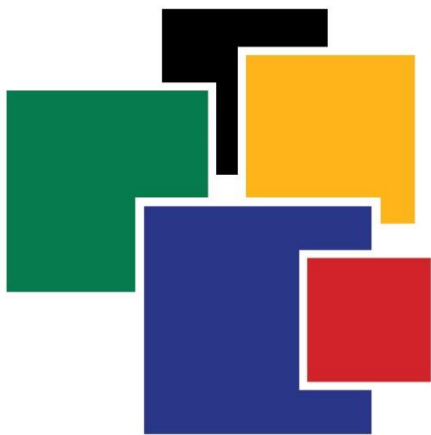




Education, Training and Development Practices Sector Education and Training Authority



# ETD Technical Education and Vocational Training Colleges 2022 – 2023

November 2021

AT THE CUTTING EDGE OF SKILLS DEVELOPMENT

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## EXECUTIVE SUMMARY

This study explored the skills development needs and practices of the employees of the public sector TVET colleges as a sub-sector of the Education, Training and Development Practices - Sector Education and Training Authority (ETDP SETA). There are 50 public TVET colleges with 364 registered campuses across the country. KwaZulu-Natal has the largest number of TVET colleges (9), while the Northern Cape has the least number of colleges (2) followed by the North West Province (3) and Mpumalanga Province (3). On average, the remaining provinces have between 4 and 7 colleges per province.

The economic performance of the TVET colleges sub-sector is mainly reliant on government funding and does not generate its income. Although South Africa subscribes to a funding framework in which costs are shared among the beneficiaries of the higher education sector (mainly government and students), the shrinking availability of funds for TVET colleges implies that public TVET colleges would need to consider alternative revenue-generating streams.

Various factors drive change within the TVET sector. The key skills change drivers have the following implications for the sub-sector:

**The Impact of COVID-19 on the ETD Sector:** TVET colleges have to seek strategic ways to respond to the impact of COVID-19 on jobs and operations. There is an urgent need for reskilling and up-skilling of the workforce.

**The Fourth Industrial Revolution:** SETA has appointed the University of Johannesburg (one of the leading universities in the space of 4IR in South Africa) to investigate the impact of 4IR in the ETD sector.

**Adequate Supply and Professionalization of TVET Workforce:** There is a need for funding to mathematics, science and technology of workplace experience for teacher students.

**Adaptable Teaching System:** Educators at TVET colleges need to be trained to deal with diverse students. Lecturers will need to be coached in empathy and provide additional support to students.

The extent and nature of skills demand vary within and across the TVET colleges sub-sector. This data indicated that various reasons had caused some vacancies to be challenging to fill.

One of the reasons was that bureaucratic procedures that have to be followed have resulted in some vacancies remaining unfilled for long periods. To fill some vacancies, colleges need approval from the College Council and DHET, delaying the process. Many colleges froze the recruitment process during the lockdown as holding interviews was impossible. The lecturing vacancies are challenging to fill primarily because of remuneration.

TVET colleges compete for the same skills with the private sector. The private sector has more flexibility in negotiating packages to meet the applicant's expectations. Among the lecturing staff, these were identified as the gaps: lack of teaching qualifications, lack of digital knowledge, lack of exposure to pastel. TVET colleges are actively engaging lecturing staff in programmes to acquire professional qualifications and motivating them to get their teaching qualifications for those who are not qualified. Most identified 'Hard to fill vacancies were for technical engineering subjects and mathematics lecturers. Reasons given for difficulties in filling the finance related vacancies were equally spread across poor remuneration, lack of relevant qualifications and lack of relevant experience. Among the management and HR staff, training in labour relations is needed, report writing skills are required and project management among others.

There is evidence that through the ETDP SETA, TVET colleges have embraced various types of partnership models and continue to explore new partnerships. This has, in some instances, assisted the TVET colleges in improving their performance and meeting their mandate. There is a need to explore more partnerships and review those long-term partnerships to find out if they are working in the best interest of the sector.

Based on the findings, the study recommends the following skills development priorities that are informed by the sector-based and national priorities and pivotal interventions.

Actions Required	Recommendation
Improve Data Collection	There are some concerns about the completeness and consistency of the data supplied in the TVET College WSPRs. Some clarification is needed in regard to use of the OFO codes if these are to further facilitate analysis of the data. In general, the manner in which the WSPs have been completed seems to represent an appropriate view of the college sector. The most common confusion, which is easily overlooked, was the use of OFO code 2015-231101 – University Lecturer rather than 2015-232130 – Post School Educator, with the occasional suggestion of ‘College of Education Lecturer’ as alternate title. Another confusion, which is symptomatic of the dual qualification

Actions Required	Recommendation
	<p>requirements of lecturers in this sector, is the smattering of listings of need for professional or technician occupations such as Mechanical Engineering Technician, Water Plant Operator, Foundry Moulder, and Metal Fabricator. In most cases where these were listed, it is clear that the college needs qualified people to teach the skills related to these occupations, rather than to perform the skills as such.</p> <p>In a few instances, the WSP templates were completed in a way that indicated that they were misunderstood, or not taken seriously. For example, one college indicated 2015-263402 - Educational Psychologist as a hard to fill vacancy, with specialisation including Diesel Mechanic, Mechanical Engineering/ Welder.</p>
<p>Ensuring Quality Teaching and Learning in TVET Colleges</p>	<p>A more finely grained categorisation of data on lecturer qualification status would allow more targeted CPD provision. In particular, it would be helpful to disaggregate the data to show numbers of lecturers who are:</p> <ul style="list-style-type: none"> <li>• Academically qualified but needing only workplace experience to achieve a professional qualification</li> <li>• Having an N6 Certificate and needing workplace experience to attain their National Diploma</li> <li>• Qualified artisans with industry experience and/or lecturing experience</li> <li>• Qualified artisans without industry experience and/or lecturing experience</li> <li>• In possession of other vocational qualifications.</li> </ul> <p>Improving the performance of lecturers in TVET colleges. It is essential to increase the number of suitably qualified lecturers in vocational education and enhance skills development through relevant programmes, including workplace experience, to ensure that professional development is maintained and adhered to.</p>
<p>Ensuring effective and efficient service delivery in colleges</p>	<p>Improving administration, management, leadership, governance, and research capacity to support teaching and training professionals. This includes training in relevant programmes for national and regional officials and managers in colleges. The role of research capacity is critical for contributing towards a knowledge-based economy. There is a need to increase the number of researchers and research managers through partnerships to ensure sufficient skills within and across the sector.</p>
<p>Supporting the transformation of the Post Schooling and Education and Training sector</p>	<p>Ensuring increased access, success and progression within TVET colleges. The key to the transformation of the PSET sector is developing and supporting youth development programmes to ensure that youth employability and empowerment are achieved to reduce unemployment and address issues of poverty and inequality.</p>

TVET colleges have the potential to make a meaningful impact on the economy of the country through the delivery of high-quality education.

## RESEARCH PROCESS AND METHODS

The study explores the skills development needs and practices of one of the sub-sectors of the Education, Training and Development Practices - Sector Education and Training Authority (ETDP SETA), namely Technical Education and Vocational Training (TVET) Colleges. The research will inform the development of the Skills Sector Plan (SSP). The research focuses on the Economic Sector Profile, Key Skills Change Drivers, Occupational Shortages and Skills Gaps, Sector Skills Priority Actions specific to TVET Colleges. To generate the requisite data, the research Partnerships, as well as Strategic Skills Priority Actions was based on a mixed methods design, combining the advantages of both qualitative and quantitative research approaches. Using quantitative methods, the research conducted a cross-sectional survey to establish the quantitative dimensions of skills development needs and practices of the TVET Subsector. The qualitative approach (document review and open-ended questions) complimented the survey, by establishing the story behind the numbers. Through qualitative methods, the aspirations, perceptions, and experiences of TVET Colleges with regards to skills development needs and practices were established.

Both qualitative and quantitative data was collected through an electronic self-administered questionnaire, follow-up interviews and document review. A standardized questionnaire (Annexure 1) with 20 questions divided into five sections was sent to all 50 public TVET Colleges. The questionnaire was designed using QuestionPro, an online survey software. Initially, the individuals who completed the Workplace Skills Plans Report (WSPR) at the TVET Colleges were contacted to confirm if they wanted to participate in the research. It was very difficult to contact everyone identified in the WSPRs because almost all personnel were working from home and the research team did not have access to their mobile numbers. Thereafter, the team found alternate contacts at each TVET College, and a link was emailed to the parties that consented to be part of the research. A follow-up email and telephone calls were made to assist the representatives in completing the questionnaire and to provide clarification if required. The initial intention of the follow-up interview was to explain the context and the process of completing the questionnaire, as well as to conduct interviews on aspects not necessarily or sufficiently covered in the survey. However, contacting and getting respondents to accept interviews proved to be a challenge, so much so that the telephone follow-ups only served the purpose of encouraging participants to be part of the study and to

complete the questionnaire with them. Out of the 50 public colleges that could have taken part in the research only 21 colleges agreed to be part of the study. As evident from Figure 1 below, only 15 Colleges completed the questionnaire in full while 6 colleges decided to abandon the process. This resulted in a 95% confidence level and a 21% margin of error. While the result is not ideal, the research team did reach a point of data saturation in the qualitative data provided by the 15 colleges that completed the questionnaire.

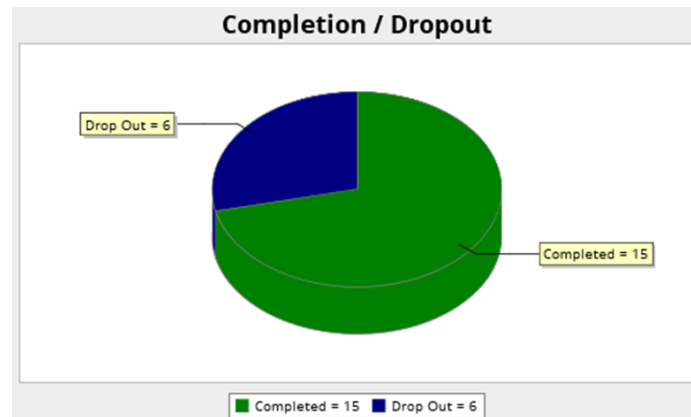


Figure 1: Survey Completion and Dropo

Several open-ended questions were included in the online survey relating to skills development needs and practices. In addition, a review of several research reports, policy documents, journal articles, published and unpublished articles, newspapers, government gazettes and white papers supplemented the primary data. Information submitted in the WSPRs by the TVET colleges were analysed in detail and was used to benchmark the information received in the survey.

Descriptive statistics were used to analyse the quantitative data from questionnaires using SPSS software. Descriptive statistics quantitatively describes the main features of the data collected and helps to explain the “distribution of and relationship among variables’. The use of tables, graphs and charts was employed to present summary statistics derived from data collection. Qualitative data were analysed thematically and are included in various subsections of this report. All data are presented and interpreted in line with five SSP chapters derived from ETDP SETA Final SSP. These include Economic Sector Profile, Key Skills Change Drivers, Occupational Shortages and Skills Gaps, Sector Partnerships, and Strategic Skills Priority Actions.



## CHAPTER 1: SECTOR PROFILE

### 1.1 Introduction

This study explores the skills development needs and practices of the employees of the public sector TVET colleges as sub-sectors of the Education, Training and Development Practices - Sector Education and Training Authority (ETDP SETA).

Many terminologies are used for schools or colleges that capacitate vocational and technical skills. According to Arfo (2015:2), these include occupational education (OE), vocational education (VE), technical education (TE), professional education (PE), career and technical education (CTE), technical vocational education and training (TVET), and further education and training (FET). However, the United Nations Education Scientific and Cultural Organization (UNESCO, 2004) recommended using the term 'technical and vocational education and training (TVET) as more appropriate to describe the sector in which technical and vocational skills are trained.

Wolff (2002) states that vocational education refers to courses for young people offered as a lower-prestige alternative to secondary academic schooling, which leads to manual craft and secretarial jobs. Interview conducted with technical and vocational education and training practitioners in Ghana revealed that technical and vocational education and training is perceived as a sector for academically challenged students (Arfo, 2015). While there is obvious derogation surrounding the sector (McGrath, 2005), many countries (South Africa, China, Ghana, France, Fiji) and international organisations (such as UNESCO 1996, 2001, 2002, & 2010) have conceptualised the sector as a comprehensive "educational process involving, in addition to general education, the study of technologies and related sciences, and the acquisition of practical skills, attitude, understanding and knowledge relating to occupations in various sectors of economic and social life"( Arfo, 2015: 2).

Many countries have set up the TVET sector as an essential vehicle for skills development, socio-economic mobility, poverty alleviation and self-employment (Arfo, 2015). TVET colleges equip artisans with critical vocation skills, often highly sought after by industries in developing and developed countries. In some countries, these graduates are preferable to the industry than university-trained graduates due to their extensive practical phases during their training (Akoojee, 2016). The global community heavily depends on TVET for economic development

and growth (Keating, Medrich, Volkoff & Perry, 2002). However, those who chastise the sector argue that TVET systems use outdated curriculum and facilities, inadequate teaching and supporting staff, and offer programmes that do not respond to market and industry evolutions (McGrath, 2005). While there is consensus on the importance of the TVET sector in many developing or developed countries, there is conventional acceptance for continually upgrading and transforming the sector. Central to that continuous renewal of the sector is the need for training and skilling service providers and staff in TVET colleges.

In South Africa, TVET colleges are administered in the Continuing Education and Training Act (Act 16 of 2006), as amended. TVET colleges are designed to provide students with Grade 9 or Grade 12 certificates an opportunity to gain technical and vocational education and training qualifications. According to the Department of Higher Education and Training (DHET), the qualifications and programmes offered by TVET colleges fall into three different programme categories, namely:

- The National Certificate (Vocational) [NC(V)] offered at NQF levels 2, 3 and 4. The NC(V) qualification has 19 vocational programmes that are offered at TVET colleges.
- Report 190/1 part-qualification, or commonly known as the NATED programmes, which are offered 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.
- The Pre-Vocational Learning Programme (PLP) is a foundational learning programme to prepare students for access into a specific vocational or occupational learning pathway at TVET colleges such as the NCV programmes at NQF level 2, N1 Engineering Studies programmes (Report 190) and occupational programmes at NQF levels 2 to 4. It aims to address identified learning gaps and to improve students' chances of academic success in the qualifications and programmes they progress into after completing the PLP.

The research will service the development of Sector Skills Plans (SSP) for both.

## 1.2 Scope of coverage

There are 50 public TVET colleges with 364 registered campuses across the country. KwaZulu-Natal has the largest number of TVET colleges (9), while the Northern Cape has the least number of colleges (2), followed by the North West Province (3) and Mpumalanga Province (3). On average, the remaining provinces have between 4 and 7 colleges per province.

