCOL, just to be on an advanced step towards other Vocational training centres at large”. “I want to come back to NAMCOL if there is level 4”

NAMCOL should make job recommendations/referrals	“NAMCOL should always recommend job opportunities to trainees, if there is any”
Workshop (space) should be expanded to increase enrolment	“NAMCOL should extend the workshop, to accommodate more trainees”
Equipment, tools and materials should be supplied on time	“Time management and all training tools and equipment on time”

### **Former Trainees’ Appreciations of NAMCOL**

It emerged vividly that some former trainees held NAMCOL in high regard and considered it the best college. They appreciated NAMCOL in a number of ways and this is evident in the extracts below:

NAMCOL should keep up the good work and I am thankful for the knowledge I received from NAMCOL.

NAMCOL should aim high because it’s the best college.

I want to thank NAMCOL for giving me an opportunity to study and I strongly want to come back if there is level 4.

NAMCOL should keep up the good work.

The next section presents employers’ views with regard to NAMCOL TVET graduates.

### **Employers’ Views about NAMCOL TVET Graduates**

#### *Employers’ Profile*

Former TVET trainees were offered employment in various industries, such as motor mechanics/car repair, construction, agriculture and production, among others. The employers’ positions that participated in this study varied: some were founders and owners of businesses, others were managers, office administrators, operators, centre managers and foremen/women.

#### *Level of Training for Employment*

Table 3 above displays responses on the level of training at which former trainees were employed. More than half (55.6%) of the employers indicated that they employed them at Level 3. This was followed by 33.3% who considered other levels, and the lowest were those that employed Level 2 graduates. None of the employers employed Level 1 former trainees.

#### *Level of Competence of NAMCOL TVET tTrainees*

Employers were asked to rate the level of competence of NAMCOL former TVET trainees in performing their assigned tasks; 87.5 % of employers rated them very good and 12.5% rated them ‘good’ at assigned tasks. None of the employers rated them as fair or poor. Coupled with this was a question on former trainees’ ability to work independently. All the employers (100%) agreed that former trainees needed no supervision and guidance; they worked independently. Furthermore, all employers were of the view that former trainees met the demands of the job market.

### ***Adequacy of Former TVET Trainees***

This question gauged employers' satisfaction with regards to the conduct and attitude of former trainees towards some variables as shown in Table 3 above. In response, all employers were satisfied with former trainees in terms of teamwork, interpersonal communication, job commitment, job knowledge, innovation and creativity, as well as their willingness to do the job; with 'willingness to do the job' receiving the highest number of employers who strongly agreed with the statement. None of the employers disagreed with the statements.

### ***Induction of Newly Appointed Employees***

When asked whether they (employers) inducted their newly appointed former trainees, all employers (100%) indicated that they always inducted them (former trainees).

### ***Skills Mismatch between the Job Demands and the Skills of Trainees***

The outcome of the question that gauged employers' views on skills match deviates from the established pattern so far. Generally, employers were satisfied with the skills, knowledge and conduct of former trainees. Hence, it is logical to deduce that the skills mismatch referred to by the majority (75) could be those of former trainees employed outside their area of specialisation. When asked about the type of skills and/or knowledge former trainees needed, the majority of the employers did not think that the former trainees lacked some skills and/or knowledge. Only a few of them cited, among others, ICT related skills. Similarly, on areas needing improvement, the majority indicated that there were no areas needing improvement. However, others recommended for more job attachments to gain more experience and to some, the driving skill seemed important.

### ***Vocational Training Courses Needed***

As displayed in Table 3 above, a significant number (36.4%) of the employers suggested electrical courses, followed by 27.3%, diesel mechanics, and carpentry, 18.2%. First and counselling courses each received 9.1% support.

## **Discussion of Findings**

NAMCOL TVET programmes target existing NAMCOL trainees, unemployed youth and adults, and artisans seeking to upgrade their skills. The fact that the majority of the 2017-2019 cohorts chose to apply to NAMCOL only, is testimony to NAMCOL's fulfilment of its mandate. NAMCOL is perceived as an institution that brings back hope to people who might have lost it, as acknowledged by one participant, "NAMCOL has been one of the biggest institutions for opening leaning to which everyone would get a chance to upgrade their studies/grades, thus I applied with a believe-for a better career". They generally see a bright future with NAMCOL. Affordable fees seem to also play a role in attracting people to study with NAMCOL.

The rating of almost all study provisions at NAMCOL, including other provisions, as 'good' to 'very good' is inspiring. However, although 63.3% is not bad in comparison, to other study provisions, the availability of training materials in the library seems to need attention. The inadequacy and untimely supply of training equipment and materials was identified as one of the major challenges former trainees encountered while studying with NAMCOL. This, as Dasmani's (2011) study revealed, affects practical skills acquisition as instructors, without training materials, end up focussing on theory only.

