Assessing the management of TVET Colleges in the development of technical skills in the North West Province

TJ Thlomedi

orcid.org 0000-0003-3167-5759

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Supervisor: Mr PD du Plessis

Co-supervisor: Mr JC Coetzee

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Student number: 20954808

ABSTRACT

South Africa's problem of a high unemployment emanates from the poor educational outcomes; the government has formulated a strategy through the National Development Plan to address the skills shortage in the country. Legislative frameworks such as the White Paper on Post-School Education and Training have been introduced in an effort to strengthen educational institutions.

At the centre of all the skills development efforts is the Technical Vocational Education and Training (TVET) sector, Colleges have become an important catalyst to absorb the millions of the NEET (Not in education or employed or training) population. This empirical study aims to assess the management of TVET colleges in the development of technical skills for students in the North-West province. Firstly, an assessment will be made on the management of skills development within that college to determine the effectiveness of the staff development programmes, status of partnerships between colleges and industry, and to examine if Colleges are providing students with relevant skills that meet labour market demand.

A mixed methods approach was adopted in this study and the respondents consisted of all employees working in TVET colleges in the North-West province. Quantitative and qualitative data was collected through a form of a questionnaire. Major findings obtained in this study revealed that skills development programmes do not empower employees to perform complex tasks in an increasingly demanding and rapidly growing TVET sector. Moreover, the study uncovered that there is little engagement between colleges and industry.

The subsequent recommendations include, among others, that there should be elaborate predetermined objectives that form a foundation for the existence of any partnership between a College and other stakeholders.

KEYWORDS: TVET College, skills development management, leadership development, students, lecturers.

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LIST OF ABBREVIATIONS

CHE -	COUNCIL ON HIGHER EDUCATION
DHET -	DEPARTMENT OF HIGHER EDUCATION AND TRAINING
ETDP -	EDUCATION, TRAININNG AND DEVELOPMENT PRACTICES
FET-	FURTHER EDUCATION AND TRAINING
FETI-	FURTHER EDUCATION AND TRAINING INSTITUTE
HR-	HUMAN RESOURCE
HRDC -	HUMAN RESOURCE DEVELOPMENT COUNCIL
IDC -	INDUSTRIAL CORPORATION DEVELOPMENT
IT-	INFORMATION TECHNOLOLGY
ITE -	INSTITUTE OF TECHNICAL EDUCATION
NATED -	NATIONAL TRAINING EDUCATION
NCV -	NATIONAL CERTIFICATE VOCATIONAL
NDP -	NATIONAL DEVELOPMENT PLAN
NEET -	NOT IN EDUCATION, EMPLOYMENT OR TRAINING
NPC -	NATIONAL PLANNING COMMISSION
NSDS III -	NATIONAL SKILLS DEVELOPMENT STRATEGY III
PER -	PERFORMANCE AND EXPENDITURE REVIEW
PSET -	POST SCHOOL EDUCATION AND TRAINING
SAIVCET -	SOUTH AFRICAN INSTITUTE FOR VOCATIONAL AND CONTINUING EDUCATION AND TRAINING
SAQA -	SOUTH AFRICAN QUALIFICATIONS AUTHORITY
SETA -	SECTOR EDUCATION AND TRAINING AUTHORITY
TTT -	TECHNICAL TASK TEAM
TVET -	TECHNICAL VOCATIONAL EDUCATION AND TRAINING
UNESCO -	UNITED NATIONS EDUCATION, SCIENTIFIC AND CULTURAL ORGANISATION
VET -	VOCATIONAL EDUCATION AND TRAINING
WIL -	WORK INTEGRATED LEARNING

CHAPTER 1
ORIENTATION AND PROBLEM STATEMENT

1.1 INTRODUCTION

South Africa has often been labelled as a nation of two contrasting worlds and a vastly unequal society. One world is immensely established, also including an advanced economy. There is also the underprivileged world, with poor quality education and training and lack of critical skills for the economy (DHET, 2016:2). A solution is needed to address these social and economic inequities, through the fast tracking of skills development. The Technical Vocational Education and Training (TVET) sector is one area in particular which is paramount for the development of scarce skills. According to Akoojee (2012:260), the abovementioned problems provide a necessary stimulus for TVET colleges to become a catalyst of the overall response to these challenges.

Policy frameworks such as the “Policy on Professional Qualifications for Lecturers in Technical and Vocational Education and Training” have been established. This regulation advocates that there is a need to effectively manage the skills development of those at the core of the TVET sector, namely, lecturers. It seeks to provide a benchmark that ensures College lecturers are developed and adhere to specific minimum requirements in order to teach, such as a professional qualification (DHET, 2014:5).

1.2 CONTEXT

The White Paper for Post-School Education and Training outline the key objectives in strengthening TVET colleges, which include improving their management and governance, developing the quality of teaching and learning, increasing their responsiveness to local labour markets, improving student support services, and developing their infrastructure (DHET, 2015:12). The attainment of these objectives depends largely on a number of factors, which consist of, implementing skills development strategies which ensure TVET colleges have adequately prepared, and

appropriately trained staff to achievement of these objectives (Hanapi & Nordin, 2013:1057).

This study will focus on the outcomes of skills development management of TVET colleges. One of the strides that have been made to achieve this objective was the introduction of the Policy on Professional Qualifications for lecturers in TVET colleges (DHET, 2014:8). This framework seeks to develop the quality of teaching and learning in TVET colleges. The policy document subsequently paves the way for TVET lecturers to be more effective in the delivery of quality education. It underlines the following:

- Suitable qualification types for TVET lecturers.
- The knowledge mix appropriate for different TVET lecturers.
- Defines the minimum set of agreed-upon competencies for TVET lecturers (DHET, 2014:8).

This policy is particularly important because Hanapi and Nordin (2013:1060) mentioned that the quality of graduates depends largely on the lecturer. They further eluded that a conducive learning environment contributes towards the development of a good personality and an excellent academic achievement. The task of lecturers is important, as they are required to educate the graduates to provide the skills needed which will serve and develop the economy of the country (Hanapi & Nordin, 2013).

Government's commitment to the delivery of quality teaching and learning is evident with treasury investing a large portion of the national budget in basic and higher education (National Treasury, 2017:31). Hani and Masnora (2013:1059) suggest that the quality of lecturers is an important factor that determines the quality of TVET graduates. Lecturers are not only bound to their daily task of educating but their behaviours become examples and models to the students. Therefore, lecturers should have good characters and personal qualities as well as being professionally and socially competent. According to Manyau (2015:19), the problems relating to TVET lecturers' skills development could be directly linked to the ineffectiveness of the TVET college management of training and development.

1.3 CAUSAL FACTORS

Research reveals that the competency of a lecturer, especially in the process of teaching and learning, greatly influences the achievement of a graduate. Previous findings also show that lecturers in educational institutions should be given intensive training and consistent courses in order to increase their skills or competencies in line with the current technology and new information (Ismail, 2012:65).

Quality of teaching and learning are simultaneously held to be the key way in which education can address the inequalities of society; the solution to the country's dire need for skills; an essential means to economic growth (McKenna, 2016:81). Scientific research by the Human Resource Development Council (2014:64) essentially reveals that quality education in TVET colleges is needed for the development of technical skills, not only to supply the labour market with a sufficiently qualified workforce, but also to provide learners with the scarce skill set required in meeting labour market demand. This has the potential to propel South Africa's economy beyond its current state (HRDC, 2014:64).

Additionally, it will ensure that TVET colleges become reputable and the learning institutions of choice. A synthesis report by a technical task team revealed that there is a negative perception of TVET colleges by society, whereby they are being viewed as "weakest" in the total education system. This widely held view creates a situation whereby TVET college graduates are marginalised by recruiters (HRDC, 2014:55).

1.3.1 Educational outcomes in South Africa

The National Development Plan for Higher Education states that higher education has immense potential to contribute to the formation of a socially and economically just society through the implementation of the National Strategic Objective for TVET colleges. This being the delivery of quality education and training, wherein the TVET sector is well positioned to balance the skewed South African economy (McKenna, 2016:72).

It is clear that the role of education in the TVET sector should not be taken lightly in forging an inclusive society with equitable access to quality education. More so, considering there are over three million young people in South Africa who are disengaged from education and work (Field, Musset, and Alvarez-Galvan, 2014:7). This statistic paints a very bleak picture about the current state of education in South Africa.

According to the NPC (2011:7), the developmental challenges need to be addressed in order to achieve vision 2030 of the National Development Plan. It is inevitable that there has to be an effective response to these underlying problems. The National Planning Commission has identified the key issue of unemployment and education as crucial to the realisation of national development challenges (NPC, 2011:7). Poverty, inequality and unemployment loom large in the national arena, associated unsurprisingly with a discourse of skills deficits and shortages in key areas of the economy (NPC, 2011:8).

This has been most clearly outlined in Figure 1.1, illustrating the Diagnostic Report released by the NPC in early 2011 identifies educational outcomes as a central and key feature of the challenges facing the country (NPC, 2011:9). It validates that the challenge of poor and ineffective education outcomes is central to achieving economic growth.

Figure 1.1: Nature of developmental challenges in South Africa

Source: NPC (2011:7)

1.4 IMPORTANCE OF THIS STUDY

There is consequently a risk that, as an emerging sector without firmly established parameters of practice, TVET colleges will undertake or be pressured to undertake too wide a range of functions, and dilute the effectiveness of their contributions overall (CHE, 2013:44). Findings from previous studies by Potgieter and Coetzee (2012:9) indicate that higher education institutions should consider identifying the competencies they deem necessary for improving the effectiveness in the specified capabilities.

Therefore, an assessment of TVET college management in the development of technical skills is important as it will take us closer to determining whether these colleges plays a significant role in preparing students for work.

1.5 PROBLEM STATEMENT

In a country where poor quality education and youth unemployment is especially prevalent, the TVET sector is under pressure to bring tangible results that will see

South Africa out of this desperate situation. Consequently, it is against this backdrop that the following problems have emanated.