TVET colleges are covered under the Standard Industry Classification (SIC) code 92004.

## 1.3 Key Role Players

Below is a list of the key role players supporting and ensuring TVET colleges meet their mandate to provide a quality education that responds to national and economic priorities.

The Department of Higher Education and Training in South Africa is responsible for the oversight of colleges and is the employer of the staff in all the public higher education institutions.

*Table 1: Key Role Players*

No	Key Role Player	Function
1	Department of Higher Education and Training	In April 2015, the administrative function of TVET colleges was shifted from provincial governments to DHET which now employs all academic and non-academic staff at TVET colleges.  DHET sets policies and oversees implementation of such policies in the sub-sector.
2	UMALUSI, Quality Council of Trades and Occupations (QCTO) and Higher Education Quality Committee (HEQC)	While the curriculum coordination and development of qualifications is done by the DHET, this function is undertaken in conjunction with the three quality councils namely UMALUSI, QCTO and HEQC.  Each quality council has its own function however in the main they oversee the design, implementation, assessment and certification

		<p>of occupational and trade-related qualifications.</p> <p>Further each council offers guidance to skills development providers (private and public) and assessment centres who must be accredited by the QCTO.</p>
3	Governing Councils	Each college has a Governing Council that is constituted by local stakeholders who are ministerial appointees and representatives for lecturers and support staff.
4	South African College Principals Organisation (SACPO)	College principals are members of the (SACPO) which is an independent association of all 50 TVET colleges in South Africa. SACPO plays a strong strategic role in representing the interests of TVETs within the system of Higher Education as a whole and supporting its members to fulfil their developmental obligations.
5	SA Student Support Services (SASSS)	SASSS is a non-profit company aimed at supporting college and university students. SASS promotes student development to enrich the quality of student life.
6	South African Further Education and Training Student Association (SAFETSA)	SAFETSA is an independent student association established in February 2013. SAFETSA is mandated with championing the interests of TVET College students.
7	Trade Unions	Dominant Unions for TVET college lecturers are South African Democratic Teachers' Union (SADTU) and South African Further Education and Training Student Association (SAFETSA) and the support staff is represented by

		National Education, Health and Allied Workers Union (NEHAWU) and other smaller unions. The unions advocate for the rights and interests of its TVET college members including their skills, training and development needs.
8	Universities	Universities provide training programmes to TVET colleges for the development of lecturers.
9	SETAs	ETDP SETA is a key role player in facilitating the training needs of all TVET college employees and only the lecturers. ETDP SETA creates the pathway to better understand the skills needed and shortages in the country. TVET colleges currently depend on various other SETA's such as the TETA, MICT SETA and AGRI SETA, BANK SETA, CATHSSETA, HW SETA, etc to facilitate their training needs.

#### **1.4 Economic Performance**

The economic contribution of the TVET colleges sub-sector was informed by the Government Gazettes (No. 43007 of 2020), Statistics South Africa, Standard Industrial Classification and Industrial Policy Action (IPAP) 2019/20, budget speeches of the National Treasury, 2020 Work Skills Plan data, 2019 annual reports published by the TVET colleges, and the 2021 sub-sector survey undertaken by the ETDP SETA.

##### **1.4.1 Sector Contribution to the Economy**

The economic condition and performance of any economy is dependent on the quality and extent of the skills of its human capital. According to the South African Media Monitoring and Measurement Association an increase in skills (that is often driven by good quality education)

directly impacts the average annual growth rate in Gross Domestic Product (GDP) per capita (Patricios, 2017). For this reason, education has received the lion's share of the budget vote in recent years, which has become a mechanism to eliminate historical inequalities and injustices. The budget for 2020 by the National Treasury and the 2020 budget speech by the Minister of Finance pointed out that the education sector would continue to receive the biggest share of government spending over the Medium Term Expenditure Framework (MTEF).

Table 2: Medium Term Expenditure

	Medium Term Estimates		
	2020/21	2021/22	2022/23
Basic Education	R265.9 Billion	R281.4 Billion	R293.2 Billion
Post-school education and training	R118.8 Billion	R124.2 Billion	R128.4 Billion

Source: National Treasury (2020)

Table 2 above shows that notwithstanding the deteriorating public finances and increasing government debt under the weight of a weak economy and a ravaging coronavirus pandemic, government expenditure on basic education and post-school education and training (PSET) will continue to rise in the short term. With this budgetary support, the government aims to provide education, training and skills development. Of particular interest to this report is the allocation given to the PSET. Regarding Table 2, PSET is expected to have an annual average growth of 4.6% in expenditure over the MTEF. The medium-term focus of the TVET sector will be to expand accessibility as well as improve their performance, develop artisans, support work-based learning (WIL) (National Treasury, 2020). NSFAS projects to fund more than 870 000 students at TVET colleges in 2021.

The grants to the 50 TVET colleges are expected to increase from R13 billion in 2020/21 to R13.4 billion in 2022/23 (National Treasury, 2020). TVET colleges get this rise in spite of the cabinet directive to have the allocations to TVET programme be reduced by R2.6 billion over the period (National Treasury, 2020).

Table 3: TVET Colleges Budget Allocation and Expenditure, 2019

No	Organisation Name	Budget/ Revenue	Expenditure	Surplus
1	WEST COAST TVET COLLEGE	R370 076 290	R296 389 739	R73 686 550
2	SEDIBENG COLLEGE FOR	R 402 657 742	R290 275 353	R112 382 389

	FURTHER EDUCATION AND TRAINING			
3	SOUTH CAPE (TVET) COLLEGE	R183 808 000	R172 369 00	R 11 439 000
4	IKHALA PUBLIC FET COLLEGE	27/07/2021	29/07/2021	29/07/2021
5	MOPANI SOUTH EAST TVET COLLEGE	R275 369 420	R196 152 556	R 79 216 864
6	SOUTH-WEST GAUTENG COLLEGE	R627 876 752	R442 147 150	R184 539 806
7	CAPRICORN COLLEGE FOR TVET	R477 397 323	R329 050 047	R147 474 6976
8	BUFFALO CITY COLLEGE	R33 242 843.78	R32 465 760.51	
9	LEPHALALE FET COLLEGE	R96 128 940	R 77 989 946	R 18 138 994
10	EAST CAPE MIDLANDS COLLEGE FET		R242 686 368	R43 323 657
11	CENTRAL JOHANNESBURG COLLEGE FOR FU	R348 005 335	R286 506 668	R61 499 657
12	ESAYIDI FET COLLEGE	R359 296 001	R276 086 133	R 82 370 836
13	EKURHULENI WEST TVET COLLEGE	R300 194 070	R284 702 872	R15 491 198
14	MALUTI TVET COLLEGE	R264,844,322	R221,528,051	R43,032,959
15	ORBIT TVET COLLEGE	R388 457 471	R 294 453 832	R94 003 639
16	FALSE BAY TECHNICAL VOCATIONAL EDUCATION & TRAINING COLLEGE	R281 173 317	240 621 241	R 39 592 571
17	NORTHLINK COLLEGE	R428 953 339	R359 061 658	R69 333 875
18	King Sabata Dalindyebo TVET	R314 552 308	R 280 606 500	R 33 915 808
19	Motheo TVET	R370 338 125	R313 063 321	R57 274 804

Source: 2019/2020 Annual Reports

Table 3, provides an overview of budgets allocated and expenditure by 19 of the 50 TVET colleges as extracted from the 2019 Annual Reports of the colleges. The colleges not included in Table 3 had not published their financial data at the time of this research report.

It is surprising to note that almost all TVET colleges reported a surplus or underspend in 2019 which could be a result of the pandemic.

The DHET set an ambitious target of 1 238 000 student enrolment by 2019/2020 (DHET, 2018) however the number of enrolments in 2019/2020 was 657 133 National Treasury Budget Review (2021). The drop in student enrolment was ascribed to the drop in NC (V) enrolments. There is hope that the enrolments will increase as DHET is constructing new TVET College campuses to address the country's skills shortages. To this end, the Minister of DHET indicated that government planned to complete nine new TVET College campuses in 2020. This was set to enhance the recruitment of students by the TVET Colleges to reach the targeted 720 000 enrolments (DHET, 2020). However, the eruption of COVID-19 interrupted the completion of these campus sites and has delayed the process.

*Table 4: Number of Public TVET Colleges and Student Enrolment in South Africa*

PROVINCE	NO OF MAIN CAMPUSES	NO OF CAMPUSES	STUDENT ENROLMENTS, 2017	STUDENT ENROLMENTS, 2018	% Change
EC	8	35	76 090	67 130	-12%
FS	4	17	51 220	50 402	-2%
GP	8	44	170 572	169 389	-1%
KZN	9	67	113 274	110 086	-3%
LP	7	18	107 057	80 436	-25%
MP	3	15	45 625	45 224	-1%
NC	2	7	10 367	13 220	+22%
NW	3	11	32 317	33 165	+3%
WC	6	36	81 506	88 081	+3%
TOTAL	50	250	688 028	657 133	-6%

Source: DHET 2018 and TVET College Annual Survey

TVET colleges work with NSFAS to have their students funded. In 2021, more than 90% of the TVET college students were funded by the NSFAS, thus providing free higher education to children of the poor and the working class. NSFAS allocated R27.8 billion during the 2019 academic year, R6.6 billion (31.5%) higher than what was allocated in 2018 (R21.1 billion). The number of students who benefitted from NSFAS funding was



740 037 in 2019, representing a 26.1% (153 274) increase compared with the number of beneficiaries in 2018 (586 763). c) The number of students who benefitted from NSFAS was higher for public HEIs (393 767 or 53.2%) as compared with TVET colleges (346 270 or 46.8%).

A total of 10 469 students were awarded Funza Lushaka bursaries in 2019, aimed at assisting students who enrolled in the education field of study. This was a 29.2% or 4 318 decrease compared to 2018 (14 787).

Although TVET colleges may not directly contribute to the economy, they make a substantial indirect through the funding of students.

#### **1.4.2 Sector Future Outlook**

According to National Treasury Budget Review (2021), TVET colleges can expect an additional R400 000 in the 2022/2023 financial year, which equates to a 3% increase in the budget allocation to the sector. The marginal increase in the budget can result from the anticipated decrease in the number of enrolments to TVET colleges. According to the National Treasury Budget Review (2021), since 2017/18 financial year there has been a downward trend in the enrolments in TVET colleges, and this trend is expected to continue into 2023/2024. Despite the government's commitment to increasing the budget, funding will likely concern the sector going forward. Given the impact of the pandemic and the downturn in the economy, more students are likely to seek financial aid.

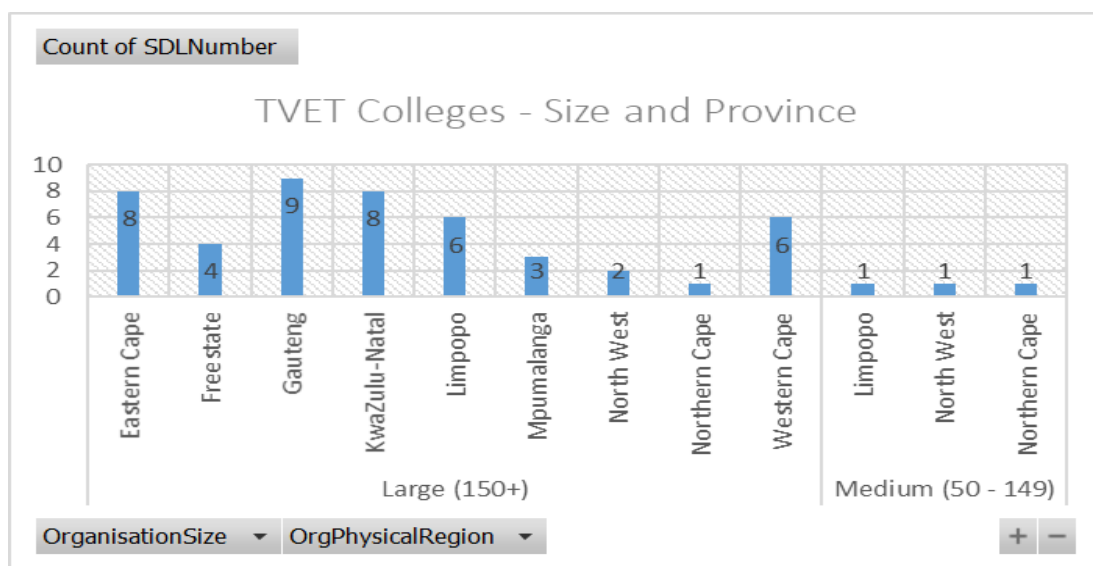
There is growing concern that although returns on investment are beginning to be evident, it is not proportional to the substantial investment which the country is making into the education sector. Due to the increase in unemployment during the pandemic in 2020 and 2021, more people will likely turn to higher education institutions such as TVET colleges to acquire new skills and re-train into higher demand occupations. While it has been acknowledged that there was a downward trend in enrolments at TVET colleges in recent years, the trend will likely be reversed. The economic impact of learning institutions will increase as more unemployed people seek short-term skills programmes to re-skill themselves.

#### **1.5 Employer Profile**

The employer profile of the TVET colleges sub-sector was informed by the analysis of the 2021 WSPR and the 2021 sub sector survey undertaken by the ETDP SETA.

There are 50 multi-campus public TVET colleges in South Africa dotted across the nine provinces of South Africa. Three provinces; KwaZulu-Natal, Gauteng and Eastern Cape provinces account for 48% of the distribution of TVET colleges while Northern Cape, North West and Mpumalanga have a paltry combined 6% of the total number of TVET colleges, Figure 2.

Figure 2: TVET College Distribution per Province



Source: WSPR (2021)

According to DHET (2019) 25% of all students are registered in the 8 TVET colleges in Gauteng, followed by Kwazulu-Natal with 18% enrolment and 14% enrolment in the Western Cape. The lowest enrolment in the country is in the Northern Cape.

From Table 5 it is clear that the trend over the past 10 years was a steady increase in enrolments between 2010 and 2015 and then a steady decrease in enrolments from 2015 to 2019.

Table 5: Enrolment in TVET colleges, 2010 – 2019

Qualification Category	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
NC(V)	130 039	124 658	140 575	154 960	166 433	165 459	177 261	142 373	131 212	138 912
Report 191 (N1-N6)	169 774	222 754	359 624	442 287	486 933	519 464	492 026	510 153	482 175	494 070
Occupational Qualifications	23 160	20 799	62 359	19 000	19 825	20 533	13 642	10 969	20 106	22 886
Other	35 420	32 062	95 132	23 371	29 192	32 424	22 468	24 533	23 355	14 025
PLP	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	285	3 597
Total	358 393	400 273	657 690	639 618	702 383	737 880	705 397	688 028	657 133	673 490

Sources: Statistics on Post-School Education and Training in South Africa, 2018

A large increase was recorded for enrolment in Pre-Vocational Learning Programmes (PLP) between 2018 and 2019 (DHET, 2019). PLP which is a bridging programme for students who may not meet the criteria for admission into a specific programme. The largest take up of PLP was in the 20-24 year old age group. This points to older school leavers who may have identified an opportunity through the PLP to improve their education.