Focusing more on theory than practice for technical and skill-based programmes was pointed out by former trainees as one area needing improvement. Lack of practical skills is likely to lead to ineffective and inefficient training (Dasmani, 2011) as, without hands-on experience and adequate preparation for the job market, trainees encounter workplace/on the job-related challenges (Damani, 2011). Prosser's principle of making training environments a replica of the environment in which they will work (Prosser & Ougley, 1950), and making vocational education skills practice-based, should overcome this dilemma.

Job attachment is part of the TVET curricula and also a requirement by NTA for trainees to be attached to an employer for a specified period of time to gain practical experience (NTA, 2021). Despite its indispensable role, not every trainee gets a job attachment opportunity. This was revealed as one of the most common challenges former trainees encountered, and is well supported by the literature (Wilson, 2016; Zulu & Mutereko, 2020). Similarly, a current review, conducted by Dondofema, Mwenje, and Musemwa (2020) revealed some benefits of industrial attachment. Authors whose work was reviewed viewed job attachment as: a 'useful linkage' to the industry of work; exposure to the real world of work; an opportunity that helps put theory into practice and enable acquisition of technical skills; inculcates in trainees a positive attitude towards work, relevant work experience and necessary skills; builds confidence in trainees, and provides prospects to link with professionals in the field; and provides an opportunity for trainees to market themselves. NTA (2021) puts more emphasis on job attachment as it is viewed as increasing job prospects for future employment (NTA, 2021).

Hence, the need for all trainees to get job attachment opportunities and augment their job knowledge and skills. Amidst all these benefits, this need justifies why former trainees and employers in this study urge NAMCOL and other providers to find ways to enhance their exit strategies for assisting trainees find placements for internship; since venturing to do that by themselves, they claimed, has not been a success. Conversely, if TVET institutions adopt a market driven approach and ensure that training workshops and rooms replicate that of the workplace, and not pseudo works (Prosser & Ougley, 1950), graduates could be confident for the workplace in the absence of job attachment opportunities.

As the study revealed, the majority of former trainees in this study were not employed. Among the reasons cited why they were still not employed is lack of job opportunities. The basic principle of vocational education is understood as an opportunity for self-employment and job creation. If the perception of producing for the job market/training for work dominates vocational education trainees, this basic principle is overshadowed. This problem is further demonstrated, in this study by a very small number (18%) of the employed who were self-employed, and the limited number (2) of former trainees who created their own companies/employers. The duration (one to two years) it took for the majority (69%) to find employment also bears testimony to this. Grierson (1997) makes a substantive contribution to this dichotomy. He reasons that vocational training should focus on enterprise-based training that would impart self-employment skills to trainees. He further exacerbates this by arguing that trainees further need resources and opportunities.

As regarding the relevance of the training vis-à-vis the ability to perform the job, the majority of former trainees who were employed rated the training they received as adequate to very relevant. Only a handful found the training irrelevant. However, qualifying reasons advanced had nothing to

do with the quality of the training but were mainly due to the lack of employment opportunities — a situation that forced some of them to take up jobs outside their specialisation, as one stated, “Because I am not working [as] a welder; I am doing something different from what I studied”. One can extrapolate that the former trainee’s response would have been positive if he/she was working as a welder. Furthermore, the relevance of the training received can be justified through the majority of the former trainees who almost unanimously (98%) attested that they would recommend the NAMCOL TVET training to other people. Similarly, the reasons advanced by a handful (2%) who did not think they could recommend the training to someone else was because they were outside the scope of their training. Some felt because they haven’t found jobs that it was a worthless endeavour — implying that they found it not worth doing if one gets no employment after graduation.

In tandem with the relevance of the training, former trainees felt adequately trained. Support of adequacy was evident across all indicators provided, among others, “I can establish my own company /business; my training adequately prepared me for work; I find myself to be very effective in my current job; and my employer is satisfied with my level of knowledge and skills”.

These statements are a direct testimony; for instance, if one can establish one’s own business, it testifies to the level of skills and knowledge acquired. This is corroborated by Chabongwa’s (2018) study that revealed, among other challenges, a lack of skills to operate one’s own business as a hindrance to some graduates in this study. Chabongwa (2018) further revealed lack of capital as another obstacle, and recommended governments come up with funding strategies to allow graduates to apply their skills. Similarly, if employers are satisfied, as discussed below, it, as well, affirms to the adequacy of the training received.

Pertaining to employer satisfaction, it became clear from the responses that employers were satisfied with the level of competence of former TVET trainees, and that they worked independently, and overall, they found former trainees meeting the demands of the job market. They applauded former trainees for their general conduct at work — including teamwork, interpersonal communication, job commitment, and knowledge, innovation and creativity, as well as their willingness to do the job. Teamwork, Hashim (2015) asserts, is one of the important soft skills for getting a job. This, he posits, can be gauged through the levels of interpersonal relations and communication, which former trainees seemed to possess. On this basis, as Hashim (2015) postulates, TVET providers should emphasise these soft skills during training for better job opportunities. Hence, TVET providers should produce graduates with soft skills, such as: attitude, behaviour, communication, critical thinking and problem-solving, teamwork, learning and information management, entrepreneurship, ethics, morality, professionalism and leadership (Hashim 2015).