An audit of the TVET colleges in the Eastern Cape found that only 38% of lecturers "are confident in their abilities to fully impart practical skills to learners' and that 34% were in urgent need of a 'practical up-skilling intervention" These percentages are indicative of a wider crisis in the sector around the capacity of the staff in Colleges to teach their subjects, and specifically the practical components of the curriculum (SAQA, 2016:15).

Furthermore, TVET colleges have been plagued by low throughput rates, high dropout, low progression and completion rates among students. This is a symptom of ineffective teaching and learning that is complicated by poor skills development management strategies (Mgijima, 2014:359).

In recent times the lecturers' own qualifications and professional status have been subject to on-going discussion among stakeholders (SAQA, 2016:55). This is partly due to the failure of public TVET colleges to increase output, notwithstanding having been receiving huge funding support from the government in recent years. The TVET colleges management was accorded greater autonomy, more power and more responsibilities. Despite this, it has been interesting to note that TVET colleges find themselves in a predicament of poor performance outcomes (Muswaba & Worku, 2012:154-155).

The recent increase in student enrolment without corresponding increase in lecturer recruitment has led to deterioration in lecturer-student ratio from 1:20 in 2002 to a national average ratio of 1:55 in 2012. The challenge in colleges is compounded by the low skills level of lecturers, with the majority not having current industry knowledge (HRDC, 2014).

In a qualitative study conducted by Hanapi and Nordin (2013:1059), one of the key findings show that the majority of respondents stated that lecturer's incompetency is one of the factors that cause the unemployment problem among graduates. Furthermore, vocational education is expensive both for individuals and for the

government, so getting the expected quality education is crucial, as the Post-School Education and Training sector is one of the most important mechanisms for addressing the high levels of youth unemployment (HSRC, 2016:108).

This alone should be a strong call for DHET to ensure that quality education is available (DHET, 2014:9). This is important particularly for TVET colleges, whereby the level of professional education and training of staff is lower than in universities. And for this reason, much has to be done to address the development of TVET college staff as a whole. Colleges should have clearly defined and communicated staff development targets and programmes, both formal qualifications and professional development programmes (DHET, 2016b:35).

The fifth outcome of the National Development Plan states that there is a need for a skilled and capable workforce to support an inclusive growth path; as such TVET college graduates should have the skills and knowledge to meet the present and future needs of the labour market (NDP, 2014). Human Resource Development Council (2013:55) conducted a study on entrepreneurship education in TVET colleges and concluded the following:

- Student participation is limited and teaching methods are ineffective.
- Teachers are not fully competent, mainly lacking practical experience.

This study goes a long way in identifying the shortcomings and the TVET sector's inefficiencies. Against this backdrop, the NDP requires that by 2030 at least 30 000 qualified artisans are produced per year. Currently the country produces an average of 12 000 qualified artisans per year (The Presidency, 2014). This ambitious target is more than double the number of artisans currently being produced in the TVET Colleges.

Sheppard and Ntenga (2015:20) concluded that TVET institutions are facing serious governance and management problems such as, among other things, management of information, Information Technology (IT) infrastructure, financial management and lack of financial accountability. This then raises serious questions of competence in the management of the TVET colleges. Research has identified these deficiencies as a focal point for development in management and should therefore be addressed.

1.6 RESEARCH OBJECTIVES

This study is based on identified primary and secondary objectives. They are clearly and concisely defined as they will direct the researcher as to what is to be accomplished.

1.6.1 Primary objective

To date, the development of management competencies in higher education institutions, including TVETs has received very little research attention in South Africa (Potgieter and Coetzee, 2010:3). The objective of this study is to assess whether TVET colleges are effective in achieving its key strategic mandate of delivering quality education, this being in line with the National Development Plan and the White Paper on Post-School education and training. Therefore, the primary objective aims to assess the management of TVET colleges in the development of skills for college staff and students.

1.6.2 Secondary objectives

In order to achieve the primary objective of this study, the secondary objectives to be realised are:

1. Are colleges providing students with relevant skills that meet labour market demand?
2. What are the outcomes of skills development management in TVET colleges?
3. How effective are staff development programmes in TVET colleges?
4. What is the status of partnerships that have been formed between TVET colleges and industry?
5. Does the college provide a wide range of learning experiences for students?

1.7 RESEARCH METHODOLOGY

Methodology is the way in which data will be collected from the study population, sampling methods, measuring instruments, the data analysis of both quantitative and qualitative approaches.

1.7.1 Literature/theoretical study

A literature and theoretical review will be conducted and special attention will be given to skills development through identifying global best practices in TVET educational institutions. Additionally college performance based on efficiency rates will be analysed and relevant legislative developments will be reviewed. In the context of what DHET is aiming to achieve through their strategic plan, the researcher will furthermore revisit literature that looks in to the effect of technology on skills demand management, analysing the global trends in skills development, pay closer attention to the financing of TVET colleges, growth of the TVET sector and leadership development in TVET colleges.

1.7.2 Empirical study

To accomplish the research objectives of this study the researcher will utilise a mixed method approach whereby printed survey questionnaires will be sent to TVET college teaching staff in the North-West Province. A questionnaire will be formulated as to receive independent responses from individuals surveyed. There are three public colleges, namely, Vuselela TVET college, Orbit TVET college and Taletso TVET college, will be approached to participate in this study. Timeous requests will be sent to the above mentioned colleges.

Primary data will be collected from the TVET colleges that wish to participate in this study. The researcher anticipates at least *N=100* respondents. A quantitative method and descriptive statistics will be used to analyse the data. A four-point likert-type scale will be used to determine areas of strength and weakness as perceived by the respondents.

Interview questions will also be recorded in the survey and transcribed for a subsequent qualitative analysis (Maree, 2009:55). Semi-structured questions will be formulated and analysed through coding. The results of the data analyses will be used to draw a conclusion and recommendations.

1.7.3 Limitations of the study

This study is only restricted to TVET colleges in the North-West Province. Additionally, little research has been done in this emerging TVET sector in South Africa, therefore limited literature is available for theoretical review.

1.8 LAYOUT OF THE STUDY

Chapter 1: Orientation and Problem Statement

It is an introductory chapter with an orientation, a problem statement, primary and secondary research objectives, including the delimitations and definition of key concepts used in this research.

Chapter 2: Literature review

Chapter two presents the literature review and the theoretical framework underpinning this study.

Chapter 3: Empirical Study and Data analysis

Chapter three outlines the research design, approach, methodologies, instruments, and sampling procedures used in this research

Chapter 4: Conclusion and Recommendations

Chapter four presents the empirical findings obtained in this research. All the quantitative and qualitative findings are summarised and presented in a clear and comprehensive manner. It provides recommendations as well as the concluding statements.

1.9 CONCLUSION

A nation of two contrasting worlds is the reality South Africa finds itself in. The instituting of legislation changes and development targets sends a very clear message in addressing this issue. It shows the urgency to improve efficiency and effectiveness in TVET colleges. Effective skills development management is undeniably an important aspect if the goals outlined in the National Development Plan are to be realised.

1.10 CHAPTER SUMMARY

The college sector is well-positioned to contribute to the much-needed reduction in youth unemployment. This study will reveal what needs to be done in terms of improving management, the development of lecturers in order to improve the efficiency of TVET institutions. The scientific research neglect of colleges in South Africa has given rise to this study.

CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION

The South African Technical Vocational Education and Training (TVET) colleges have a mandate in terms of the National Skills Development Act to providing education and training (DHET, 2012:12). The literature on skills development management has acknowledged the pivotal role of TVET colleges in preparing young students for employment; hence the focus will pay attention to the skills development within TVET colleges that support staff in their diverse tasks (Sharma, 2012:240). This will enable the reader to fully understand the staff development taking place at TVET colleges and their potential to develop students in attaining scarce skills. The following theoretical study will give an overview of the landscape of the TVET sector with respect to all significant changes that have taken place, global strategies used for successful implementation of skills development and finally unpack the dynamic role of TVET Colleges in skills development.

2.2 AN OVERVIEW OF TVET COLLEGES

The Republic of South Africa has a Post-School Education and Training (PSET) system that provides education and training through the 50 TVET colleges with 248 campuses on a range of courses. These courses consist of; Report191/NATED (National Technical Education) N1-N6, National Certificate (Vocational) and Occupational Qualifications (SAQA, 2016:10). The TVET colleges provide a pathway for the development of scarce technical skills for students. Unlike basic education, TVET refers to a range of learning experiences that occurs in a wide variety of settings and is focused on developing the skills needed for certain occupations (Arthur-Mensah & Alagaraja, 2015:836). Artisan is a generic word used to describe technically skilled craftsmen, such as boilermakers, fitters, turners, diesel mechanic, electricians, welders, millwrights and carpenters. Colleges focus on these specific trades, among others, instead of general academic education and play a significant

role in preparing young people for work, developing the skills of adults and responding to the labour market needs of the economy (Tikly, 2013:25).

2.2.1 Legislative developments in the TVET sector

The colleges also intend to provide a basis for higher education through articulation of education programmes as well as to facilitate the smooth transition from learning to the world of work (Papier, Needham, Prinsloo & McBride, 2016:85). Supported by this is the FET College Act (Act 16 of 2006) which states that TVET colleges should: enable students to acquire knowledge, practical skills, and applied vocational and occupational competence, in order to enter employment; a vocation, occupation or trade; or higher education (ETDP-SETA, 2013).

It has also been argued that it was much more cost effective to provide basic academic education than vocational education, and the return on investment for basic education was much better than investments in TVET (Tikly, 2013:22). Based on this argument the legislative framework of the TVET college sector has undertaken noteworthy alterations.

Public FET (Further Education and Training) colleges have been retitled TVET colleges in terms of the Further Education and Training Colleges Amendment Act, 2013 (Act No. 1 of 2013). The Act came into effect in 2014 by order of the President of the Republic of South Africa (South Africa, 2014). This is all in an effort to align South African vocational education with International standards. TVET, or Technical and Vocational Education and Training, was born from the 1999 UNESCO Second International Congress on Technical and Vocational Education. TVET focuses on the "acquisition of knowledge and skills for the world of work" (DHET, 2015:13). Unlike FET, TVET is a much more direct articulation, which profoundly links education to work. This move merely signalled a key development in the South African vocational education space.