## 1.6 Labour Market Profile

### 1.6.1 Systemic Level

The migration of the TVET college employer functions to DHET from April 2015 has seen the management of systems for TVET colleges being embedded in the DHET practices. Previously college staff and lecturers were employed by provinces; now, the majority are employed directly by the DHET. DHET-employed staff are usually appointed either in permanent or temporary positions. The migration process has seen several employees formerly on the provincial payroll but performing TVET functions being transferred to the national department, but some have been absorbed in regional offices.

Across the 50 TVET colleges, most employees are employed in Gauteng, KwaZulu-Natal, Eastern Cape and Western Cape, Figure 3. This is in line with the number of TVET colleges distributed across the province and the number of enrolments across the colleges.

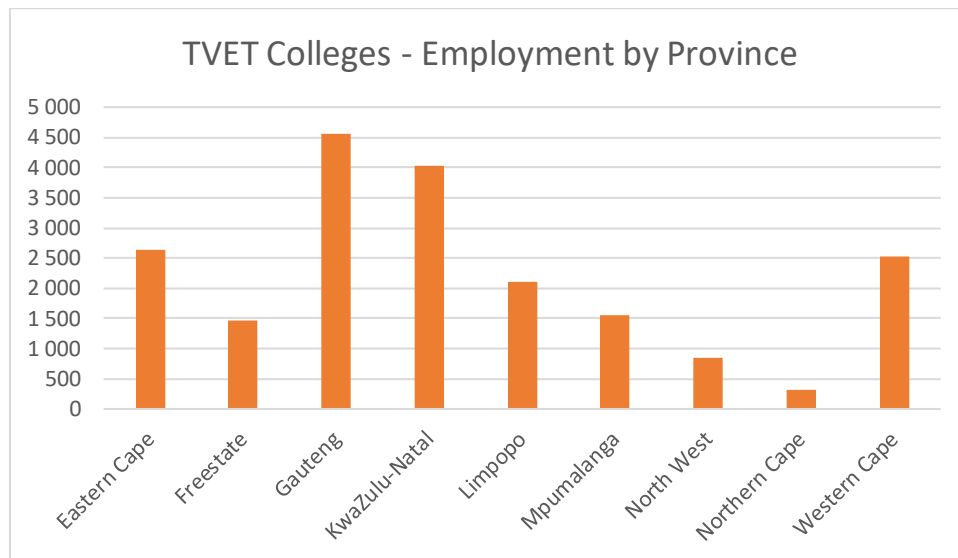
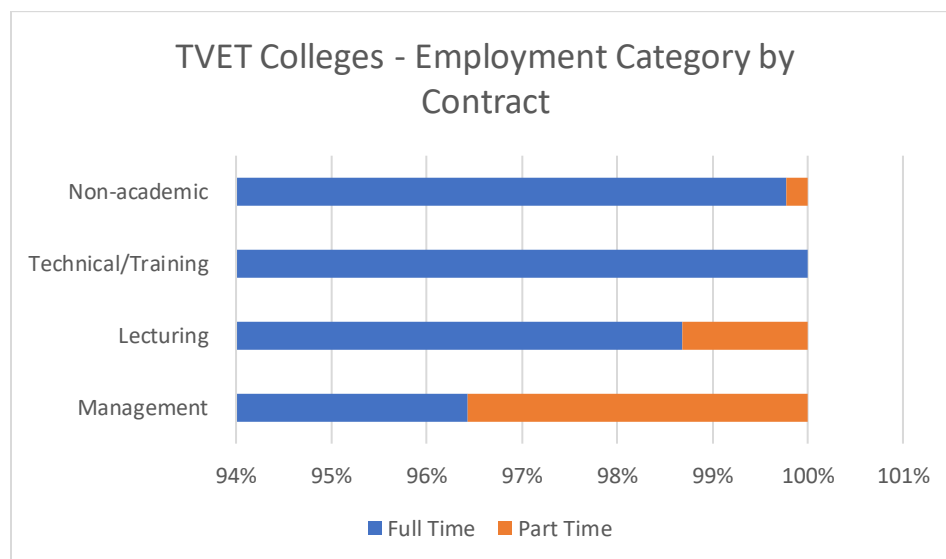


Figure 3: Employment per Province

Most employees are full time employees with the largest number of part time employment in Management, Figure 4.



Source: 2021 ETDP SETA Sub Sector Survey

Figure 4: Employment Category by Contract

According to employment data released by the DHET in 2019, public TVET colleges, employed 18 396 staff, Table 6. This represented an increase from 16 928 in 2012. The gender

aggregation in 2019 was relatively even despite men remaining the domineering gender in lecturing and support staff categories.

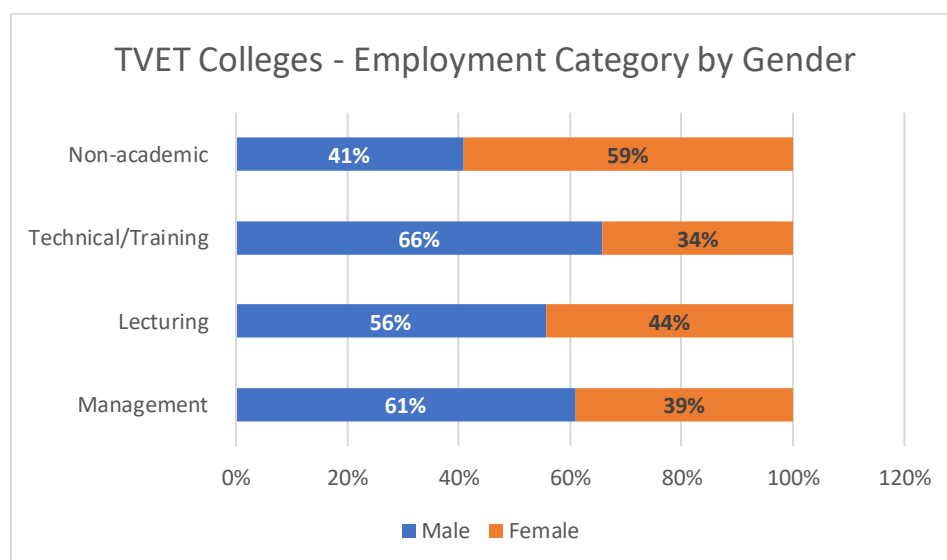
Table 6: Employee Composition at TVET Colleges by Category and Gender

Staff Category	Male	Female	Total
Lecturing Staff	5 741	5 101	10 842
Management Staff	208	215	423
Support Staff	4 228	2 903	7 131
Grand Total	10 177	8 219	18 396

Source: DHET, released 2019

However, according to WSPR (2021), the number of employees across all 50 public TVET colleges increased to 20045 in 2021. The gender aggregation in 2021 showed that 54% female were employed compared to the 46% males employed. This shows a growing commitment by TVET colleges to improve female representation on campuses in line with the national imperative to improve gender representation in the workplace.

However, the 2021 ETDP SETA sub sector survey, Figure 5, shows that female staff are mainly employed in support/non-academic occupations. Occupations in the technical, management and lecturing fields still remain largely dominated by males. These occupations are also the higher paying professions.



Source: 2021 ETDP SETA Sub Sector Survey

Figure 5: Employment Category by Gender

The findings of the 2021 ETDP SETA sub sector survey is supported by the analysis of the 2021 WSPR data for gender distribution across professions, Table 8. It can be seen from Table 8 that the employment per occupation is aligned with conventional expectations. In other words, females are employed in lower paying and/or lower-skilled occupations.

Table 7: Occupations per Gender

Occupation	Female	Male
2019-232130 - TVET Educator	50%	50%
2019-242303 - Human Resource Advisor	60%	40%
2019-811201 - Commercial Cleaner	58%	42%
2019-242401 - Training and Development Professional	48%	52%
2019-811204 - Caretaker / cleaner	53%	47%
2019-321123 - Orientation and Mobility Practitioner	50%	50%
2019-334102 - Office Administrator	67%	33%
2019-121201 - Human Resource Manager	34%	66%
2019-252201 - Systems Administrator	34%	66%
2019-531106 - Hostel Parent	58%	42%
2019-242404 - Student Support Service Officer	87%	13%
2019-134501 - School Principal	22%	78%
2019-134503 - Faculty Head	38%	63%
2019-412101 - Secretary (General)	100%	0%
2019-732101 - Delivery Driver	0%	100%
2019-242301 - Career Development Practitioner	80%	20%
2019-514102 - Hair or Beauty Salon Assistant	100%	0%
2019-351201 - ICT Communications Assistant	0%	100%
2019-334302 - Personal Assistant	67%	33%
2019-441903 - Program or Project Administrators	0%	0%
2019-332302 - Purchasing Officer	100%	0%
2019-862914 - Sheltered Workshop Worker	50%	50%
2019-235904 - Examination Supervisor	0%	100%
2019-334101 - Office Supervisor	0%	100%
2019-143901 - Facilities Manager	0%	100%
2019-342201 - Sports Development Officer	0%	100%
2019-235101 - Education or Training Advisor	100%	0%
2019-111207 - Senior Government Manager	0%	100%
2019-241107 - Financial Accountant	0%	100%
2019-262201 - Librarian	0%	100%
2019-121101 - Finance Manager	0%	100%
2019-441601 - Human Resources Clerk	0%	100%
2019-243203 - Corporate Communication Manager	100%	0%
2019-133105 - Information Technology Manager	0%	100%
2019-242203 - Company Secretary	100%	0%
<b>Grand Total</b>	<b>53%</b>	<b>46%</b>

Source: 2021 WSPR Data

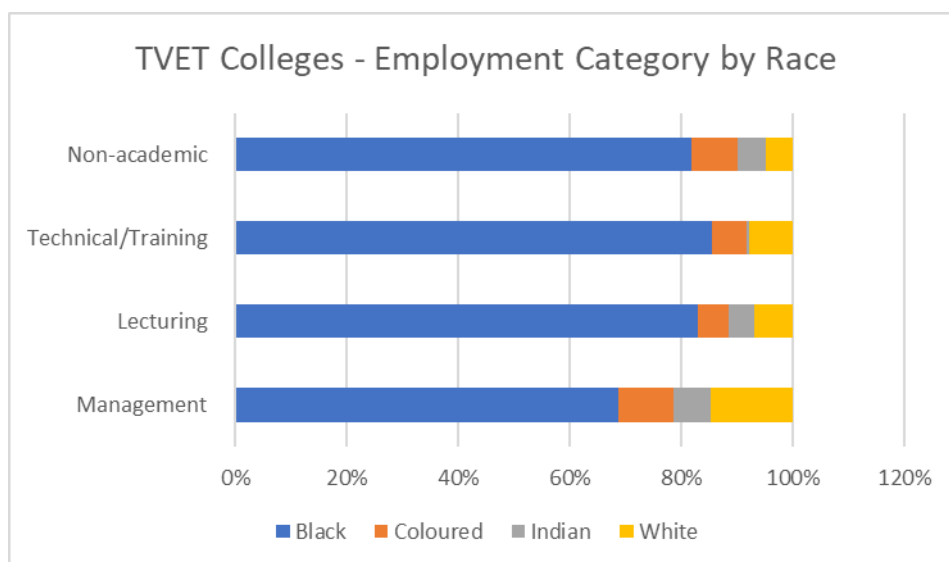
All TVET colleges across all provinces employ majority African employees followed by Coloured, White and Indian people, Table 9.

Table 8: Employment by Race per Province

Province	African	Coloured	Indian	White
Eastern Cape	67%	23%	0%	9%
FreeState	90%	2%	0%	8%
Gauteng	98%	0%	0%	1%
KwaZulu-Natal	97%	0%	2%	1%
Limpopo	98%	0%	1%	1%
Mpumalanga	100%	0%	0%	0%
North West	94%	1%	1%	5%
Northern Cape	62%	23%	1%	14%
Western Cape	41%	58%	0%	1%
<b>Grand Total</b>	<b>85%</b>	<b>9%</b>	<b>1%</b>	<b>5%</b>

Source: 2021 WSPR Data

The data is supported by the findings of the 2021 ETDP SETA sub sector survey, Figure 6.

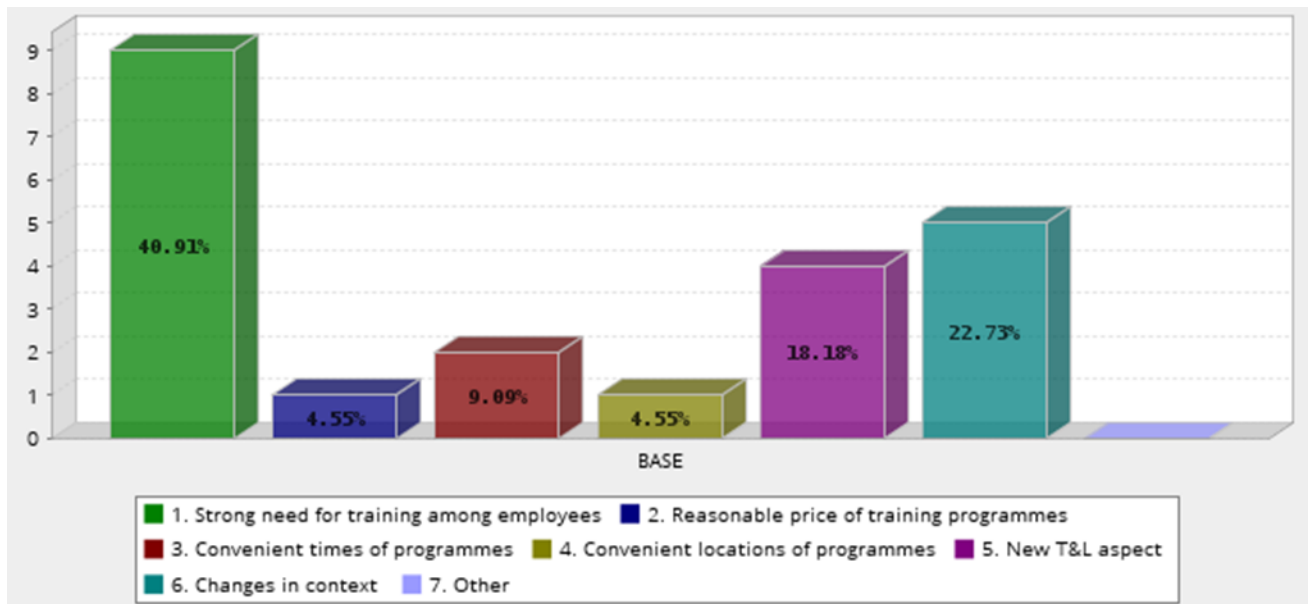


Source: 2021 ETDP SETA Sub Sector Survey

Figure 6: Employment by Race per Province

TVET colleges remain committed to improving the competencies and skills of their employees. According to the 2021 ETDP SETA sub-sector survey, 90% of colleges interviewed stated that they provide internal and external training for their employees.