Another important dimension of the findings worth discussing is the notion of induction. All employers in the study indicated that they inducted their newly appointed former trainees. Employers should be commended for this as research has shown that induction has a number of benefits including, reduction of employee turnover, integration of new employees into the culture of the company, augmentation of operational efficiency (Baddapuri, 2016), better understanding of employee’s role, quickly settling into the new role, feeling accepted and respected, and having a better understanding of company processes, policies and procedures (Employeesure Guide, n.d). Furthermore, arguing this point in pursuant of Prosser’s theorem one finds reasonable grounds to

argue that graduates who were trained in replicated job settings needed ‘little adjustment’ (Prosser & Quaigley 1949).

Among components of NAMCOL TVET training needing ‘total’ improvement and revamp, instructors’ knowledge and theory, as well as instructors’ practical skills appeared common to many. The importance of well qualified teachers is well documented (Becker & Spöttl, 2017). Becker and Spöttl (2017) noted that TVET instructors are recognised and instrumental to the success of TVET programmes, and the acquisition of competencies and skills by trainees is mainly dependent upon instructors. Hence, if the quality of instructors is poor, this crucial role is compromised. One way to overcome this challenge, Ayonmike, Okwelle and Okeke (2015) assert, is to re-train instructors as well as strengthening TVET quality assurance best practices.

## **Conclusion**

The study has revealed that the majority of former trainees were content with the training they received in terms of relevance and adequacy. Similarly, the majority of the employers that participated in this study corroborated with former trainees’ views. They considered them competent and adequately trained – they generally felt that former trainees did not lack any knowledge and/or skills needed by the job market. The majority of former trainees are unemployed, and those employed are mainly in private companies; and a significant number are employed outside their area of specialisation – leading to skills mismatch. NAMCOL former trainees encountered some challenges while studying with NAMCOL such as financial problems, untimely supply of equipment and materials, finding institutions for job attachment, among others. There were some NAMCOL TVET components needing improvement, namely, theoretical knowledge, training in practical skills, textbooks, teaching and delivery methods, instructors’ theoretical knowledge and practical skills. Although relatively lower as compared to the above components, some participants felt that industrial (job) attachments, instructional manuals and workshop equipment needed to improve. The absence of Level 4 has forced some former trainees to continue their studies with other institutions, inside and outside the country, a situation, some described, would not have happened if NAMCOL had Level 4 and upwards. Hence, the call to NAMCOL to expand all trades beyond Level 3.

## **Recommendations**

In view of the findings and conclusions, the following recommendations are advanced:

- Improve the following components of NAMCOL TVET training: knowledge (theory), training in practical skills, textbooks, teaching and delivery methods, instructors’ knowledge and theory, as well as practical skills;
- The College should organise job attachments for trainees – former trainees felt that the College should find such platforms for them;
- Expand levels appeared common to most of them. Participants felt that the College should expand levels beyond Level 3 across all trades;
- Provide trainees with resources such as ICT gadgets (laptops and computers), sufficient workshop equipment, and materials;

- Timely supply of equipment, tools and materials was another area that former trainees felt needed improvement;
- Expand workshop facilities. The participants felt that the workshops needed to be expanded to accommodate more trainees;
- Enhance the time for practical sessions came out strongly. Former trainees were discontent that during their training, focus was more on theory than practice;
- The quality of instructors in terms of knowledge and skills was also attested to by some participants. They called upon NAMCOL to always ensure that they appoint well qualified and professional instructors with appropriate and relevant knowledge and skills;
- Hire former trainees for (small) TVET related jobs was also suggested by some participants;
- Build a hostel — participants bemoaned how they struggled financially to find affordable accommodation as well as money for transport to and from the College;
- Market extensively NAMCOL TVET in order to market the graduates;
- Focus TVET curricula and put more emphasis on practice than theory; make TVET market driven;
- Increase the number of instructors at the College.
- Consider former trainees for small TVET related jobs at NAMCOL
- Make job recommendations/referrals through NAMCOL.

**Acknowledgement:** The completion of this study wouldn't have been successful had it not been for the assistance of the following: my colleagues for their endless support and cooperation; the ICT technician for setting up a WhatsApp group that was very instrumental in the data collection for this study; the former NAMCOL TVET trainees (2017-2019) and all TVET 2017-2019 employers who participated in this study for availing the time to complete the questionnaire or for cooperating with the data capturing clerk. My last special thanks go to the Data Capturing Clerk for her dedication and commitment to the task and for her professional conduct throughout the data collection phase.

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Cite this paper as: Sichombe, B. (2022). Tracer study of 2017-2019 NAMCOL TVET graduates. *Journal of Learning for Development*, 9(3), 545-562.