Further legislative frameworks including, the White Paper on Post-School Education and Training of 2013, which among other things aims to expand and strengthen the TVET system through building partnerships with employers and other stakeholders,

increasing the responsiveness of colleges to local labour markets, improving placement of college graduates in jobs, and creating a mix of programmes and qualifications that will meet the varied needs of students (DHET, 2013:12).

Salleha *et al*. (2015:27) are of the view that this is in response to the dynamic and ever-changing world of work, that has made it essential for the TVET sector to be more responsive to the needs of the labour market. It is the students who will ultimately have to face and engage the working environment, and therefore must be able to demonstrate the ability to perform in accordance to standards that will be under constant scrutiny (Hutton & Dixon, 2016:110). TVET colleges are therefore bound by legislation to provide a unique and practically based education that is closely related to job outcomes.

2.2.2 The impact of technology on skills demand and TVET colleges

According to Danial, Bakar and Mohamed (2014:117), the advancement of technology has had an increased effect in the types of available jobs, and changes in the world economy require people to adapt quickly to the needs of the world of work. Existing literature also indicates that the integration of technology is an essential component to augment TVET college programmes. It is further noted that for vocational studies, the exposure to and experience with modern and advanced technologies easily translates into marketable skills for graduates entering the labour force (Oroni, 2012:15).

The continued reliance on technology requires that colleges be flexible in their design to include and allow for new technological devices and methodologies to deliver teaching and learning (Danial *et al.,* 2014:118). The impact of technology suggests that TVET colleges ought to continuously initiate staff development programmes that rigorously enable employees to become accustomed to such technologies. However, the downside to the rapidly changing technologies means that equipment, study material and machines are rendered outdated relatively quickly (Schultz, 2016:150).

2.3 INTERACTION WITH INDUSTRIES: SOUTH AFRICA, INDIA, CHINA, SINGAPORE AND GERMANY

Sheppard and Ntenga (2015:248), point out that private business and governments from many parts of the world are cognisant that South Africa suffers from an unavailability of skills. It is generally accepted that there is a shortage of teachers qualified and competent enough to teach specific subjects or learning areas primarily mathematics, the sciences, technology and languages (SAQA, 2016:128).

In 2015 the World Competitiveness Yearbook categorised South Africa to be 52 out of the 58 countries profiled for availability of skilled labour. The concern is that the poor development of scarce skills training affects South Africa's competitiveness in the world economy (Sheppard & Ntenga, 2015:260). Evidently, no one is satisfied with the volume of skills training taking place in South Africa (Archer, 2012:158). This resulted in companies importing skilled labour from as far away as China and the Philippines (Kahn, 2017).

Although emerging markets economies has been the pillar of global growth in recent years, this momentum is decelerating due to countries struggling to sustain their rates of growth (IDC, 2014:2). Following this point of departure will be a skills development overview of ~~the~~ India, China, Singapore, Germany and South Africa.

2.3.1 India

The Indian economy has experienced rapid growth over the recent period. However, the low level of education and formal training of the workforce are matters of concern. India's informal sector employs nearly 90% of the workforce, most of whom are either non-skilled or inadequately skilled, and there is very little investment or opportunity for formal skilling (Jamal & Mandal, 2013:590).

To respond to the existing skill gaps and to identify skill needs, a National Policy on Skill Development has been formulated. The objective of this policy is to create a workforce empowered with improved skills, knowledge and internationally recognised

qualifications to gain access to decent employment and ensure India's competitiveness in the dynamic global labour market. It aims at an increase in the productivity of the workforce both in the formal and informal sectors, seeking increased participation of youth, women, and other disadvantaged sections and to synergise efforts of various sectors and reform the present system. At present, the capacity of skill development in India is around 3.1 million persons per year, the plan envisaged to increase capacity to 15 million annually (Jamal & Mandal, 2013:593).

2.3.2 China

Wang (2012:234), elaborates how TVET is of key interest in Asian countries. Most countries in the region regard TVET as being pivotal to their economic growth prospects, as it is intimately linked to job creation. For instance, China has been continuously expanding the scale of vocational education. From 2005 and 2008, vocational secondary school enrolments increased by one million people annually (Wang, 2012:211). Likewise, South Africa has witnessed substantial growth in the TVET sector but has lacked to see results similar to that of China (Akoojee, 2016:23). South Africa faces many challenges of strengthening education institutions with low capabilities, weak linkages, misalignment between the sector and the labour market (Kruss, 2012:1).

Wang (2012:211) elaborates further about the methods used by the Chinese to upskill their people, which have resulted in over 95% of the students becoming employed after completion of their technical studies. Some of the key strategies include the following:

- Combining learning and practice, not only does learning take place in the classroom but has focused its vocational education directly to employment.
- Cooperation between schools and enterprises which gives opportunities to students to learn while working.
- Emphasising practical and vocational competency skills
- Education reform, legislative changes to allow better response to change (Wang, 2012:212). However, Motala and Vally (2014:4) have cautioned that the expectation that legislative changes through policy reform can, on their own,

resolve the lack of skills, is misleading and short-sighted. Essentially, it takes more than educational reform to affect positive change.

2.3.3 Singapore

According to Parry and Hayden (2015:68), the Singapore government has invested heavily in education and training, especially in vocational and technical education under the Institute of Technical Education (ITE). Governments are investing substantial sums in education because they believe that it will produce better leaders and more effective school system (Harun & Mom, 2014:28). ITE is a network of colleges offering career-based vocational training that leads to technician-level employment in the fields of engineering, Information and Communications Technology (ICT), health sciences, business and business services. ITE has spun around the public perception and image of ITE. Today, the ITE education system is extensively recognised internationally for its relevance and excellence (Van Broekhuizen, 2015:14).

Singapore is, without much doubt, the leader in terms of technical skills development in Southeast Asia – as it appears also to be in terms of cognitive skills development. Its achievements in this regard are widely acknowledged (Van Broekhuizen, 2015:15). The ITE is successful for many reasons. It is well funded by the State, its programmes are popular and well delivered. There is a mix of classroom-based and experiential learning. Industry partners play a significant role in identifying the skill needs that should be addressed in the curriculum (Parry and Hayden, 2015:70).

2.3.4 Germany

German vocational education and training (VET) system has an exceptional reputation in many countries worldwide. Its unique selling points are founded on a dual system vocational training structure: close collaboration between government and industry, learning within the work process, the involvement of the social partners which results in broad societal acceptance of national norms and standards (European Commission, 2014:12).

About 500 000 businesses offer students workplace training every year on their own accord, solely because they have confidence that this guarantees them a source of well-trained personnel in the future (Papier, 2012:216). The German high quality VET systems that have a strong element that link practice, knowledge, skills and competences, which students need for a successful first step into the workplace (European Commission, 2014:16).

Germany's technical education system links the practical and theoretical scope and involves public and private stakeholders. The dual training system has proven to be a successful model. Crisonà (2017:105) alleges that although job roles descriptions and TVET curricula may never totally overlap, the process maintained by the alliance to make them as close as possible is relevant for the design of TVET curricula that aim to support the transition from training to work.

2.3.5 South Africa

According to Kruss (2012:2), vocational training institutions have failed to form close co-operation with industry, mainly due to the diverse historical trajectories in stating that there can be no denying with regards the country's deep rooted divide in society. That has cascaded into poor educational-industry collaborations and a labour market that systematically favours trainees drawn from certain racial groups (Kruss, 2012:2).

A research study conducted by Papier (2012:200) indicates that the responses received from South African TVET college students suggest that their expectations of practically oriented training are not met by many of the college programmes. This is as much owing to a theoretically dominated syllabus, as it is to the lack of coherence between colleges and industry. Acquiring adequate places of work keen to offer students workplace experience remains a stumbling block (CHE, 2013). Many colleges face infrastructural and resource challenges associated with the delivery of practical skills in the workshops, and there are high costs associated in the practical skills training components (HRDC, 2014:110). Similarly, South African college students suffer from a lack of workplace exposure and the related skills and competencies are factors contributing to the skills gap (DHET, 2014c).

2.3.6 A summary to the approaches to skills development

The discussion above outlines the different approaches to skills development through vocational education. Although the abovementioned nations have a different uptake in culture compared to that of South Africa, available literature makes it vividly clear that skills development through vocational education requires stakeholder involvement. Additionally it reveals that the policy context for skills development is different in advanced countries from those of developing countries (Arthur-Mensah & Alagaraja, 2015:847).

2.4 GLOBAL PERSPECTIVE ON SKILL DEVELOPMENT

A review of 46 developing countries in the Arab States, South and West Asia, and sub-Saharan Africa conducted for the Education for all Global Monitoring Report displays that most countries do not have a National Skills Development Strategy that unambiguously speaks to skills shortage (Marope *et al.,* 2015:45). The South African National Skills Development Strategy progress report (NSDS III, 2013:28) is a notable exception as it is a comprehensive plan that gives clear articulation of the skills shortage, but faces plenty of challenges in implementation (Field *et al*., 2014:277).

Alternatively observing other regions from a global standpoint, Latin America has created strategic alliances whereby private business, the state and labour have joined hands, which has enabled young entrepreneurs to gain access to funds from a range of sources. Scholars argue that the individual's environment, resources and processes can have a more profound influence on their intention to become an entrepreneur (Solesvik *et al.,* 2014:683). By 2012, their skills development programmes had trained more than 57,000 young people. It has accomplished remarkable results, including growing the likelihood of participants creating their own new business venture by between 75% and 88% (Severo, 2012:86). Alagaraja, Kotamraju and Kim (2013:267), identified four essential components of a TVET system: skills, education, knowledge and innovation. The Latin American vibrant TVET system has aligned these elements to produce a self-reinforcing virtuous cycle of growth and development.