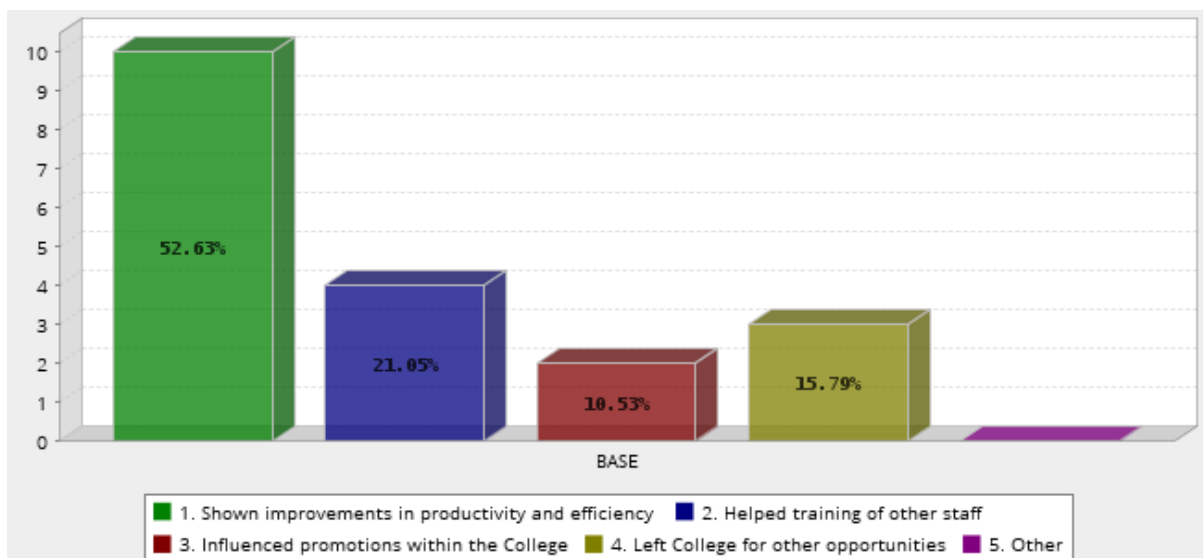
The need for training is mainly influenced by the employees who identify their need for training followed by the need to train due to changes in context, Figure 7. The cost and convenience of the training programme effect the need for training but at a much lesser rate.



Source: 2021 ETDP SETA Sub Sector Survey

Figure 7: Need for Training of Employees

The training provided to employees has mainly improved productivity and efficiency at the college.



Source: 2021 ETDP SETA Sub Sector Survey

Figure 8: Effect of Training Provided on TVET College Sub Sector

## 1.6.2 Institutional Delivery Level

Across South Africa, TVET colleges deliver programmes at their 364 campuses. These colleges vary widely in size, complexity and context, in which both provincial and rural/urban location are factors. Rural colleges have been restricted in the range of programmes they can offer,



given the need for linkage these colleges should establish with industrial sectors and provide workplace-based learning (WBL) opportunities for students. The colleges are distributed in proportion to the population across provinces in the country.

The National Development Plan target for enrolment in TVET colleges is 2.5 million by 2030. Enrolment in TVET colleges reached 673 490 in 2019, reflecting a 2.5% increase from that of 2018 (657 133).

To improve the level of service delivered and coordination between TVET colleges, the DHET established regionally-based support teams for TVET colleges. This has resulted in the sharing of best practices and the monitoring and evaluation of training initiatives and performance management across the colleges.

DHET has proposed a staff re-structuring for the regional offices but is yet to be finalised or operationalised. The process is currently in a consultation phase, and there are no time frames for the finalisation. An organisational development exercise is being conducted to design the regional office structure addressing both educational and administrative TVET institutional support. The support will entail supply chain management, Human Resources and Finance. Table 9 below shows the location of the six existing regional offices.

*Table 9: DHET Regional Offices*

<b>Region</b>	<b>City location</b>	<b>No. of colleges</b>
Eastern Cape	Zwelitsha	8
Free State and Gauteng	Johannesburg	12
KwaZulu-Natal	Pietermaritzburg	9
Limpopo	Polokwane	7
Mpumalanga and North West	Mafikeng	6
Northern Cape and Western Cape	Cape Town	8

Source: DHET: [www.dhet.gov.za](http://www.dhet.gov.za)

Ideally, the regional offices are expected to be engaged in skills development issues. These interventions are meant to address the National Skills Development Strategy and the National Development Plan, taking cognisance of the regional requirements in skills that are aligned to provincial growth and development aspirations. It is recommended that efforts should be

made to ensure that programmes offered in TVET colleges respond to the provincial and national skills needs.

## **1.7 Conclusion**

This chapter has shown the labour market, employer profile, and economic profiles of the TVET colleges and some of the constituent sectors of the SETA category. This chapter has further demonstrated that the sector's economic performance relies on government funding and does not generate income. Although South Africa subscribes to a funding framework in which costs are shared among the beneficiaries of the higher education sector (mainly government and students). The shrinking availability of funds for TVET colleges implies that public TVET colleges would need to consider alternative revenue-generating streams.

Furthermore, the chapter has shown that TVET colleges have increased the employment of females, albeit in the less technical occupations.

TVET colleges can make a meaningful impact on the country's economy through the delivery of high-quality education.

## **CHAPTER 2: KEY SKILLS CHANGE DRIVERS**

### **2.1 Introduction**

This chapter focuses on the specific change drivers that affect the supply and demand of skills in the TVET colleges sub-sector. The chapter also looks at the policy frameworks impacting skills demand and supply in the TVET colleges sector. The individual subsector research and qualitative desktop research that was done looked at the political, socio-economic, technological, legal/legislative, and environmental factors that affect the supply and demand of skills sets. COVID-19 pandemic and its effects on the TVET sector continue to be a significant disruptor on training and development. The extent of its impact will be correctly known in the future. The pandemic is one of the major change drivers in the TVET colleges sector.

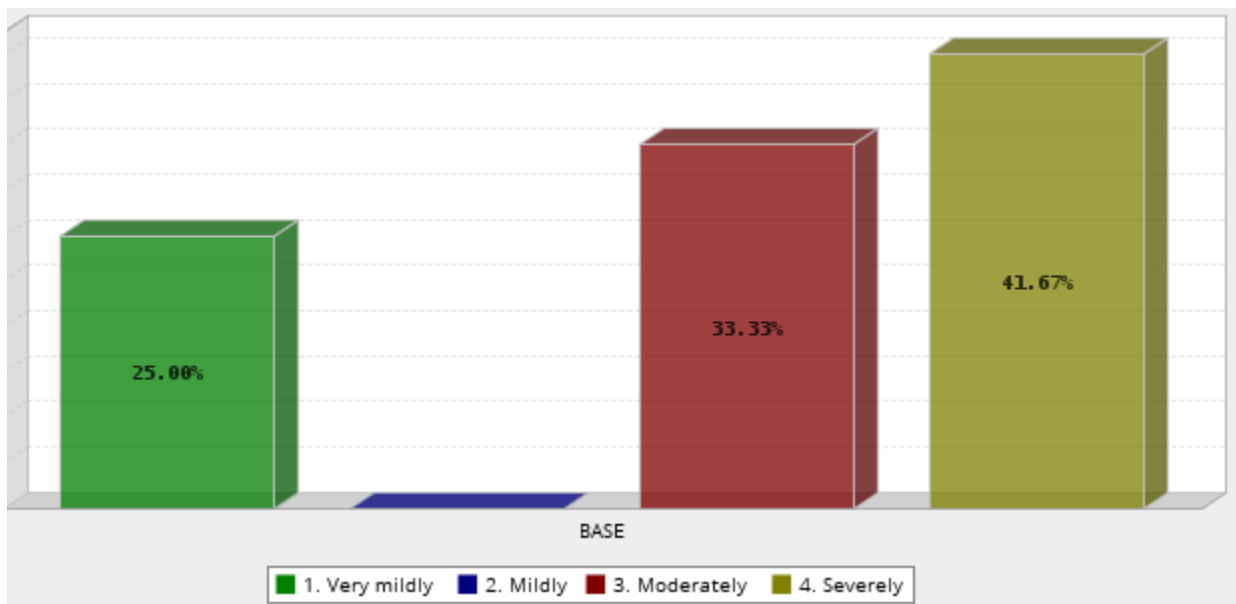
### **2.2 Factors Affecting Skills Demand and Supply**

#### **2.2.1 Impact of COVID-19 on the TVET College Sub Sector**

COVID-19 has impacted every sector of the economy, and the TVET college sub-sector is no exception. To ward off the impact of the pandemic, governments across the world imposed temporary closures of their educational institutions leading to a complete closure of schools, universities and colleges (UNICEF, 2020). The closures of campuses not only affected students who had to leave campuses, but also had far-reaching economic and social consequences on a wide-ranging of issues including student debts, digital learning, food insecurity, internet connectivity, and others (UNICEF, 2020).

To avert the spread and impact of the disease on society, almost all TVET colleges shut their doors by the end of March 2020. But the institutions were confronted with a twin challenge of saving lives and saving the academic year. When it became clear that the disruption caused by COVID-19 was not going away, colleges sought to establish open-learning applications such as google classes, MS Teams, Zoom, YouTube and other virtual platforms. Though this saved the academic year, it failed to save disadvantaged students in a society that is ranked as one of the unequal societies in the world. So many argue that this has amplified social inequalities among societies. It is now well known as to the true implications COVID-19 has had on the education sector. The prolonged closure of colleges has compromised progress in achieving set goals. The pandemic has dramatically worsened the prospects of the post-school level.

After all, the pandemic has led to the shrinking of the fiscus because people have lost jobs, thus reducing the amount of revenue the government could collect, which has negatively affected the budget allocation for the education sector. 42% of all colleges that participated in the 2021 ETDP SETA sub sector survey confirmed that they were severely affected by the pandemic, Figure 8. Approximately 33.33% indicated that their institutions were moderately affected and only 25% confirmed a mild impact of COVID-19 on the demand and supply of skills for the TVET colleges sector.



Source: 2021 ETDP SETA Sub Sector Survey

Figure 9: Impact of COVID 19 Pandemic on the TVET College Sub Sector

Some of the impacts identified by respondents in the survey include:

- Many of our employees could not work online;
- Staff needed more attention and support;
- Teaching and lecturing staff needed more training in online and blended learning;
- Staff needed training on the management and handling of Covid-19 Regulations (Protocols);
- Internal skill trainings didn't take place due to COVID-19 Pandemic;
- Employees were unable to attend any of the training due to covid-19;
- It has become imperative for us to train cleaning staff in cleaning and also keeping safe during the pandemic. -

- Training in respect of e-learning had to be rolled out to lecturers to ensure that effective teaching and learning took place. All Lecturers were issued with laptops;
- Covid 19 pandemic caught us unprepared since it required that we adapt quickly to the new ways of doing things since we had to move from contact training and meetings to virtual platforms;
- The rapid changes in the way of doing things required that training needs be intensified to ensure that employees are abreast of the new ways of doing things in the era of constant budget cuts;
- Infrastructure was not in place to effectively implement remote working and teaching during COVID; and
- Staff had to be provided with post-pandemic trauma, due to the lost of colleagues.

Almost all colleges reported in their 2020 annual reports that providing online learning for students was their most significant challenge due to the lack of the correct infrastructure and the training of lecturers to function under the conditions. Many colleges reported that it was challenging to train staff to operate from home as there was no remote access to the IT infrastructure on campus. Also, lecturers were not skilled in providing online lessons, which impacted the quality of the education provided.

According to Reddy, Soudien & Winaar (2020) and the Social Justice Think Tank (2020), the push towards the digital platforms' adoption has amplified inequalities amongst societies. Van Der Burg et al. (2020) argue that the pandemic has dramatically worsened the prospects at the post-school level because it has (and continues to) shrink the fiscus because of job losses and thus less income tax contribution, which impacts negatively on the budget allocation for education. In this regard, SETAs should devise ways of being responsive to the call for action as the impact of COVID- 19 on jobs has a knock-on effect on their operations and purpose (Rasool, 2020b: 7).

In this regard, SETAs should find ways to respond to the impact of COVID-19 on jobs and the knock-on effect on their operations and purpose (Rasool, 2020b). COVID-19 has brought new dimensions to the workplace which would not go away post-COVID 19. There is a realisation that some full-time jobs may diminish and be replaced by remote and digital working environments. TVET colleges will have to adjust to the new reality post- COVID 19 if their lines

of business are to survive. Schumpeter's economic principle of creative destruction will mean that traditional jobs and practices will be replaced by new ones found in the "Gig Economy", which will necessitate quick deskilling, reskilling, upskilling, adaptation and sustainability of the workforce. Skills will be more attractive than credentials (degrees) and will instill a new culture of engaging in lifelong learning and acquiring skills faster to retain jobs. The impact of COVID 19 on skills demand and supply in the TVET college sub sector is as follows:

- Lecturers would need short courses on how to plan and implement effective online lessons. This may also mean that lecturers would need to improve their IT skills.
- Given the strong reliance on offsite working, more students maybe inclined towards IT related occupations driving the need for IT qualifications.
- COVID 19 has emphasised the need for better occupational health and safety (OHS) requirement in the workplace. As part of workplace COVID 19 protocols, employers have designated OHS representatives. This will require short courses in the OHS field.
- If fewer support staff is required on campuses, the existing staff would need to be re-skilled in other areas.
- Management and planning professionals at the colleges would need to be re-trained in providing a online curriculum as opposed to the standard in class lessons.

### **2.2.2 The Fourth Industrial Revolution**

The Fourth Industrial Revolution (4IR) is animating development and policy debates in Africa and worldwide. The African Union's Agenda 2063, the African Industrial Development Action Plan and the Global Sustainable Development Goals 2030 are all hinged on technology development and sustainable infrastructural development. 4IR indeed holds the future of Africa and that of the world. It provides remarkable opportunities for industrialisation and the incubation of new business models that capitalise on digital services.

Following the advent of new technological advancement trends in the industrial and work world, the world has found itself plunged at the deep end with a need to improve its skills to match the technologically advanced world (Kim, 2020). As learnt from previous industrial revolutions, "there are transitional and social costs associated with technological progress" (Frey, 2020:36). In the short run, only a few benefit at the expense of the many. The growing level of informality in the world of work indicates that large numbers of people constantly fall

outside of the formal economic purviews due to a lack of skills to survive and thrive in the technological space. The World Development Report (2019: vii), observed;

“Many jobs today, and many more in the near future, will require specific skills—a combination of technological know-how, problem-solving, and critical thinking as well as soft skills such as perseverance, collaboration, and empathy. The days of staying in one job, or with one company, for decades are waning. In the gig economy, workers will likely have many gigs over the course of their careers, which means they will have to be lifelong learners”.