Skills development that is custom-made to the local context through an evaluation of the local market and its needs is more likely to be successful (Field *et al*., 2014:307). Due to the fact that a widespread skill development resulting from local-based education raises knowledge acquisition across skills and the education spectrum, all of which set the stage for continuous expansion (Alagaraja *et al*., 2013:268). Moreover, the Latin American skills development programme has been successful because it builds on partnerships involving the government, local communities, labour and business (Field *et al*., 2014:307). Rassol and Mahembe (2014:23), propose that the six principles inherent in a successful skills development planning include; relevance to the labour market (one that meets employer's needs and expectations), access for trainees, quality of delivery, standardisation, inclusion of soft skills, and secure and uninterrupted funding for the system.

2.5 SKILLS DEVELOPMENT STRATEGIES IN SOUTH AFRICA

Skills Development in South Africa is governed under the Skills Development Act 97 of 1998 (South Africa, 1998). This act has continually been amended quite a few times. The ministry of Department of Higher Education and Training (DHET) is responsible for higher education and vocational education through TVET colleges. Skills training and development is an imperative factor as it ensures that the country's present labour force is continually improving, contributes in bridging skills gaps, assists the country in abiding to universal best practice and inspires entrepreneurial capacity (Van den Barselaar, 2017). Fostering greater levels of trained professionals within the TVET system is an important component of a milieu of critical conditions required to successfully drive innovation, creation of new ventures, and ultimately economic growth (HRDC, 2013:13).

This is supported by the global education and training comparative studies and research, which indicate the education and training systems which have a robust technical, vocational and entrepreneurial element tended to persist in the worst economic downturns and have frequently presented quite low levels of unemployment (Cloete, 2013). Additionally, they tend to recuperate more quickly from damaging impact arising from erratic global economic slumps as a result of the

forever present volatility in the international market and political uncertainty. There is a clearly established link between economic resilience and the type and nature of an education and training system a country chooses (Marope *et al.,* 2015:85).

These findings advocate that the expansion and resourcing of vocational education is of critical importance for economic growth (Manana, 2017). Henceforth DHET has initiated the Work-Integrated-Learning (WIL) programme which has emerged as a focal point that needs support from the Sector Education and Training Authorities (SETA), which will encourage colleges to establish college-industry partnerships and align the general vocational curriculum closer to the needs of industry (Kgobe & Baatjes, 2014:4). Despite the country's diversity, Tang (2015:8) reveals that it is remarkable how much consensus exists around the idea that skills development through vocational education is a crucial vehicle for human progress and driving employment creation.

2.6 THE CURRENT STATUS OF TVET COLLEGE-INDUSTRY PARTNERSHIPS

The State expects that TVET colleges will become the cornerstone of the country's acute skills shortage. Hence, the partnership between the employers and the colleges is integral to advance skills development (Nzimande, 2015:9). In 2014 the Higher Education Ministry signalled the need for aligning of TVET colleges to the world of work saying *"*it is no longer negotiable". Crucially, this means colleges and employers join forces for the prosperity of college students as well as the economy at large (Nkosi, 2014).

The relationship between colleges and industries are weak. This poses a problem as some students are unable to find workplace experience, which is required to complete National Diplomas. Moreover, the workforce is not keeping up with the skills needed to remain competitive in an increasingly knowledge-based economy. There is a need to ensure the continuous upgrade of skills through college-industry collaborations, to help ensure a measurable increase in the intermediate skills pool, especially in artisan, technician, and related occupations (Manana, 2017:2).

In 2013 the Human Resource Development Council (HRDC) established a Technical Task Team (TTT) to examine the weak linkages of college and industry partnership. This report revealed that the overriding focus has tended to be on the breadth or number of partnerships from a statistical perspective, rather than the qualitative dimensions, modalities and outcomes of partnerships. This has meant that the intended outcomes such as creation of work-integrated learning (WIL) placements, employment, curriculum and infrastructure development could not be achieved (HRDC, 2014:5). This is in line with what the NSDS III progress report (NSDS III, 2013:86) has identified as a barrier to progress in term of skills development.

The European Commission (2014:4) has identified that it is clear that the problem of ties between TVET colleges and industry is being paid high-level attention and intervention from the national Government. It is however the implementation thereof which needs to be reconfigured. The department (DHET, 2014) has noted that securing suitable placement for students is a challenge for all colleges, and finding appropriately prepared learners for specific occupations is equally a challenge for employers (DHET, 2014).

Rasool (2014:37) recognises the challenges of TVET-industry partnerships; hence the HRDC had conducted this review of TVET college partnerships. The review established that there is no clearly distinct regulatory framework for college partnerships with business and proposed the subsequent recommendations:

- the DHET in consultation with South African Institute for Vocational and Continuing Education and Training (SAIVCET) should develop TVET partnership guiding principles and a policy framework;
- the document ought to comprise of a set of best practice guidelines and code of conduct to assist colleges and the participants with launching partnerships;
- the partnership structure should have applicable policies and procedures established founded on the framework to direct partnership formation;
- the course of action should offer advice on how to implement and structured partnerships, primarily in areas such as funding, access, parity and procurement. And the process of developing the regulatory framework should be transparent and allow full participation of all prime role players concerned (Rasool, 2014:38).

The HRDC together with DHET (2012) outlined that partnerships are an important vehicle that should have a clear direction, so as to enable involved stakeholders to mutually benefit from the relationship. Furthermore, TVET colleges can do the following:

- communicate with universities so that those who select a vocational training direction can later continue their studies at university level if they choose to do so;
- be responsive to the needs of the employers by continuously engaging them to create tailor-made programmes where possible in addition to their core programmes;
- colleges and SETAs must work hand-in-hand, which will play an increasingly significant role in connecting colleges with employers (DHET, 2012).

Policy interventions to date have tried to place colleges primarily to offer a sound general-vocational qualification to a critical number of school leavers in preparation for universities or for entry-level employment and further training in the workplace (Gewer & Akoobhai, 2012:90). These authors are of the view that colleges are challenged with offering mainstream pathways to work and further learning. These challenges are a result of external factors, such as the slow growth of the South African economy, geographic location and systemic issues. They are also caused by numerous internal factors such as:

- uneven relationships with SETAs and higher education and;
- negligible tracking systems for learner progression. According to Gaebel *et al*. (2012:9), tracking students has become increasingly important for colleges due to the growing enrolment numbers and it is therefore an important criterion for monitoring graduate entry into the labour market;
- poor linkages with local industry;
- and finally, the failure of the TVET Colleges to direct learners towards courses of study which are likely to maximise their natural talents (Marock, Hazell & Akoobhai, 2016:110).

Finally, Van den Barselaar (2014), states that if South African businesses invest in building a highly-skilled labour force, through consolidation of links with educational

institutes, it will also be able to successfully scale down the reliance on overseas expertise in skilled areas, which is central in lowering the unemployment rate. In addition, it is imperative that TVET colleges stay knowledgeable about how the country's business landscape is evolving and what kind skills are in demand. This will support in making the most of opportunities that are presented in terms of skills development and training (Van den Barselaar, 2014).

2.7 FACTORS THAT AFFECT SKILLS DEVELOPMENT MANAGEMENT IN TVET COLLEGES

This discussion sets off with an in depth exploration of student enrolment numbers, financing of colleges, efficiency rate in terms of throughput rate and certification rate. All these factors are critical to the performance of the TVET colleges and skills development management.

2.7.1 Student enrolment numbers in TVET colleges

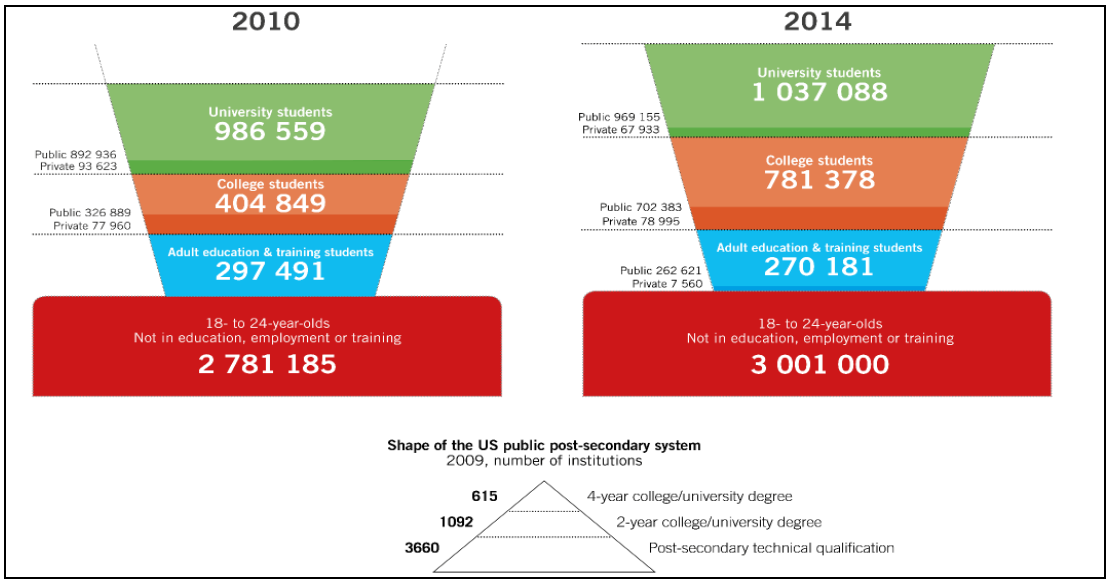
Around 2010 the country had what was called an 'inverted pyramid', Figure 2.1 shows that virtually twice the amount of students in universities. Ideally DHET envisioned to have these figures reversed, to match the USA post-secondary model. This will eventually see more students in the TVET system than in Universities (DHET, 2014b).

Perold *et al.* (2012:1), suggests that the learner flow-through rate is around 50% which is measured by the percentage of learners who enter Grade 1 and finish Grade 12 within the 12 year period. Henceforth, with reference to Figure 2.1, in 2014 the NEET (not in education, employment or training) population was found to be just over three million, mainly consisting of those between the ages of 18- to 24-year olds who drop out of school mostly between Grades 9-12 (DHET, 2016b:64).

These discoveries ignited renewed efforts to bring young people into education through financing of studies but at the same time TVET college facilities needed to be revamped and its staff compliment also needed to be improved in order to house increased numbers of students (Papier *et al.,* 2016:84). Improving staff supply is not

simply about getting sufficient numbers of qualified lecturers into colleges, but rather about getting sufficient numbers of adequately prepared, appropriately trained and competent lecturers (Van Broekhuizen, 2015:14).

Figure 2.1: South African Post-School Education and Training system



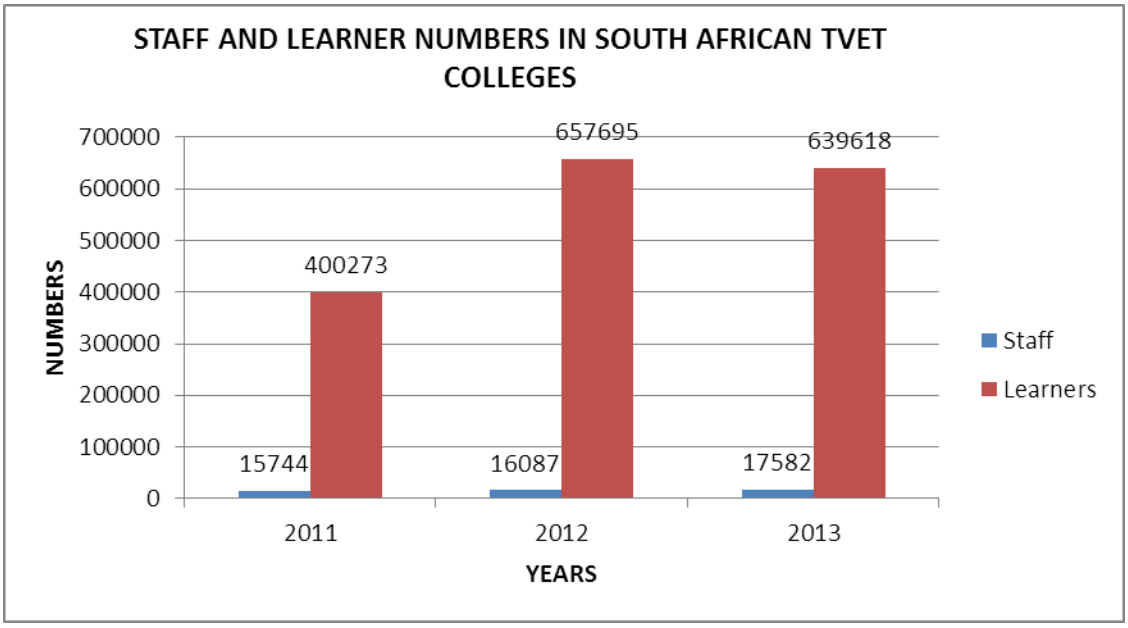
Source: DHET (2016)

Jacobs and De Wet (2014:85) have criticised higher education ministry enrolment targets indicating that it will lead to reduced quality which will fail to meet the country's real needs. Setting enrolment goals for the system, and measuring its success in meeting these, is a problematic basis. This is especially true as increasing graduation rates is the system's most critical challenge. Much more planning should be dedicated to ensuring that the TVET system produces quality graduates whose skills enable them to obtain employment, rather than merely increasing enrolment numbers (Jacobs & De Wet, 2014:85). Moreover, when colleges are incentivised to enrol additional students without being simultaneously incentivised to increase performance; there is a risk that efficiency rates will suffer (DNA Economics, 2015:7).

Equally so, colleges experiencing this type of rapid growth and expansion needs to ensure that they recruit sufficiently qualified staff, set up skills development strategies to continuously develop its staff to guarantee a competent workforce. The afore-mentioned developments present unique opportunity for TVET college employees to

effectively perform their complex tasks within an increasingly demanding work environment (Schultz, 2016:144).

Figure 2.2: Enrolment numbers in TVET colleges



Source: Akoojee (2016)

In light of the outlined challenges, there are plans to increase the TVET college system to 2.5 million student admissions by 2030 as set out by the National Development Plan (NPC, 2011). Nonetheless, much criticism has been directed to setting enrolment goals for the TVET colleges, and analysts (Field, Musset & Alvarez-Galvan, 2014:14), predict that assessing its achievement in meeting these targets is a problematic basis for planning. This is particularly correct as increasing the efficiency rate is the system's most important responsibility. Far more planning should be devoted to ensuring that the skills development strategies are implemented to improve performance, rather than simply increasing enrolment figures (Field *et al.,* 2014:48).

2.7.2 Financing of TVET colleges and its impact on skills development

The TVET colleges in South Africa are financed in terms of a budget formula provided to them by the DHET, and in terms of which they are funded to offer the certified curricula (NATED and NCV). Incorporated in the funding method is the

number of lecturing and support staff with respects to 'staff establishment' ratio determined by the Department. The lecturer staff establishment is determined by student enrolments per college according to an 'optimal' teacher to student ratio (one teacher to 30 students). This ratio is problematic for TVET colleges since all programmes they offer cannot accommodate this norm, for instance, workshops are limited according to the equipment available as well as safety regulations, and would require a much lower teacher:student ratio, e.g. 1:15 (DHET, 2014b).

The current funding norms and standards need to be reviewed in order to be flexible enough to allowing colleges to receive optimum funding. Table 2.1 reveals that only 11% of the higher education budget is allocated to TVET colleges (DHET, 2016).

Table 2.1: Expenditure on the Post-School Education and Training Sector

Sector	Amount (R'000)	Percentage
TVET Colleges	R8 501 243	11%
SETAs	R10 456 134	14%
Universities	R52 860 091	71%
Community Colleges	R1 731 890	2%
Other institutions (incl. DHET)	R426 536	1%
Total	R73 975 894	100%
Total as % of GDP	1.70%	

Source: DHET (2016)

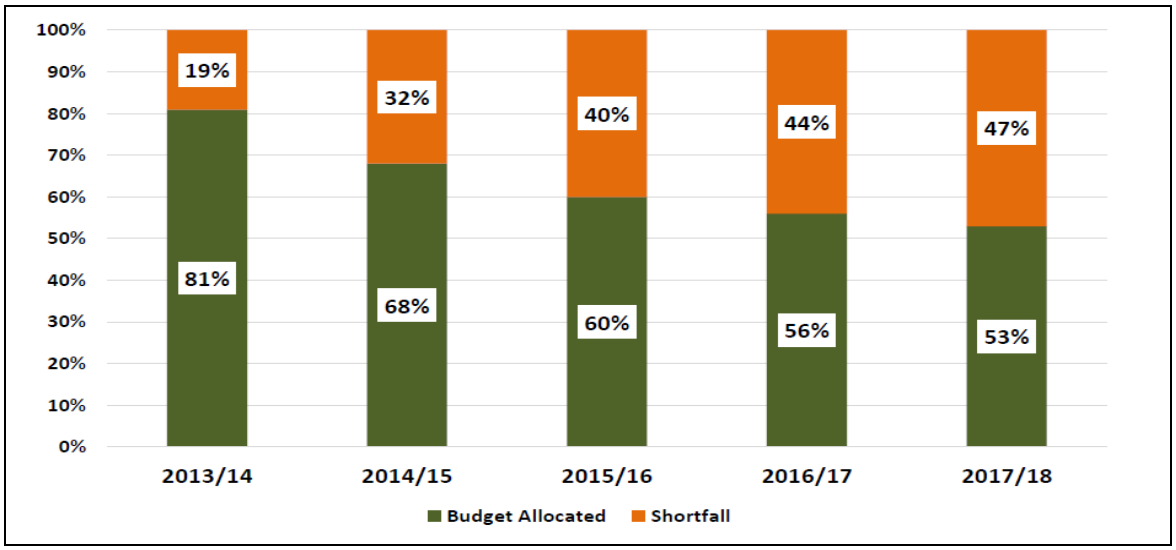
Be that as it may, Government needs to reprioritise this expenditure pattern if it intends to reach its expansion target for TVET colleges. Sheppard and Ntenga (2015:251), resolved that funding of TVET colleges is unbalanced and inadequate and that more financing needs to be assigned to TVET colleges within the provincial budget.

That being said, there are added imbalances with the distribution of these monies to the different provinces. These disparities are also reflected with the difference in performance of the provinces in terms of certification rate. It is impractical to expect an effective and fully functional provincial TVET system, when there is no level playing field with regard to allocation of funding for the different provinces (Sheppard & Ntenga, 2015:252). Given that college certification rates are highly variable

between different programmes, different colleges and different provinces. It presents a challenge in terms of setting up TVET college skills development strategies at national level (DNA Economics, 2015:22). In light of this finding; the policy on professional qualifications for lecturers in technical and vocational education and training, for instance, might not be able to fully address key training gaps.

According to DHET the Post-School Education and Training (PSET), the TVET sector in particular is under-funded and unless strategies are reformed, the problems cited could adversely affect skills development training efforts. Figure 2.3 looks at the current and past estimates of the TVET college budget deficit. This present a chronic problem for the sector as the budget shortfall has continued to rise since 2013/14 financial year; on the contrary there are plans from government to grow student numbers. Furthermore, the earlier a new funding model for higher education is formulated for the PSET system as a whole; the more it will guarantee colleges are not limited by financial resources to implement training programmes (DHET, 2016).