While the Report emphasises the need for adaptability in how human beings approach the world of work, it also notes that not all people will be able to weather the technological storms of robotics and automation (see also Frey, 2020). As such, the governments are urged to find "new ways to invest in people and to protect them, regardless of their employment status" (World Development Report, 2019: viii). In several countries, the need to provide knowledge, attitude and skills necessary for employment, economic, technological and national development has renewed demand for improvement and reform in TVET systems to make them fit for this task.

According to Andersson, Hellgren and Köpsén (2018), it is imperative to consider 'two intertwined parts — teaching skills and knowledge in the subject they teach' (2018, p.141) when conceptualising TVET colleges. The professionalisation of South African lecturers should consider the current challenges posed to the working world by digitalisation, automation and the internet of things (IoT). Changing competence expectations of employers and the pedagogical content knowledge implications for modern learning and teaching arrangements need to be considered (Kim, 2020; Zinn, Raisch & Reimann, 2019). Otherwise, the gap between the current skill levels of graduates from a public TVET college and the industry's requirements will continue to grow. This requires robust and stable cooperation with local companies and a programme to finance internships for socially disadvantaged students.

There is a need for lecturer-training on modern technology for better cooperation with the world (Zinn, Raisch & Reimann, 2019) in mechanical, electrical, and electronics, and mechatronics; the implementation of new technologies linked to each subject contents, new labs and workshop. The curriculum should thus change, and that means the instructors,

lecturers and teachers at TVET colleges should also be trained to keep up with the new developments. There is a need to invest in modern educational technologies, lifelong learning, continuing education, and retooling and upskilling to ensure that TVET teachers and trainers remain relevantly competent in the changing environment.

The current COVID 19 global pandemic has exposed the technological gap in many higher education institutions in terms of access to ICT infrastructure and technologies, as well as the requisite capacities of lecturers to adapt to remote and virtual learning modalities (Hedding et al., 2020). Mhlanga and Moloi (2020) tracked the rate at which various South African higher education institutions used the Fourth Industrial Revolution (4IR) tools during the COVID-19 lockdown. The International Labour Office (ILO, 2021) compiled a report on skills development during COVID-19: Taking Stock of the Initial Responses in Technical and Vocational Education and Training. While commending many countries for real-time responsive adaptation to implement emergency measures such as blended and remote learning, ILO (2021) contends that more resilient systems need to be created to absorb future shocks better. These include developing and reinforcing the capacities of TVET teachers and learners and the managers of TVET institutions to adjust to constantly evolving circumstances, whether those of the COVID-19 pandemic or any future crisis.

This requires development for teaching and learning using blended learning (a combination of face-to-face and remote training, online and offline instruction, and high-tech, low-tech and no-tech solutions), depending on the local and national contexts and the changing skills needs of industries and enterprises. In addition, peer-to-peer learning both for teachers and for students can be encouraged with a view to learning from previous challenges, exchanging good practices for teaching and learning and providing mutual support (ILO, 2021:49).

Manda & Backhouse (2017) emphasises that the advent of 4IR brings with it accompanying social and economic rewards and challenges, which calls for governments to respond accordingly). This digital-induced transformation is characterised by a fusion of technologies that "blurs the lines between the physical, digital, and biological spheres" (Schwab, 2016:1). Manda & Dhaou (2019) argue that this disruptive technological advancement will transform society, business, and government through attendant innovations. Schwab (2016) calls 4IR a

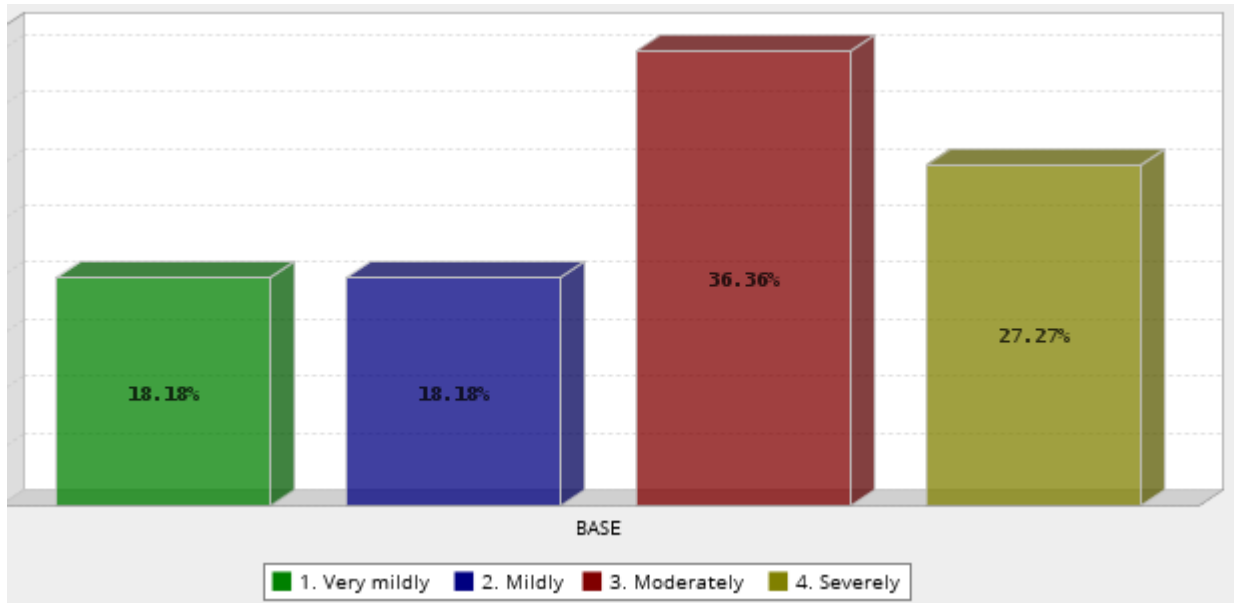


range of new technologies fusing the physical, digital and biological worlds, impacting all disciplines, economies and industries, and even challenging ideas about what it means to be human. This reconfiguration of technologies is characterised by the integration of technologies across the spectrum of physical, digital and biological worlds that would result in profound shifts across all industries and facets of society (Schwab, 2016).

The eruption of the COVID-19 pandemic has fast-tracked the adoption of digital technologies such as the Internet of Things, robotics, virtual reality (VR), artificial intelligence (AI), and virtual learning.

South African educational institutions and workplaces are not immune to the influence of the Revolution. In response to this challenge, the ETDP SETA appointed the University of Johannesburg (UJ is a leading university in the space of 4IR in South Africa) to investigate the impact of 4IR in the EDT sector. This is a 5-year plan that would focus on all ETD subsectors and make recommendations to the SETA on the changes that should be effected to respond to these changes. The study will further look at the adoption rate of 4IR demands by most of the ETD subsectors during the COVID-19 and how these have leveraged and/or been affected by the use of 4IR platforms. Research across the world has revealed that workers in various countries do not have the requisite skills to fit in the 4IR regime (UJ-ETDP SETA Research Chair, 2020). The impact COVID-19 has had on the space of learning, teaching, training, and development has exposed this. Going forward, it is imperative to shift as these disruptive technologies have succeeded in wiping out the phrase "status quo" from the dictionary of how the traditional workforce operated in the past; thus, necessitating training and retraining, up-skilling and reskilling in the use of diverse technologies.

The 2021 ETDP SETA sub-sector survey revealed that 36% of participating TVET colleges confirmed that the 4IR moderately affected the skills supply and demand in 2021. This was followed by those who indicated that 4IR severely (27.27%) affected their skills' supply and demand. Those who said mildly and mildly affected were tied at 18.18%.



Source: 2021 ETDP SETA Sub Sector Survey

*Figure 10: Impact of 4IR on the TVET College Sub Sector*

Many respondents mentioned that the 4IR implementation caught the TVET colleges unprepared due to a lack of technical training. The use of technology during the COVID-19 pandemic meant TVET staff had to adapt to new ways of doing things. Contact teaching and learning was no longer feasible and continued not to be possible, and there was a need to transition to digital-based learning and teaching. This required staff training to be intensified to ensure that employees are abreast of the new ways of doing things in the prevailing environment of the digital world. However, the movement was not easy under an atmosphere of a national lockdown, but staff had to be trained in using technology. TVET colleges were confronted with the lack of infrastructure to implement remote working and teaching during the COVID-19 environment effectively.

The influence and use of technology across educational institutions and workplaces impact the workers' ability to do their work and learn and acquire skills. In this age, e-learning, multimedia, social media and other digital technology devices can enhance teaching and learning situations (MacDonald, 2004). In this regard, there is a need for skills development interventions that are tailored to suit the needs of the staff in the context of teaching and learning. Also, skills would be needed in the science fields, including mathematics, IT, technology, etc.

The arguments have already been made for the 5IR's emergence globally. It is making a case for the human return into the 'technology-rich' workplaces. It focuses on 'soft skills or critical cross-field outcomes' in addition to technology.

The impact of the 4IR on skills demand and supply in the TVET college sub-sector is as follows:

- Lecturers need to be trained in technology to deliver quality education.
- Staff need to be trained in alternate and technology-driven ways of performing daily functions to improve efficiency and to be relatable to students.
- TVET colleges need to consider the new occupations available due to the 4IR.
- Management and planning professionals at the colleges would need to consider the UJ study's findings in providing competitive and relevant qualifications.
- Due to the impact of the 4IR, the skills shift is towards science which implies that more funding and training will be required in the technology, maths, science-related fields.

### **2.2.3 Demands of Socio-economic Developments**

South Africa and other African countries are influenced by developed countries to work towards building a modernised educational framework with some of them having realised this modernisation already (Allais, 2011a; DHET, 2013a; Field, Musset & Álvarez-Galván, 2014; Hailemichael, 2016). South Africa is striving to include international standards in their curriculum planning to raise the standard of professionalisation to an internationally comparable level (Allais, 2011a; Akoojee, 2016). Blanco (2002) highlights that many countries, especially those in Africa are battling with the development of policies that will address economic development and growth, poverty, and skills development. Euler (2013) states that TVET programmes must be adjusted to local educational policies as well as social and economic goals if a foreign educational system is to be transferred into one's own country, existing circumstances must be considered. A lot of focus has been put into changing of the TVET curriculum with the changing demands of the industry and the consumer. However, not much focus has been taken into initiating changes to fit the new world demands and to cater for the changing curriculum.

In a comparative analysis of TVET training policies in selected African countries, Arfo (2015) concluded that graduates of TVET colleges were poorly trained and were not responsive to the needs of the labour market chief among the reasons for such being that the TVET lecturers

and teachers did not have enough skills themselves and the sector proved to be filled with inadequate qualified personnel among other things. Zinn (et al, 2015) in addition to South Africa, other African nations such as Egypt, Ghana, Tanzania and Ethiopia have recognised the importance of highly qualified teachers and trainees at vocational colleges and, in this spirit, have declared their intention to institute appropriate reforms.

#### **2.2.4 Evolutions in Vocational Pedagogy**

Simplistically conceptualised as ‘learning by doing’, vocational pedagogy involves integrating various knowledge mixes to prepare technical and vocational graduates (Gamble, 2013). As summarised in DHET Policy on Professional Qualifications for Lecturers in Technical and Vocational Education and Training (2013), includes “learning about the subject, learning about how to teach the subject, learning about applications of, and relevance of the subject in the workplace” (DHET, 2013:9). Therefore, teaching and learning in the TVET sector should involve a variety of knowledge mix identified in the DHET Policy; disciplinary, pedagogical, practical, situational, and fundamental (DHET, 2013:8). While lecturer competence within the sector entails aggregation of all the knowledge components, Gamble (2013) notes that the evolution within this pedagogy has influenced the substance of lecturer competence.

The initial artisan-apprentice pedagogical paradigm of early 19th Century Europe thrived on the mystery or secrecy of the omnipotent master. The age-old craft was passed on from generation to generation in an almost time-stagnant context. The initiation into the craft was as much a process of social identification as it was technical capacitation (Gamble, 2013). However, the industrial developments in Europe and the increase in mechanisation brought necessary transmogrifications to the above prototype. Starting in the French Trade Schools in the late 19th Century, the dual system was born, in which theory was as much emphasised as the practical components of technical and vocational training. Now, it was not only sufficient for the instructor to know how but the why (theoretical foundations) was as much emphasised. Apprentices needed foundations in maths and science to thoroughly grasp the practical aspects of the training. Later, a competency-based modular training (CBMT) system was introduced, in which the role of the instructor/teacher was further decentred and relegated to the assessor or coach. More emphasis was put on the learning process, which

students could do independent of the instructor, raising possibilities for innovation – students bringing innovative solutions to the age-old crafts (Gamble, 2013).

According to Gamble (2013), these changes in vocational pedagogy within the historical and socio-cultural contexts necessitate different teacher competencies. Now, the competencies of TVET teachers have become diverse; while workplace and industry experience is necessary components, it is no longer sufficient on their own. The basics of contemporary vocational pedagogy lie in the interrelationship of three dimensions; (i) formal subject/technical knowledge, (ii) pedagogical expertise, and (iii) practical workplace experience (Gamble, 2013:224). While the other two are intuitive, in pedagogical expertise Gamble (2013:226) includes “learning needs analysis; the planning and management of learning systems at operational and strategic level; learning design; distance learning; multimedia teaching; counselling and specialised learning support; integrated communication technology (ICT); inclusive education; ecological awareness; evaluation, audit and quality assurance; labour market analysis; partnership creation and networking.” These are divided into pedagogical, situational, and fundamental learning the DHET (2013:9). While contemporary prescriptions for TVET teaching may seem an overcompensation for the erstwhile master-centric craft pedagogy, Gamble (2013:227) contends that what is good enough is a “strong formal teaching and learning, aided by various educational technologies and premised on up-to-date understanding of vocational, technical and professional fields of practice.”

### **2.2.5 Learner Diversity**

In 2013, the Council on Higher Education noted, with concern, that despite almost double enrolment numbers in two decades of democracy, “high attrition and low graduation rates” neutralised important access gains in the South African post-school systems (CHE 2013:9). This was also noted in several governments and independent reviews (Lewin & Mawoyo, 2014; HESA, 2014, CHE, 2015). The Presidency in the Twenty-Year Review, laid the blame for the large part of lack of success in higher education to the institutions. They argue that these institutions had not done enough to offer diversified student support, particularly for those students from previously underrepresented groups (The Presidency 2014:28). In response, the DHET, through its agencies and affiliates, HESA and CHE, instituted interventions to

enhance the articulation gap of students entering academic programmes at universities. These took several forms (tutoring, mentoring, writing centres, foundational programmes). The CHE (2015) argued that ‘student support is critical to student success; regardless of the quality of a particular student cohort (CHE 2015:105).