Figure 2.3: TVET colleges: Estimated shortfalls as a % of the National budget



Source: DHET (2016)

2.7.3 College performances based on efficiency rates and their effect on skills development

It should be noted that certification rates do not perfectly measure all relevant aspects of student performance (DNA Economics, 2015:9). However, Cosser *et al.*

(2012:34), asserts that the importance of efficiency indicators cannot be over emphasized, as they provide an indication of how efficient a college is in terms of student performance. These efficiency rates are determined as follows:

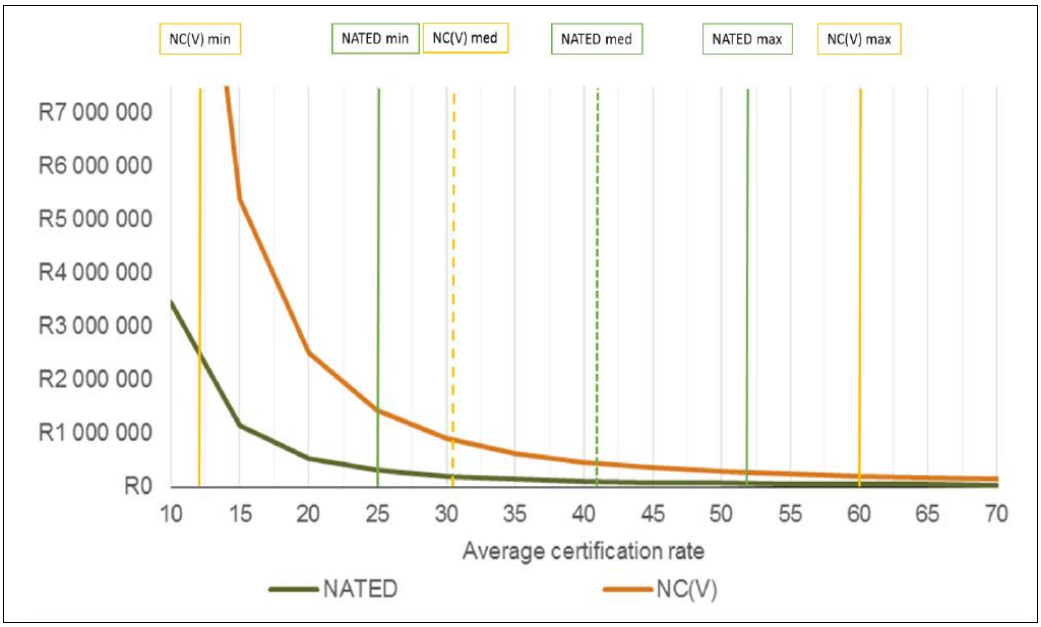
Throughput rate is calculated by dividing the number of students who pass an examination by the number of students who enrolled for the programme for which the examination constitutes the summative assessment (Cosser *et al.,* 2012:35).

Certification rate is calculated by dividing the number of students who pass all their subjects/modules for a specific level within a programme by the number of students who enrolled for that particular level (Cosser *et al.,* 2012:35). In others words, unlike pass rates, these efficiency rates are a more comprehensive way of measuring performance.

It is argued that the lack of skills development strategies within TVET colleges is linked to the poor efficiency rates. There has been a sharp increase in the numbers of students enrolling at TVET colleges but the certification rate remains low (Cloete, Sheppard & van Schalkwyk, 2016:120). It has been proven that colleges that spend more on staff development have significantly higher certification rates. Staff development is potentially an important mechanism to improve performance (DNA Economics, 2015:16).

The 2014 examinations data suggest that as few as 6% of all the students who start NCV courses at Level 2 complete the qualification up to Level 4, within the minimum period (Reddy, Bhorat, Powell, Visser & Arends, 2016). Figure 2.4 shows the immense impact that low certification rates can have on the cost-effectiveness of a college and the large improvement in cost effectiveness that can be achieved by just a small improvement in certification rates. Essentially, a higher throughput rate means that colleges can be in a healthier financial position, thus ensuring more monies spent on training employees. Below Figure 2.4 illustrates the effect of certification rate on cost per student as such the cost-effectiveness gains from only a slight improvement in certification rates are therefore immense (DNA Economics, 2015:18).

Figure 2.4: The effect of certification rate on cost per student



Source: DNA Economics (2015)

While comprehensive evidence could not be acquired, available facts indicate that certification rates are especially low in more technically demanding and practically orientated programmes, such as mechanics, engineering related and computer sciences courses (DNA Economics, 2016:11). Kahn (2017:16) attributes this to High Schools encouraging weaker students to enrol at TVET colleges before reaching grade 12 to push up their matric pass rates. Some enrol for these technically demanding programmes that require a grasp of maths and physics beyond their capabilities. Additionally, students often get little or no career counselling; hence they enrol for courses in which they have little interest or aptitude, these are major contributors to the efficiency rates (Kahn, 2017:22).

The TVET colleges have attempted to overcome this by increasing the number of teaching hours allocated to problematic subjects and by increasing the requirements for courses with low certification rates; often by only accepting Grade 12 graduates rather than Grade 9 or 10 graduates who are also eligible for college enrolment (DNA Economics, 2015:25).

The Performance and Expenditure Review (PER) estimated that on average, it costs the state over R450 000 to produce a single NCV graduate (Reddy *et al*., 2016).

Hence, Mashongoane (2015:68) is of the view that the vocationally-oriented NCV programmes offered at colleges do not yield any return on investment, as a result some prominent employers discard the graduates of the programmes. Linked to this is that colleges over-accentuate the theoretical components of the qualifications they offer. Programmes are often delivered in a substantially less practical way than was likely intended at the time that the curriculum was designed, mainly caused by poor college-industry linkages (Kligyte & Barrie, 2014:520). This seemingly reflects not only decisions to reduce costs by limiting workshop equipment costs, but in some cases also decisions to prioritise theoretical teaching in an attempt to increase low pass rates in summative assessments (DNA Economics, 2015:32).

As a consequence, outputs from TVET colleges are generally viewed by employers as being out-of-touch with the skills desires of the labour market. It is for these reasons that TVET Colleges are finding it hard to overcome the negative perception and stigma from recruiters (Mashongoane, 2015:49).

2.7.4 Financing and enrolment numbers: Their effect on TVET college operations

In the light of the mentioned challenges, the funding model itself may also unintentionally prevent colleges from introducing new and innovative programmes. This situation arises because such courses are unfunded, despite the DHET's encouragement to implement them (Kraak, Patterson & Boka, 2016:15). This means that college curriculum is constantly lagging behind modern developments and technologies.

Another consequence of the current funding model is that colleges are concerned with enrolment numbers and not with the appropriate selection of students for particular programmes, the resulting effect is that even greater demands are made on college lecturers (Bloem, 2016:59). For example, colleges enrol students for programmes without regard to whether the students need a firm basis in mathematics or not. It is only after enrolment that lecturers for Financial Accounting, Information Technology and Engineering programmes, for example, discover the students' deficiencies in the basics (Bloem, 2016:60). This ultimately leads to low

certification rates also result in small class sizes at higher levels, which have an adverse effect on the lecturer: student ratio of 1:30.

Nevertheless, the DHET (2013:28) is adamant that the TVET college sector shall not turn away anyone who wants to enrol as it is responsible for the development of technical skills for the economy, and consequently the college sector is targeted for the greatest expansion in the post-school system. Kraak *et al.* (2016:22) concede that the rapid increase in enrolments is raising concerns about 'further diluting the quality' of teaching and learning in the colleges. All funding is in relation to enrolment targets, Bloem (2016:59) believes that this approach will bring about 'reproductions of poverty', as the success of students is far from a priority. Students consequently leave the colleges without being prepared either for higher learning, or for work.

2.8 LEADERSHIP DEVELOPMENT IN EDUCATION

Robertson (2015:42) advocates that leadership development as an investment since it does not only provide necessary knowledge and skills to leaders to assist the organisation with realising its strategic intentions; enhanced competence and learning on the part of leaders also brings about positive change and innovation. The author (Robertson, 2015:43) elaborates that leaders are too diverted from the core purpose of their work, which is to improve teaching and learning. This situation seems to echo the TVET college situation. Quinlan (2014:38) agrees that the concentration of educational leadership fundamentally has to be on practices of learning such as the rounded development of the learner. Educational leaders thus have to be mindful of creating supportive and nurturing surroundings for learners in which they can grow holistically.

Gentry, Eckert, Munusamy, Stawiski and Martin (2014:85) note that leadership competencies can be seen 'as the result of a leader's experience, wisdom and ability to perform effectively on leadership tasks that are presented to him or her in an organisational context'. Leadership in organisations has become ever more important as a key differentiator for success (Gentry *et al*., 2014:83) while leadership and leadership development are seen as being progressively central for improving the effectiveness of educational institutions. Even though the link between leadership

and leadership development does not automatically suggest organisational improvement, it is logical that leadership development aimed at organisational improvement would be most effective in changing leadership behaviours (Gentry *et al*., 2014:86).

2.8.1 Reasons for leadership development in TVET colleges

There are three main reasons why deliberate strategies for leadership development have become necessary. Firstly, there is the question of succession planning as it has been reported (Simon and Bonnici, 2011; Sullivan and Palmer, 2014) that many leaders in the TVET sector internationally are nearing retirement age. Secondly, for leadership development to be goal and purpose-driven, there should be career paths for leaders in the TVET sector with specific training programmes aimed at developing leaders at every level. Thirdly, it is imperative to continuously identify the necessary skills and capabilities required by leaders in the complex TVET environment for leadership development programmes to remain current (Robertson, 2015:52). These three issues are discussed in more detail below.

Firstly, in the light of the previously mentioned leadership crisis in the TVET sector. Vargas (2013:38) predicted that 84% of the present leaders of TVET colleges would be retiring by 2015, Vargas (2013:1) believes that a new skills set and life experiences different to those in the past are needed to navigate the challenges of the 21st century successfully. The retirements can therefore be seen as an opportunity rather than a crisis. This sentiment is echoed by Hagedorn and Purnamasari (2014:170), who established that change happens when leadership changes and demographics shifts. With college principals retiring in record numbers, this should be seen as an opportunity to attract a more diverse and representative set of leaders. It is clear that there are insufficient numbers in the ‘leadership pipeline’ (Sullivan & Palmer, 2014; Lambert, 2013). Sullivan *et al.* (2014:44) see an opportunity to identify new leaders who have expanded skillsets which could equip them better for coping with contemporary challenges.

Secondly, there should also be pathways in leadership development. Unlike countries like the USA, for example, in South Africa there is no clear career path for

leaders in the TVET college sector. Vargas (2013:48), points out that in the USA, for example, TVET college leaders take on the position of leader via a number of different routes but mainly come from within TVET college teaching staff. The majority (87%) come from the ranks of the teaching staff. It has become important to re-think the career path of TVET college leaders so that a greater number of teaching staff members can be exposed to leader development. At least in the USA, there are formal leadership development programmes available for aspirant leaders, which is not the case in South Africa (Vargas, 2013:21)

Thirdly, it is imperative to continuously identify the necessary skills and capabilities required by leaders in the complex TVET environment for leadership development programmes to remain current. Hagedorn and Purnamasari (2014:159) suggest the establishment of possible standards or guidelines for the development of these programmes in order to gauge the quality of the programmes, bringing greater coherence and curricular quality to the programmes. Programmes also need to keep pace with the 'constant state of change and development' in the sector instead of remaining static (Hagedorn & Purnamasari, 2014:170).