However, it has still been noted that the success rate is still skewed according to race and gender at institutions of post-school learning (DHET, 2013; Lewin & Mawoyo, 2014; CHE, 2015). As such, the National Development Plan (NDP) 2030 calls for urgent action to ensure that ‘all South Africans realise their full potential, in particular those previously disadvantaged by apartheid policies, namely black people, women and people with disabilities (PWDs) (NDP 2011:296). The NDP argued that

Many individuals with poor schooling aspire to higher qualifications, but they are academically less prepared than their middle-class counterparts. Extra support will help them cope with the demands of higher education (NDP 2011:320).

In this reasoning, the NDP alludes to the schism that exists in basic education system, where some learners, even though they achieved university admission, emerge qualitatively underprepared. The Presidency has also noted this as a ‘tale of two school systems’ – ‘characterised by unequal performance and resources endowment’. According to the Presidency (2014:7), while this system is equally detrimental as its apartheid counterpart, the discriminating criterion is now the socio-economic status of parents rather than their race. Unfortunately, a few can only access the better performing and well-resourced school, leaving the rest trapped in a system that does not sufficiently prepare them for post-school education. These underprepared students need extra support if their physical access to post-school education is to be translated to socio-economic mobility.

## **2.2.6 Policy Frameworks Affecting Skills Demand and Supply**

The transformation of the FET system (formerly known as technical education) was informed by the work of the National Committee on Further Education (NCFE) appointed by the Minister of Education in 1996 (Akoojee, et al., 2005). The NCFE Report (1997) informed the Green Paper on Further Education (RSA, 1998), the Education White Paper 4 (RSA, 1998a), and eventually the Further Education and Training Act (1998) (currently Continuing Education

and Training Act, 2006), which provides for the governance and funding of FET colleges. Other relevant legislative documents include; South African Qualifications Authority (SAQA) Act No. 58 (1995); National Education Policy Act (1996); Higher Education Act No. 101 (1997); Skills Development Act No. 97 (1998); General and Further Education and Training Quality Assurance Act No. 58 (2001); National Qualifications Framework (NQF) Act No. 67; and The White Paper for Post-School Education and Training (2014).

The National Development Plan (NDP, 2012) and the National Skills Development Strategy (NSDSIII, 2011-2016), see the growth of the TVET system as ancillary to the achievement of national development priorities through meeting contemporary national skills needs and facilitating inclusive pro-poor growth (UNESCO/UNEVOC, 2015). The South African government uses the TVET system to promote the integration of education and training while enhancing learner mobility and progression. The TVET system is seen as an appropriate and accessible vehicle for “providing intermediate to high-level skills that would lay a foundation for higher education, facilitate the transition from school to work and develop autonomous life-long learners” (UNESCO/UNEVOC, 2015:6).

The ETD Skills Sector Plan (2022-2023) provides an overview of the TVET college sub-sector's policy framework. Current skills demand and supply are aligned with objectives of the policy and legislative frameworks that govern the sector. There are no new policy changes that impact the skills demand and supply of the sub-sector.

### **2.3 Conclusion**

Various factors drive change within the TVET sector. However, the key skills change drivers outlined above are not limited to the TVET sector alone but cut across the ETD sector as a whole. These factors relate mainly to policy, technological advancement and the changing patterns of work organization and employment trends (DHET SSP Framework and Requirements, 2019). From the above-mentioned key skills change drivers discussed in this chapter, the following implications have been deduced:

- **The Impact of COVID-19 on the ETD Sector:** TVET colleges have to seek strategic ways to respond to the impact of COVID-19 on jobs and operations. There is an urgent need for reskilling and/or up-skilling of the

workforce.

- **The Fourth Industrial Revolution:** SETA has appointed the University of Johannesburg (one of the leading universities in the space of 4IR in South Africa) to investigate the impact of 4IR in the ETD sector.
- **Adequate Supply and Professionalization of TVET Workforce:** There is a need for funding to mathematics, science and technology of workplace experience for teacher students.
- **Adaptable Teaching System:** Educators at TVET colleges need to be trained to deal with a diverse student population. Lecturers will need to be coached in empathy and provide additional support to students.



## CHAPTER 3: OCCUPATIONAL SHORTAGES AND SKILLS GAPS

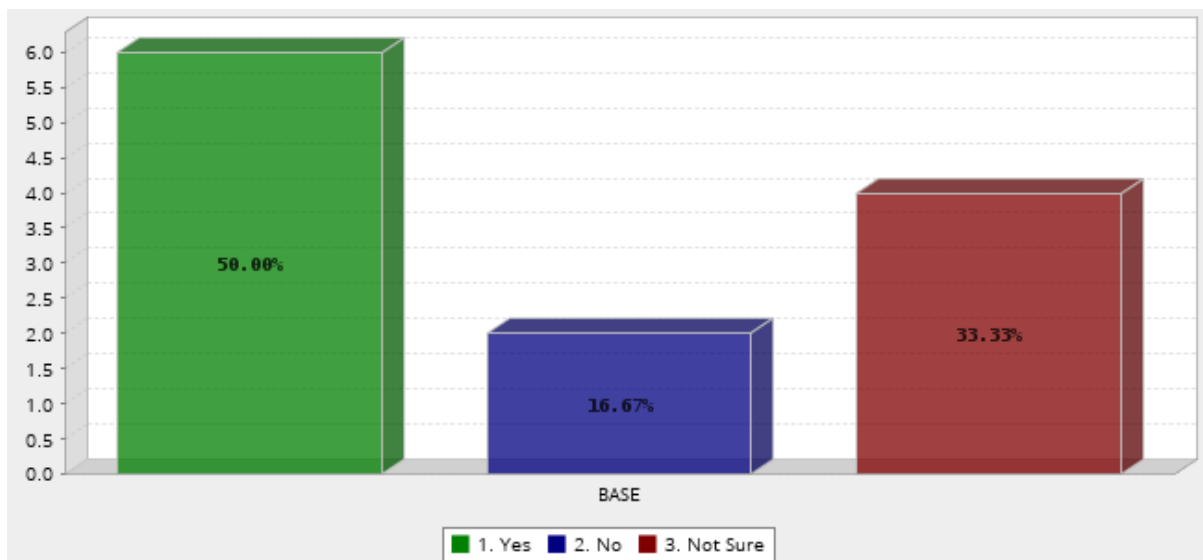
### 3.1 Introduction

The following chapter focuses on occupational shortages and skills in the TVET college sub-sector to identify and understand the hard-to-fill vacancies (HTFVs) the extent and nature of supply across the TVET college sub-sector. For this study, hard to fill vacancies are defined as those vacancies that take the employer a period longer than six months to find suitable candidates to fill the vacancy. Data on 'Hard to fill vacancies' was obtained from the 2021 TVET College WSPRs and the 2021 ETDP SETA sub-sector survey.

### 3.2 Sectoral Occupational Demand

#### 3.2.1 Occupations Affected by Hard-to-Fill Vacancies and Reasons

According to the 2021 ETDP SETA sub sector survey, 50% of colleges interviewed confirmed that they had HTFV while 17% admitted to not having any HTFV and 33% were unsure of any HTFV, Figure 11.



Source: 2021 ETDP SETA Sub Sector Survey

Figure 11: Hard-to-Fill Vacancies

Survey participants identified the following HTFV in the TVET college subsector:

- Campus manager;
- Duty Principle - academic services;

- Qualified Artisan with teaching qualifications;
- Boiler maker;
- Fabrication;
- Facilitator: Mechanical Fitter;
- Facilitator: Rigging; and
- Tooling Centre Manager.

Though the reason for a job opening to be regarded as HTFV is the period that it takes to fill the vacancy, respondents provided the following reasons for not being able to fill the positions:

- Availability of suitable candidates;
- Remuneration – salary and benefit expectations of candidate are difficult to meet in the sub sector;
- Employment equity criteria;
- Most candidates do not have teaching qualification which is a requirement to teach in TVET College;
- TVET colleges compete with the private colleges and the private sector in general for the same skills and so far it has been hard to resolve the issue since it is more about benefits that offered by government institutions vis/vis what is offered by the private sector;
- Generally, the HTFV are specialised positions, which require a specified number of years of trade experience after conclusion of the trade test and most candidates lack the number of years of experience;
- General shortage of skilled tooling staff in the country;
- COVID delayed the advertising, interview and appointment process and in some cases the appointment of staff was frozen during COVID;
- Getting approval from the College Council and DHET can be an arduous task which can delay the process of making an appointment; and
- Lack of skills means that the position is re-advertised many times, delaying the process.

According to the WSPR (2021) there are 109 HTFV in the sub sector. TVET colleges identified the following occupations as HTFV:

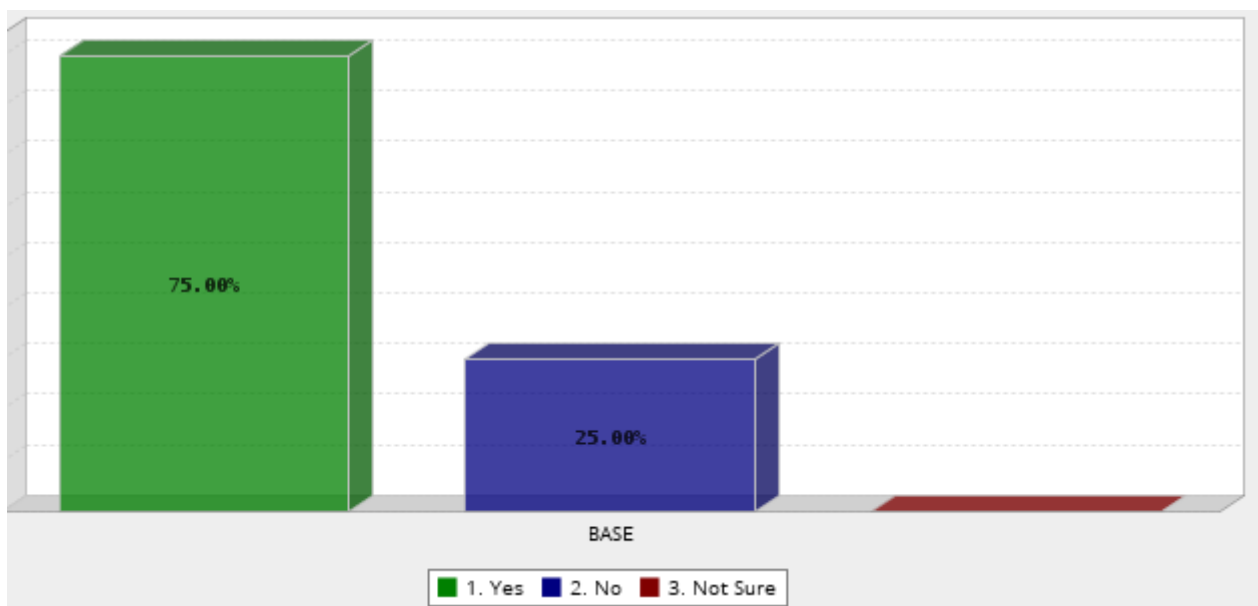
- 2019-112101 – Managers - -Director (Enterprise / Organisation), Finance, Human Resource
- 2019-121103 - Credit Manager
- 2019-121202 - Business Training Manager
- 2019-121905 - Programme or Project Manager
- 2019-121908 - Quality Systems Manager
- 2019-132102 - Manufacturing Operations Manager
- 2019-132104 - Engineering Manager
- 2019-133101 - Chief Information Officer
- 2019-133105 - Information Technology Manager
- 2019-134502 - FET College Principal
- 2019-141102 - Guest House Manager
- 2019-214201 – Engineer – Civil, Mechanical, Electrical
- 2019-216604 - Web Designer
- 2019-231101 - University Lecturer
- 2019-232130 - TVET Educator
- 2019-235601 - ICT Trainer
- 2019-241104 - External Auditor
- 2019-311501 - Mechanical Engineering Technician
- 2019-642601 - Plumber
- 2019-651302 - Boiler Maker
- 2019-653101 - Automotive Motor Mechanic
- 2019-653306 - Diesel Mechanic
- 2019-682201 - Cabinet Maker

The main reasons cited for the HTFV is lack of experience, poor remuneration, lack of relevant qualifications, unsuitable job location and equity considerations.

There is correlation between the data sourced from the 2021 ETDP SETA sub sector survey and the data provided via the WSPR. The main occupations that are hard to fill are in the management, education and technical fields.

### 3.2.2 Skills Gaps in the TVET College Sector

According to the 2021 ETDP SETA sub sector survey, 75% of colleges interviewed confirmed that they are experiencing skill gaps at their college while 17% admitted to not having any skills gaps, Figure 12.