Nevarez *et al*., (2013) call for leadership development who state that to be an effective leader, there is a need to acquire specialised knowledge, an understanding of change and leadership theories which can be applied in different situations. Leaders need to be given leadership development opportunities to enable them to develop into visionary leaders who understand the challenges to quality institutional growth. Before determining what sort of leadership development would be necessary in the sector, it is important to understand the dynamics of the changing TVET colleges (Coates *et al*., 2013:811).

It is necessary to gain insight into what leadership involves in the 'unique operating context of TVET', what the leaders do, what influences determine the work that they do and what the defining characteristics of effective leadership in the sector are (Coates *et al*., 2013:820). It is important to identify the necessary skills needed to lead the colleges in the 21st century and then design training programmes to teach these skills (Sullivan & Palmer, 2014:40).

2.9 SKILLS DEVELOPMENT MANAGEMENT IN TVET COLLEGES

Vocational education is a factor for economic growth. In this regard, TVET colleges need continuous adaptation to respond to the changing needs in the economy. To realise this, Government has invested considerably in the vocational education system. Although much has been achieved, there are still numerous challenges that have to be addressed particularly in the area of up skilling TVET employees (ETDP-SETA, 2012). The way forward for the TVET college sector is working towards building capability, including human capacity, as well as developing systems and standardised policies for the sector in areas such as human resource development (Joubert, 2016).

Skills audits carried out by Human Resources (HR) should identify skills deficiencies and determine whether there is a need for training and development (Mbon *et al.,* 2012:834). Thereafter, core competencies should be identified and met by the college officials for the organisation to be effective. Efficiency of any educational institution depends, to a large extent, upon how effectively the human resources are utilized. The employees' continuous development and training is essential to gain competitive advantage for any business, the education sector is no exception (Mbon *et al.,* 2012:837).

2.9.1 Best practices for management of skills development

According to these authors (Potgieter & Coetzee, 2012:2), the focus of management training and development should be on developing the management skills and competence required in support of the college's vision, mission and strategy. The management of skills development strategies is most effective where they are able to identify and track skills demand through empirical evidence such as effective data collection and analysis systems, and where they foster training programmes which build cognitive and soft skills as well as technical skills that best equip employees to innovate and adapt to dynamic work environments. These strategies must also have a capacity to be responsive to change, and to be informed by stakeholder needs and experiences. Thus, enabling management to reduce duplication and maximise efficiency and effectiveness (Parry & Hayden, 2015:76).

There should be mechanisms in place to measure and improve the quality of skills development strategies. It is therefore important for management to play a more significant role in identifying the skills needs in order to increase organisational capacity (Parry & Hayden, 2015:77). Additionally, skills within different college departments can be shared systematically, which will enable creativity, particularly as it is likely that colleges have different types of skills assets (Mavodza & Ngulube, 2013:4). Furthermore, skills development management is useful when identifying relevant information and disseminating to enable learning to take place by linking people together and with information and by so doing, they are able to learn from documented evidence (Watindi & Rono, 2012:692)

2.9.2 Management development in TVET colleges

Colleges are increasingly confronted by the interplay of competing priorities and tensions arising from wide range of stakeholders requiring more flexibility and variety in the delivery of the training, in order to respond to the needs of business and industry (Munastiwi, 2015:222). These tensions are drivers of change requiring extensive management and leadership capabilities as well as professional and additional soft skills such as 'strategic thinking skills' how to facilitate business growth and how to build sound management systems and policies (Robertson, 2015:34)

Skills development for management in TVET colleges cannot be taken for granted. It is critical as they are held responsible for the implementation of the strategic policies established by DHET. Poor governance, lack of financial accountability within TVET colleges is an indicator of absence of management and leadership curtailing from fruitless skills development interventions (Mgijima, 2014:359).

Research by Kraak, Patterson and Boka (2016:75), revealed significant resentment from lecturers directed at central office management and the college councils. Most of the lecturers raised systemic and institutional challenges. The thorny issues that have led to bad relations between lecturers, college management revolved around ineffective facility resource management and management capacity (Kraak *et al.,* 2016:76). Colleges were considered to require 'comprehensive' training across a

wide spectrum of functional domains. There is therefore a real gap for leadership and management development in the TVET college sector (Robertson, 2015:55).

2.9.3 Lecturer development in TVET colleges

More established TVET systems in the USA, Europe and Australia among others, have established a large frame of data on what constitutes a 'vocational pedagogy', which informs the kind of qualifications that are accessible for the training of vocational educators. In South Africa the local body of knowledge on this issue is still weak and growing gradually (European Commission, 2014:31). Motala *et al.* (2014:34) are of the view that TVET lecturers have the need of instructional support to enable them to apprehend their role in the classroom and in the vocational sector at large.

The success of learners in any learning area is dependent on the capacity, skills and ability of lecturers to know the content of their learning areas. The fact that learning outcomes among students remain low, while the percentage of qualified educators has increased, raises questions about the value of qualifications as a measure of the competence of TVET lecturer (SAQA, 2016:132).

Maintaining a productive TVET system capable of operating within a complex and changing environment therefore depends critically on continuing to develop the knowledge and skills of those at the heart of the system, TVET lecturers. As TVET lecturers attempt to come to terms with the growing demands placed on them by governments, industries and learners, it is not surprising that debate has intensified regarding how best to deal with the workforce development needs of lecturers. In the current climate these issues give rise to important questions and have significant implications for the nature, design, implementation of skills development for TVET lecturers (Saunders, 2012:184).

College lecturer study piloted by Further Education and Training Institute (FETI) in 2011 showed that lecturers require an amalgamation of academic, pedagogical, workplace, curriculum and organisational competences (Papier, 2013:50).

Historically, in South Africa, technical college lecturers were not required to have a specific teaching qualification to be appointed as lecturers in TVET colleges (Mgijima, 2014:359). These lecturers, in the view of Mgijima (2014:359), were mostly appointed on the basis of their technical know-how and workplace experience. Similar happenings are observed in Sweden where individuals are not required to have a teaching qualification to be employed as vocational teachers (Fejes & Kopsen, 2012:1). Colleges at times were found to be recruiting lecturers from their best students who have attained the N6 qualification (SAQA, 2013:139). This implies that most TVET College lecturers in South Africa are either under-qualified or unqualified. Due to scarcity of lecturers in some fields, retired professionals are recruited as lecturers. Additionally, TVET colleges have had to employ teachers from the schooling sector, who came with no additional training that prepared them for their lecturing responsibilities (SAQA, 2016:140).

Currently, however, the difficulty is that while having education qualifications, many lecturers lack work-related qualifications and industry work experience. It is a status quo that creates grave complications for TVET colleges' efforts to bring into line programmes to industry needs. (NSDS III, 2013:52). Equally, there are no programmes that are designed specifically for training college lecturers in institutions of higher learning. They may, for example, get training as engineers but not have the professional qualification that is required to qualify them to teach. The unavailability of sufficient customised training programmes therefore constitutes a gap in the training of college lecturers (SAQA, 2016:140).

2.10 CONCLUSION

What makes the TVET college situation unique, though, is that the TVET colleges operate across sectors rather than focusing on a purely educational system, each with its own requirements and challenges, owing to the vocational focus of the college. In addition, the structures required by the kind of leadership tasked with running a public sector TVET institution are also different from conventional commercial or business operations as well as most educational institutions. The ability to balance these factors may be a unique challenge to the management of the

colleges in their quest to develop their current workforce, especially given the strong financial pressures on the sector.

2.11 CHAPTER SUMMARY

Chapter 2 has explicated to the reader the overarching dynamics that play an integral part within TVET Colleges. The developments from a legislative point of view such as the FET College Act (Act 16 of 2006), which outlined the mandate of TVET colleges have been interesting to note. Additionally, the name change from ‘FET’ to ‘TVET’ college, further pronounces the increasing emphasis of addressing an elaborate problem of the skills development limitations. Notwithstanding the adverse effect of technological innovation on skills development, as TVET colleges struggle to find relevance in an ever-increasing digitised economy. Various other factors that affect skills development management in TVET colleges were identified, such as issues of funding, the increasing number of student enrolments, college management of skills development and leadership development. Finally, an extensive and relevant literature review of how South Africa can share best practices with other nations was also conducted.

CHAPTER 3
RESEARCH METHODOLOGY AND FINDINGS

3.1 INTRODUCTION

The literature review in Chapter 2 of this study provided an overview of the South African and international literature on the management of skills development trends in TVET, including the various factors affecting skills development in the vocational education and training sector. The focus of chapter 3 was on the research methodology followed to assist in meeting the research objectives as laid out in Chapter 1.

This particular chapter draws focus towards the research methodology and the findings of the study are also presented. All the collected data was analysed with the use of the SPSS software package. All statistical analyses were done by the Statistical Consultation Services at the North-West University.

3.2 PROCEDURE AND SCOPE OF THE QUANTITATIVE RESEARCH APPROACH

The research approach is composed of a mixed method approach consisting of both quantitative and qualitative approaches. At the outset, the quantitative research method is directed towards the quantity and examination of causal relationships between variables within the value-free context. Its intention is to assess objective data made up of numbers and the researcher makes use of controlled techniques to confirm or disprove hypotheses. Flexibility is narrowed down to avoid any form of prejudice in the outcomes. This research method deals with an abstraction of reality rather than everyday life. It aims to preserve an outsider's viewpoint which remains isolated, bias free and objective (Welman, Kruger & Mitchell, 2010:8).