Source: 2021 ETDP SETA Sub Sector Survey

Figure 12: Hard-to-Fill Vacancies

Survey participants identified the following skills gaps in the TVET college subsector:

- Lecturing staff not being qualified in having lecturer qualifications.
- ICT Skills
- excel training computer training
- Financial Management skills
- Teaching qualifications
- Microsoft Excel, Word, Powerpoint skills
- Distance learning content development (e-learning)
- Panel beater and spraypainter

- Skills Development Facilitator not having a skills development facilitators qualification.
- Finance/Supply Chain/Bidding
- Minute taking and report writing
- Computer skills
- Assessor
- Online Teaching methods
- Micro Soft Office (Word, Excel, PowerPoint, Outlook, Access)
- Diesel Fitter mechanic

Having noted the skills gaps in the TVET sector, the colleges embarked on several training programmes to try and close the skills gaps. These training programmes were either done internally or provided externally by the institutions' partners. Table 10 below gives a summary of the training programmes

Table 10: Training Undertaken by TVET Colleges

Name of College	Training Provider	Training Areas	Number attended
Boland College	Internal Training	Training on various online tools	Not specified
	Internal	Use of Moodle	160
Buffalo City College	Internal	Induction for new staff	4
		Curriculum training of lecturers	60%
		Audit skills training	50%
Capricorn College	Internal	Lecturers placed on placement	9
Central Johannesburg College	FoodBev	Lecturer development	Not specified
	ETDP SETA	WIL and staff development	Not specified
East Cape Midlands College FET	Internal	ICT skills, AST Tutor software training, Induction and training,	Not specified
	GIZ, DHET, Eastern Cape Midlands TVET College, Port Elizabeth TVET College, Ekurhuleni West and Ekurhuleni East TVET Colleges	The Dual System Apprenticeship Programme	Not specified
Enhlanzeni TVET College	ETDP SETA	Management Training	21
	FPM SETA	Educator staff training	109
	Internal	Student support	16
		Support staff administration	28
		Support staff cleaners and grounds men training	42

Ekurhuleni East TVET College	Internal	Academic (Lecturers trained in various areas of speciality)	170
		Staff trained in other areas	115
	WITS	Lecturers and Planning	46
	SABS	QMS Training	2
Ekurhuleni West TVET College	DHET	Life Orientation L4	Not specified
	Internal	Programmable Logic Controller	Not specified
	ATA Consultant	Mathematics Level 2,3,4	Not specified
	Esoh, Microsoft, Sage Pastel, MSC Artisan Academy	Microsoft 2013, Office 365, Pastel, Payroll and Accounting, Enel Photovoltaic Skills	Not specified
	BLS Medical	First Aid level 1& 2, Safety and First Aid	Not specified
Esayidi TVET College	PERSAL	Lectures placed in industry for a specific period.	100
False Bay Technical Vocational Education and Training College	IDZ, John Thomson, Damen Shipyard, Abagold, Quantum Foods, Oceania Group, Sea Harvest, SA Navy, Absolute Rigging, Lemon Leaf Trading and Nautic Africa	CoS training programmes	Noted specified
	Internal and External	TVET lecturers placed in workplaces for specified purpose	39
Flavius Mareka FET College	Internal	Governance, Sage evolution, PMDS, Persal Advanced Project Management, Customer service, Persal, King IV Corporate, Governance Examinations security, PMDS, Advance Project Management	69
	GIZ Academy Training	Automation technology. Facilitation of learning	16
Gert Sibande TVET College	Internal	Taxation and Payroll Training, Staff development program	Not specified
King Sabata Dalindyebo TVET College	Fibre Processing and Manufacturing (FP&M SETA)	Occupational Directed Education, Training and Development	30
	IHWK Germany	Mechanical Engineering training for Lecturers	
Lephalale TVET College	Internal University of Limpopo, UNISA	Assessor course, Moderator course, Furthering studies, Minutes and report writing course, Asset Management, Debtors and Contract Management	36
			17

		Management Development Programme, PGCE study	
Majuba TVET College	PGCE study	Millwright, Electrician, Fitter, Bricklayer, Chemistry, Hospitality, Boiler Making, Plumbing, Carpentry, Engineering Science, Mathematics	81
Maluti TVET College	Internal	Taxation, SHE Training, HR Workshop, Lecturer(s), COVID 19: Protocols Workshop, Macmillan Webinars Training, Digital technology training, technical training	385
Mopane TVET College	Internal	Boiler making, Diesel Mechanic, Fitting & Turning, Electrical	9
	Internal/External	Assessor, Moderator, PERSAL, VIP Payroll, COLTECH(Dash Board), ODETP, OHS Representative, Bid Committee, CompTia Networking, SHERG IMS, Diesel Mechanic (CoS), First Aid & Fightin	263
Northlink College	Western Cape Department of Economic Development (DEDAT)	Mentorship Training Programme	180
Orbit TVET College	Internal	Induction training	Not specified
	Ford SA, Tharisa Mining, Impala Platinum Mines, AECL, Rustenburg Local Municipality	Workshop support, Artisan Development Training/Centre of Specialisation, Training of lecturers / Placement of students, Artisan Development Training / Funding for training, Use of facilities and student placement/Training of employees/Artisan Development.	Not Specified
Sebideng College	International Youth Foundation	Life Orientation Workshop	Not specified
	Internal	Lecturer Work Integrated Learning For Lecturers Programme	Not specified
South Cape (TVET) College	Internal	Engineering lecturers – artisans, Campus managers – OHS related training, Lecturers were trained and developed as CISCO CCNA 1, 2 & 3 and cyber security	44

		operations instructors, College-wide induction programme.	
	Nelson Mandela University (NMU)	Middle Management - Management and Leadership Development Programme- 18 Months, Supply Chain Officers - Supply Chain Programme – 12 Months	13
	Boston College.	ICT technicians were provided training in the form of National Diploma in ICT and network systems	All ICT technicians
	Huawei	Trained as a certified Huawei instructor	1
South-West Gauteng College	Internal	Educators, Formative assessment development, PowerPoint development, Management – 110 staff members – PMDS refresher training	253
	DHET	Management and 20 Educators – Consultative workshop by the department	22
	Universal Knowledge Software	Staff members – library training	7
	Rand Water, Foodbey, Artisan Training Academy, Institute of Internal Auditors public sector forum, Meridian	Educators – water waste and treatment practice, Educators- Electrical Engineering, Educators – Artisan training, Management – internal auditing, Staff members – advanced law of evidence	12
Tshwane South TVET College	Internal	Fire Marshalls, Induction, First Aid, Drafting and Management of ICT Contracts workshop, Workshop on approved policies for managers, First Aid Level 1 & 2 (Sport), Accounts Payable: From Accounting to Management Training Course, and other skills	361



	Construction Industry Development Board, CCNA Networking, DHET	Procurement Training, Procurement Training, Central Application System (CAS)	29
uMgugundlovu TVET College	Internal	Lecturers placed in industry for specified period	Not specified
Vhembe TVET College	Internal	Lectures placed in industry for a specific period.	4
Waterberg TVET College	Internal	PLC – Lecturing staff, TVET 4IR Digital Skills Initiative – Lecturing staff, Moderator – Lecturing staff, ITIL – Support (IT), OHS SHE Representative – support/ Lecturing, VIP Payroll – Support (Finance), Pastel Rage Evolution – Support (Finance), Records Management – Support, Office 365 Admin and Troubleshooting – Support.	87
	ETDP, TETA, ETDP Seta	Auto Cad – Lecturing staff, Assessor – Lecturing Staff, Executive Management Programme – Lecturing/Support	32
West Coast TVET College	HWSETA (Lecturer Development, CHIETA (Lecturer Development))	TVET lecturers placed in workplaces for specified periods (n)	65
	Internal	Lecturing staff professionally developed. Focused intervention on the following strategic areas: WIL, Artisan Development, Academic Support (n, Support and management staff professionally developed. Focused intervention on the following strategic areas: compliance with PFMA, GRAP, SCM, CET, PSR)	88

Source: 2020 Annual Reports

The above data is an illustration that TVET colleges are committed to addressing the skills gaps in the TVET sub sector.

Much of the training rendered to TVET employees is done internally as colleges organise training for their staff in various disciplines. TVET colleges are dependent on partnering with

other institutions to provide external training for employees due to the financial challenges the TVET sub sector faces in funding employee training initiatives.

The College Lecturer Education Project (CLEP) is a project aimed at developing professional qualifications for TVET lecturers and is supported by 14 public universities, developing a range of qualifications, from the Advanced Diploma in Technical and Vocational Teaching (Adv. Dip. TVT) to the Bachelor of Education in Technical and Vocational Teaching.

### **3.3 Conclusion**

The extent and nature of skills demand vary within and across the TVET colleges sub sector. This data indicated that there were various reasons that have caused some vacancies so be difficult to fill.

One of the reasons was that bureaucratic procedures that have to be followed have resulted in some vacancies remaining unfilled for long periods of time. To fill some vacancies, colleges need approval from the College Council and DHET which can delay the process. During lockdown the recruitment process was frozen by many colleges as holding interviews was impossible.

The lecturing vacancies are difficult to fill primarily because of remuneration. TVET colleges compete for the same skills with the private sector. The private sector has more flexibility in negotiating packages to meet the expectation of the applicant. Among the lecturing these were identified as the gaps: lack of teaching qualifications, lack of digital knowledge, lack of exposure to pastel. TVET colleges are actively engaging lecturing staff in programmes to acquire professional qualification and motivating them to get their teaching qualifications for those who are not qualified. The majority of identified 'Hard to fill vacancies' were for lecturers of technical engineering subjects and mathematics.

Reasons given for difficulties in filling the finance related vacancies were equally spread across poor remuneration, lack of relevant qualifications and lack of relevant experience.

Among the management and HR staff training in labour relations is needed, report writing skills are needed and project management among others.

## CHAPTER 4: SECTOR PARTNERSHIPS

### 4.1 Introduction

The TVET colleges have adopted partnerships to implement their skills development programmes and achieve their strategic goals. These formal partnership agreements are entered into with most stakeholders at the national level and related employers at provincial levels. Essentially, partnerships are co-operation of relevant importance to achieving short and long-term goals by utilising partners' unique skills and achieving better outcomes that none of each could achieve alone (Franco & Estevao, 2010). These partnerships include project partnerships, problem-oriented partnerships and programme delivery partnerships. Partnerships help the TVET colleges achieve what they would never have achieved on their own.

Partnerships between the ETDP SETA and other SETAs relevant to TVET college programme delivery areas can substantively improve college programme delivery. SETAs are well-positioned to support TVET colleges in several ways. For example, from 2014 to 2016, the ETDP SETA supported the Work Integrated Learning (WIL) for lecturers collaborating with the Swiss South Africa Cooperative Initiative. This was initiated after realising that many TVET academic staff lack subject area qualifications and relevant industry exposure. Workplace exposure opportunities are likely to significantly contribute to improving the quality of subject teaching of these lecturers and their undertaking formal pivotal programmes. Collaboration between the ETDP SETA and other relevant SETAs could facilitate these processes and address the blockage represented by the lack of adequate work placements. Collaboration between colleges and industry is important if TVET programmes are increasingly to lead to employment after students graduate. Many of the colleges need support in establishing relevant relationships.

### 4.2 Existing Partnerships

In addition to unilateral efforts, the South African government has partnered with other countries to develop its TVET system. One of these initiatives is the collaboration with the German government. This is a joint declaration of intent by the Department of Higher Education and Training (DHET), the Federal Ministry of Education and

Research (BMBF), and the related bilateral operational programme. This bilateral operational programme provides for the support of the continued development of the South African Institute for Vocational and Continuing Education and Training (SAIVCET), the trial of dual training courses in South Africa, the development of vocational training standards and the assembly of curricula which align themselves more closely to the needs of the South African economy. Funded by DHET and the National Skills Fund (NSF), SAIVCET, focuses on research, innovation, curriculum, and the reform requirements of vocational teachers' training and continued education (Baumgarten et al., 2017; Kuehn, 2019).

Other programmes, supported by Germany, focusing on TVET teacher development include TrainMe, College Lecturer Education Project (CLEP), and various vocational training partnerships between German Chambers of Crafts and South African TVET colleges. TrainMe is a modular training and education programme designed for South African TVET lecturers in mechanical and electrical engineering fields, run by the Inter-Company Training Centre in east Bavaria. Between 2016 and 2019, the Erfurt Chamber of Crafts entered into a relationship with three TVET schools in the Eastern Cape (Eastcape Midlands, Lovedale and Port Rex Technical High School), to improve the employability of graduates in the car repair sector. The project aimed to achieve this through engaging local car repair industry in curricular development and teacher training (Kuehn, 2019:230). Through these programmes, the hope is to leverage on the German successes in the dual system to inform the developments of the South African fledging TVET sector.

According to Precious Sipuka, DHET Deputy Director of Post-School Education, CLEP is a sub-project of the Teaching and Learning Development Capacity Improvement Programme (TLDCIP) – a €20-million grant initiative as part of the South African-EU Teaching and learning Sector Reform Contract, 2015. CLEP conducts annual skills audit within TVET and Community Education and Training (CET) college lectures, supports universities in developing and offering professional qualifications for TVET and CET lecturers and supports research activities on TVET and CET (Sipuka, 2020). Through CLEP, 14 South African universities have designed and are at various stages (2017 - 2022) of implementing professional qualifications for TVET and ACET lecturers, which include a Diploma in Technical and Vocational Teaching (Dip. TVT), Bachelor of

Education in Technical and Vocational Education (Bed. TVT) and Advanced Diploma in Technical and Vocational Teaching (Adv. Dip. TVT). The ongoing research and development projects under CLEP are thought to have positively impacted the skill of TVET college lecturers.

In the 2021 budget vote, the Minister of Higher Education indicated the desire of the DHET to continue to improve the TVET system to ensure that there is quality teaching by having a competent teaching workforce that would entrench an enterprising culture among the students. This will be done by partnering TVET colleges with universities. The Minister confirmed that there are currently fourteen universities developing TVET college education and training qualifications. This comes at a time when eleven (11) have already been accredited by the Council on Higher Education. At the same time, three (3) are already being offered and the other eight (8) are planned to be offered beginning 2021.

Moreover, working with business organisations, the DHET is developing an online teaching and learning platform for TVET Colleges. The Department has extended an invitation to industry to serve on the councils and academic boards of the TVET colleges to strengthen collaborations that would produce work-ready graduates. The Department has approved a revised curriculum for TVET colleges for 2022.

TVET colleges partner with various funding institutions such as NSFAS and bursary schemes to ensure that their students attend college. According to many colleges, the main challenge in these partnerships relates to the different procurement approaches of involved parties which tended to delay the implementation of the partnerships.

In the 2019/2020 Annual Reports analysis, the following existing partnerships were documented.

*Table 11: List of Existing Partnerships in the TVET College Sub Sector*

Name of TVET College	Name Partner organization	Value of partnership
Tshwane North TVET College	Department of Transport, SB Group, Coastal College and Northlink College, ETDP SETA, ITEC	This partnership focuses on the development of teachers through various skills development programmes, where over 600 beneficiaries have benefited from 2012 to date.

Central Johannesburg TVET College	ETDP SETA FASSET WR SETA	Strengthened TVET systems
Ekurhuleni West TVET College	Grundfos (PTY) (LTD), Jungheinrich South Africa, ERB Technologies, Cargo Motors, Grand Central Motors, Fiat Jeep, Smollan, Fiat Chrysler, Arnold Chatz – Hyda, Arnold Chatz Cars, Thyssenkrupp Industrial Solution, Diplomat Distributors, Chieta, Diesel Innovation, Youth Managers Foundation	Second phase in 2019 benefited 280 Subject Advisors, 9121 teachers and 2676 SMTs from 2676 schools.
Esayidi TVET College	W&AMPR SETA, EW SETA, TETA, LGSETA, NSF, MICT SETA, MERSETA, ETDP SETA, CHIETA SETA, CETA SETA, AGRISETA, UGU District Municipality and Ray Nkonyeni Municipality	Application of 4IR and WIL research recommendations. Establish a working template for the establishment of 4IR laboratories in all TVET Colleges.
Majuba TVET College	Newcastle Advertiser, Dundee Courier, Eyethu Newspaper, Intuthuko Newspaper, New Castle Express, INSETA, AGRI SETA, BANK SETA, CATHSSETA, ETDP SETA, HWSETA, PSETA, WR SETA, Rand Water, Sumito Rubber, VW Newcastle, Arcelor Mittal	Provide WIL
Lephalele TVET College	Limpop Tooling Initiative Programme, WR SETA, EW SETA, TETA SETA, LG SETA, NSF, MICT SETA, Lowveld Bus Service, Provinvial, Artisan Development, Department of Rural Development and Land Reform, SIEMENS, GROVOS, MERSETA, ETDP SETA, CHIETA SETA, and CETA SETA	
Gert Sibande TVET College	WR SETA; M SETA	
King Sibata DalIndyebo TVET College	DHET, SAMSA Fibre Processing and Manufacturing (FP&MSETA), Try Easy, Nelson Mandela Foundation, British Council	
Northlink TVET College	Western Cape Department of Economic Development (DEDAT)	

Mopani TVET College	Youth Development Agency (NYDA). Department of works roads and Infrastructure, Department of Education, Department of Health and Social Welfare, Greater Tzaneen Municipality, Great North Transport Dreyer Earthmoving, PP Mare, Lepelle Water Board	
Tshwane South TVET College	International partners include Industries from China, Japan, Germany, Namibia, USA and Netherlands . Local include 15 of 21 SETAs	
False Bay TVET College	IDZ, John Thomson, Damen Shipyard, Abagold, Quantum Foods, Oceania Group, Sea Harvest, SA Navy, Absolute Rigging, Lemon Leaf Trading and Nautic Africa	
uMgungundlovu TVET College	Jozini, Hluhluwe, Mhlabuyalingana, Mtubantu, and Greater Kokstad Municipalities	
Vhembe TVET College	Department of Correctional Services, the Provincial Department of Education, the Department of Health, the Department of Economic Development and Tourism, Madzivhandila Agricultural College, Eskom, the National Department of Justice and the Expanded Public Works Programme	
West Coast TVET College	AGRISETA, CHIETA, CETA, CATHSSETA, Department of Public Works, Department of Economic Development and Tourism, Department of Labour, Department of Social Development, Western Cape Education Department, South Birmingham College (United Kingdom)	

From Table 12 is it clear that the TVET college sub sector is robust and innovative in establishing and maintaining partnerships that progresses the vision of the sector. However, it would appear that the urban TVET colleges are better suited to establish these partnerships.

Very little comment and literature is available on the partnerships, especially the relationship with industry, in the rural TVET colleges. Extensive partnerships are held with many SETAs.

### 4.3 Proposed New Partnerships

From the previous section, it is apparent that the TVET college sub-sector accepts and appreciates the value of partnering with other organisations and institutions to improve the quality of education within the sub-sector. Therefore, it is imperative that the ETDP SETA leverages of this view and creates new and meaningful partnerships that will facilitate the development of the sub-sector.

Table 12: Proposed New Partnerships

Partner Organisation/Programme	Objective of the Partnership	Benefit of the Partnership
The Dual System Apprenticeship Programme	The programme was implemented in 2017, which made provision for the training of apprentices and the capacitation of facilitators, by providing them with the necessary pedagogical and technical training	The partnership will improve the quality of students making them better suited for employment in industry.
German Handwerkerskammer German Partnership with GIZ	Create exchanges between TVET lecturers and company trainers	The partnership will improve the quality of lecturers which will improve the overall quality of the sub sector.
College SRC's and Marketing Departments of TVET Colleges	Involved in student recruitment, through recruitment drive. Responsible for advertisement, media campaigns, visiting schools attending parents meetings in schools, recruitment drives, and by hosting open days	The SRC and marketing departments of the TVET colleges are at the cold face with potential students to the college. If the ETDP SETA engaged with representatives of these organisations, the SETA will insight into the education aspirations and concerns of future applicants. This will also help the ETDP SETA identify the sort after qualifications and inturn better prepare the TVET colleges to develop training programmes in the right the direction.



SETAs	Facilitates training and WIL.	
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#### **4.4 Conclusion**

There is evidence that through the SETA, TVET colleges have embraced various types of partnership models and continue to explore new partnerships. This has in some instances assisted the TVET colleges to improve its performance and meet its mandate. There is a need though to explore more partnerships and review those long term partnerships to find out if they are working in the best interest of the sector.

## CHAPTER 5: STRATEGIC SKILLS PRIORITY ACTIONS

Below is an overview of the main findings of each the preceding chapters.

### 5.1 Key Skills Findings from Previous Chapters

*Table 13: Summary of Key Findings*

Chapter	Key Findings
Chapter 1	<p>TVET colleges sub sector is mainly reliant on government funding and does not generate adequate funds of its own. Although South Africa subscribes to a funding framework in which costs are shared among the beneficiaries of the higher education sector (mainly government and students), the shrinking availability of fund for TVET colleges implies that public TVET colleges would need to consider alternative revenue generating streams.</p> <p>TVET colleges have increased the employment of females albeit in the less technical occupations.</p> <p>TVET colleges have the potential to make a meaningful impact on the economy of the country through the delivery of high-quality education.</p>
Chapter 2	<p>There are various factors that drive change within the TVET sector. The above-mentioned key skills change drivers discussed in this chapter, the following implications have been deduced:</p> <ul style="list-style-type: none"> <li>• The Impact of COVID-19: TVET colleges have to seek strategic ways to respond to the impact of COVID-19 on jobs and operations. There is an urgent need for reskilling and/or up-skilling of the workforce.</li> <li>• The Fourth Industrial Revolution: ETDP SETA has appointed the University of Johannesburg (which is one of the leading universities in the space of 4IR in the in South Africa) to investigate the impact of 4IR in the ETD sector.</li> <li>• Adequate Supply and Professionalization of TVET Workforce: There is need for the provision of funding to mathematics, science and technology of workplace experience for teacher students.</li> <li>• Adaptable Teaching System: Educators at TVET colleges need to be trained to deal with a diverse student population. Lecturers will need to be coached in empathy and in providing additional support to students.</li> </ul>
Chapter 3	<p>The extent and nature of skills demand vary within and across the TVET colleges sub sector. This data indicated that there were various reasons that have caused some vacancies so be difficult to fill.</p> <p>One of the reasons was that beaucratic procedures that have to be followed have resulted in some vacancies remaining unfilled for long periods of time. To fill some vacancies, colleges need approval from the College Council and DHET which can delay the process. During lockdown the recruitment process was frozen by many colleges as holding interviews was impossible.</p> <p>The lecturing vacancies are difficult to fill primarily because of remuneration. TVET colleges compete for the same skills with the private sector. The private sector has more flexibility in negotiating</p>

	<p>packages to meet the expectation of the applicant. Among the lecturing these were identified as the gaps: lack of teaching qualifications, lack of digital knowledge, lack of exposure to pastel. TVET colleges are actively engaging lecturing staff in programmes to acquire professional qualification and motivating them to get their teaching qualifications for those who are not qualified. The majority of identified 'Hard to fill vacancies' were for lecturers of technical engineering subjects and mathematics.</p> <p>Reasons given for difficulties in filling the finance related vacancies were equally spread across poor remuneration, lack of relevant qualifications and lack of relevant experience.</p> <p>Among the management and HR staff training in labour relations is needed, report writing skills are needed and project management among others.</p> <p>Critical skills gaps at this level included coaching and mentoring, curriculum and materials development, administration and supervision, and subject specific knowledge and qualifications. Technicians and associate professionals lack critical skills in their areas of specialisation including supply chain considerations, office administration, IT, as well as in subject areas where they are required to lecture in their areas of expertise. At student support, clerical support and service worker level, scarce skills listed included careers counselling, employee relations, financial administration, ICT and librarian.</p> <p>Critical skills gaps among clerical support workers included computer skills, financial and other administration skills, records and document management, and skills to use the COLTECH college information system, among others. Among service workers, the very few critical skills gaps listed included Health and Safety, First Aid, customer service, and relevant machine operator skills.</p>
Chapter 4	<p>There is evidence that through the ETDPA SETA, TVET colleges have embraced various types of partnership models and continue to explore new partnerships. This has in some instances assisted the TVET colleges to improve its performance and meet its mandate. There is need though to explore more partnerships and review those long term partnerships to find out if they are working in the best interest of the sector.</p>

## 5.2 Recommended Actions and Conclusion

Based on the findings, the study recommends the following skills development priorities that are informed by the sector based and national priorities and pivotal interventions.

Table 14: Recommended Actions

Actions Required	Recommendation
Improve Data Collection	There are some concerns about the completeness and consistency of the data supplied in the TVET College WSPRs. Some clarification is needed in regard to use of the OFO codes if these are to further

	<p>facilitate analysis of the data. In general, the manner in which the WSPs have been completed seems to represent an appropriate view of the college sector. The most common confusion, which is easily overlooked, was the use of OFO code 2015-231101 – University Lecturer rather than 2015-232130 – Post School Educator, with the occasional suggestion of ‘College of Education Lecturer’ as alternate title. Another confusion, which is symptomatic of the dual qualification requirements of lecturers in this sector, is the smattering of listings of need for professional or technician occupations such as Mechanical Engineering Technician, Water Plant Operator, Foundry Moulder, and Metal Fabricator. In most cases where these were listed, it is clear that the college needs qualified people to teach the skills related to these occupations, rather than to perform the skills as such.</p> <p>In a few instances, the WSP templates were completed in a way that indicated that they were misunderstood, or not taken seriously. For example, one college indicated 2015-263402 - Educational Psychologist as a hard to fill vacancy, with specialisation including Diesel Mechanic, Mechanical Engineering/ Welder.</p>
<p>Ensuring Quality Teaching and Learning in TVET Colleges</p>	<p>A more finely grained categorisation of data on lecturer qualification status would allow more targeted CPD provision. In particular, it would be useful to disaggregate the data to show numbers of lecturers who are:</p> <ul style="list-style-type: none"> <li>• Academically qualified but needing only workplace experience to achieve professional qualification</li> <li>• Having a N6 Certificate, and needing workplace experience in order to attain their National Diploma</li> <li>• Qualified artisans with industry experience and/or lecturing experience</li> <li>• Qualified artisans without industry experience and/or lecturing experience</li> <li>• In possession of other vocational qualifications.</li> </ul> <p>Improving the performance of lecturers in TVET colleges. It is important to increase the number of suitably qualified lecturers in vocational education as well as improve skills development through relevant programmes, including workplace experience to ensure that professional development is maintained and adhered to.</p>
<p>Ensuring effective and efficient service delivery in colleges</p>	<p>Improving administration, management, leadership, governance as well as research capacity to support teaching and training professionals. This includes training in relevant programmes for national and regional officials as well as managers in colleges. The role of research capacity is critical for contributing towards a knowledge-based economy and there is a need to increase the number of researchers and research managers through partnerships to ensure sufficient skills within and across the sector.</p>
<p>Supporting transformation of the Post Schooling and</p>	<p>Ensuring increased access, success and progression within TVET colleges. Key to transformation of the PSET sector is developing and supporting youth development programmes aimed at</p>

Education and Training sector	ensuring that youth employability and empowerment is achieved in order to reduce unemployment and address issues of poverty and inequality.
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These three priorities are reformulated into the interventions proposed below with specific reference to the public TVET Colleges. It should be noted that there is substantial continuity between the interventions proposed, and those proposed in the previous SSP, however the proposals are based on discussions and observations presented in the report.

### 5.3 Proposed Interventions

Interventions	Discussion
1	Continue to provide customised programmes for TVET College Management including principals, deputy principals and campus managers focusing on Management and Leadership development with specific focus on: introduction to financial management and risk management, internal audit, supply chain management, project management, monitoring and evaluation (M&E), human and public relations and stakeholder management; communication; advanced computer skills, planning and budgeting; managing performance; mentoring and coaching.
2	Develop and introduce programmes for TVET College management including principals, deputy principals and campus managers focusing on developing research capacity, the use of data in TVET, strategies for collecting data, conducting Tracer Studies, using data to inform strategic planning
3	Develop and introduce programmes for TVET College management including principals, deputy principals and campus managers supporting the establishment of partnerships with industry, dealing with strategies for collaboration aimed at integrating supply and demand, mechanisms needed for interfacing with external parties and with parties internal to the college
4	Continue to prioritise TVET lecturer specialisation development to address critical skills needs with a focus on mathematics teaching; teaching English to speakers of other languages; ICT management, Physical Science didactics and content knowledge; pedagogic; workplace and industry experience/ work integrated learning and reflective practice
5	Continue to ensuring career development officers are supported and placed once graduated. Develop and

	Introduce skills programme focusing on counselling skills, communication and interpersonal skills, and diversity management
6	Continue to work in partnership to support the training of Workplace Based Experience/Work Integrated Learning for TVET lecturers
7	Continue to develop and introduce customised programmes for Heads of Department focusing on instructional leadership with specific focus on: Curriculum design and planning; supervision and support; and performance management
8	Continue to ensure that the supply of suitably qualified TVET Lecturers is prioritised focusing on specialisations for Vocational Education through bursaries and support for curriculum processes
9	Continue to prioritise the supply of suitably qualified support staff at TVET Colleges such as remedial and special needs teachers
10	Support partnerships with other SETAs with a view to facilitating Work Experience for TVET lecturers and WBL for students; collaborating on research agenda initiatives; developing programmes and resources to help employers manage work experience and WBL placements
11	Support partnerships with other SETAs with a view to prioritising TVET lecturer specialisation development to address critical skills needs with a focus on Electrical, Mechanical and Civil Engineering and Trades
12	Ensuring inclusive TVET and skills training. It is only the TVET system that has a potential to engage new group of learners and those whose training has been disturbed by the pandemic. Shorter and more applied nature of training might be attractive to youth that dropped out during the COVID-19 Pandemic. Reskilling and upskilling of workers who were furloughed or laid off during COVID-19 business shutdown will be important for TVET system to integrate them. Students needs and pathways aspirations need to be identified earlier based on students' circumstances as this will also enable TVET colleges to serve more diverse students TVET programs also need to "consider strategies to address the digital divide, perhaps via partnerships among TVET institutions or with private sector stakeholders".
13	More robust and resilient training systems are needed in TVET colleges. The COVID-19 pandemic has shown us that there's a lack of preparedness and resilience in all education institution, and this includes TVET colleges. Therefore investment in several aspects of TVET systems

	<p>is need in order to avoid future disturbance to teaching and learning. Smart technologies investment will be important in this regard, such as “ development of content for online learning platforms, incorporation of virtual and augmented reality tools in training, and e-portfolio skills accreditation tools, can enhance the learning experience and make it more flexible during regular periods, but also facilitate transition to crisis mode in case of future disruptions to face-to-face teaching”. Capacity building investment, particularly for TVET instructors is important. This will require knowledge and training for TVET instructors to ensure that their skills and knowledge are updated with the current industry requirements and are able to switch from face-to-face teaching to remote teaching without any hitch will enable continuity with much ease, even during crisis. Students need to be engaged in learning through data collection, and this will ensure that that the investment made on curricula design is in line with the students and employers’ needs which is based on the relevance of the training provided. Moreover, lessons learned from the COVID-19 pandemic be incorporated as a form of comprehensive contingency plan that is able to deal with unexpected future events</p>
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