Quantitative research is otherwise known as positivist approach and qualitative research is also referred to as an anti-positivist approach. To begin with, the positivist approach makes use of research methods that are founded on firm natural-scientific methods which somewhat disregards the human involvement connected with the person and thus making them impartial and detached. The anti-positivist or

qualitative style centres on the experience of the human behaviour and understanding the human behaviour (Welman *et al.*, 2010:6).

The empirical study focused on assessing the management of TVET Colleges in the development of technical skills within the North-West Province. The demographic profile of the respondents was based on reaching as many possible respondents working within the TVET Colleges in the Province. There are three Colleges in the North-West province. The assessment regarding management of skills development is not limited to the managers in the colleges, therefore making it necessary to gain inputs from all levels of the institutions.

3.3 PROCEDURE AND SCOPE OF THE QUALITATIVE RESEARCH APPROACH

The qualitative research approach sources subjective data that is created by the thoughts of respondents and is presented in language format (writing) instead of numbers. The researcher attempts to accomplish an insider's outlook by asking questions relating to the subject under study or observing their behaviour and thus the investigator is working with a dynamic and unpredictable nature of reality. This approach is related to the social constructivist *world view* and is founded on the interpretive paradigm (Oosthuizen, 2009:8).

The participants in the study completed specific questions that were designed from the literature and formed part of an indirect interview whereby they had to elaborate by giving their own opinion on the topic. The respondents' comments were in writing and were examined in a qualitative fashion. Additionally, these comments together with the quantitative research were used to add substance to the results attained.

3.4 SAMPLE GROUP AND SIZE

When conducting research it is essential that the results obtained applies to a certain group of people. This group may be very broad, such as the entire population of the world or it could be very narrow. These groups possess certain characteristics such as working in similar institutions (Bernard, Whitley & Mary, 2013).

It is generally quite problematic to get co-operation from all employees to complete questionnaires. The calculation of a sample size is significant as it safeguards statistically and scientifically important outcomes of the research procedure; nevertheless, it would have been burdensome and not feasible to get all the employees from the TVET colleges in the North-West Province to take part in this study.

Thus the researcher decided to take a **non-probability convenience sample** from the study population. This refers to data collection from participants of the study population conveniently accessible to partake in the research and was selected by the writer as the best method to gather the data speedily and efficiently owing to very tiny discrepancy in the population being studied (Sekaran & Bougie, 2009:276; Welman *et al*., 2010:70).

Equation 3.1 Sample size

$$n = \frac{Z^2 \pi (1 - \pi)}{e^2}$$

Where:

n = the sample size required for the given parameters
Z= the number of standard deviations for the given accuracy
π= the proportion of sample of interest (a value of 0.5 maximises the sample size, therefore minimising the error)
e= the error allowable, for instance, 10% (Levine *et al.,* 2011:312)

There are three TVET colleges that comprise the population. For the purpose of this study they will be referred to as College A, B and C, each of which have three campuses. Thus, there are nine college campuses in total population. Among these three Colleges, one TVET college in North-West Province was conveniently chosen for the empirical investigation process. It consists of three campuses named herein as Campus I, Campus II and Campus III. Campus I is the main one and constitute a larger population followed by Campus II and Campus III respectively. A total of 150

questionnaires were distributed to Campus I, II and III (50 questionnaires per campus) as well as the College's Central office. 52 questionnaires were returned constituting a response rate of 35%.

Non-responses were expected and could have been due to:

- the failure to respond due to being very busy and not having the time to respond due to their job responsibilities;
- being absent from work at the time the questionnaires were distributed and;
- plain refusal of respondents to participate in the study.

3.5 SURVEY INSTRUMENT

There are two schools of thought that exist in the gathering of research data, namely quantitative and qualitative approaches. The quantitative method is an objective approach and tries to find precise measurement and analysis of the target concept. It is similarly less time consuming. The qualitative research approach is a descriptive form of research and is subjective due to the fact that the researcher interprets the data such as the responses to open-ended questions made by participants (Welman *et al*., 2010:207).

This instrument used a quantitative approach utilising a four point Likert scale to minimise indecisiveness combined with a limited qualitative approach. These were followed to achieve the research objectives as set out in Chapter 1. Participants to the study come from various institutions where they have little time to participate in studies and thus lead to the decision on using a quantitative approach would be the best approach to get the maximum number of results in the available timeframe. The limited qualitative approach was used to analyse the response gained from open-ended questions in the survey.

A questionnaire was used as instrument because it was inexpensive, easy to administer and quick to delier to the respondents where they could answer at their own convenience. Ethical clearance had been obtained from the Ethics Committee in the North-West University Research Support Office. Surveys were physically

distributed by the author, going from one location to the next and in the process explaining to the participants what the study entails.

The questionnaire was constructed by the author himself and was based on the literature review conducted and reported on in Chapter 2. The questionnaire consisted of a total of 37 questions, of which Questions 17, 18, 27 and 37 were open-ended questions which reflected subjective comments. These will be reported on in a qualitative research manner. Section A was covered by questions 1 to 5 which had focused on gathering demographic information from the participants. The remaining questions ranging from 6 to 16, 19 to 26, and 28 to 36 gathered information using a 4-point Likert scale ranging from Strongly Disagree to Strongly Agree excluding a neutral option.

Each section had a short descriptive explanation to familiarise the respondent with the type of question though the questions are based on the literature (Attached in Annexure B). Section B was covered by the questions ranging from 6 to 18 which focused assessing skills development for students. Section C consisted of question 19 to 27 which focused on assessing skills development among staff members. And finally in section D the focus was placed on the management of skills development in the institution ranging from 28 to 37.

3.6 SECTION A: DEMOGRAPHIC PROFILE OF RESPONDENTS

It was found necessary to unpack all the information about respondents which include their gender, age group, highest qualification, their position as well as their years working in the organisation. It is important to note that findings were used as evidence to explain the main results or findings obtained in this study.

The population of the study comprised of 52 participants. Figure 3.1 shows the gender profiles of participants who took part in the study. Out of these, 30.8% were males while 69.2% were females. The gender profile reflects that just over two thirds of the respondents to be female and just under one third to be male.

Figure 3.1 Gender

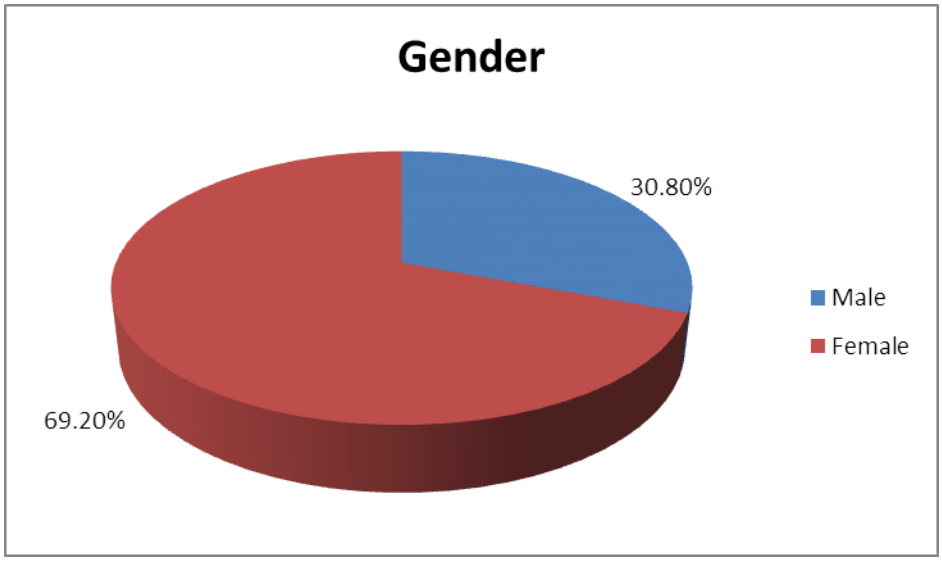
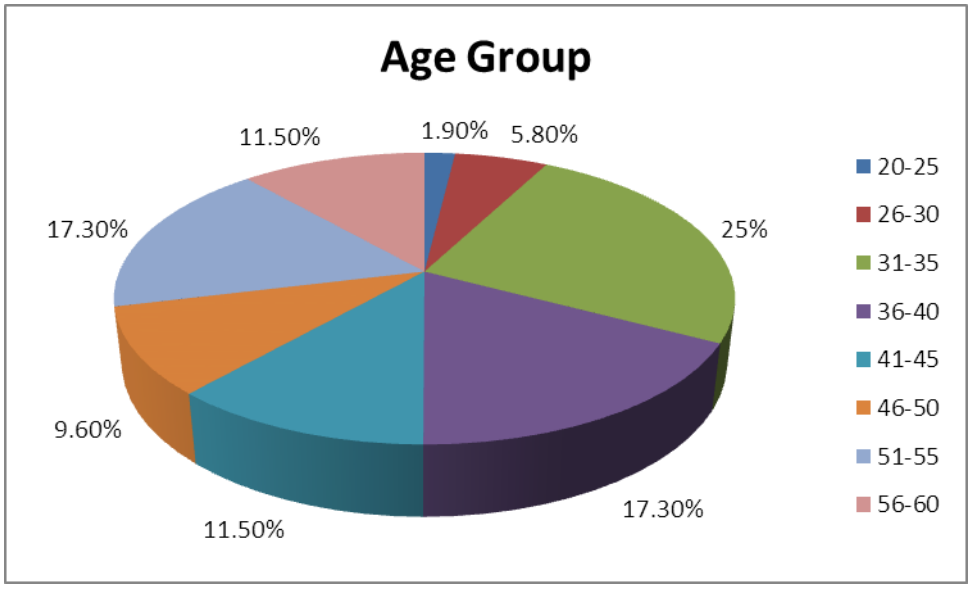


Figure 3.2 displays the age profiles for employees in the TVET colleges. The figure shows that the population comprises 1.9% aged between 20 and 25, 5.8% aged between 26-30, 31 to 35 were 25%, 36 to 40 17.3%, 41 to 45 were 11.5%, 46 to 50 were 9.6%, 51 to 55 were 17.3% and 56 to 60 were 11.5%. It is interesting to note that less than 8% of the sample is below the age of 31 years. Normally, this is the group that is normally more open to technology and change.

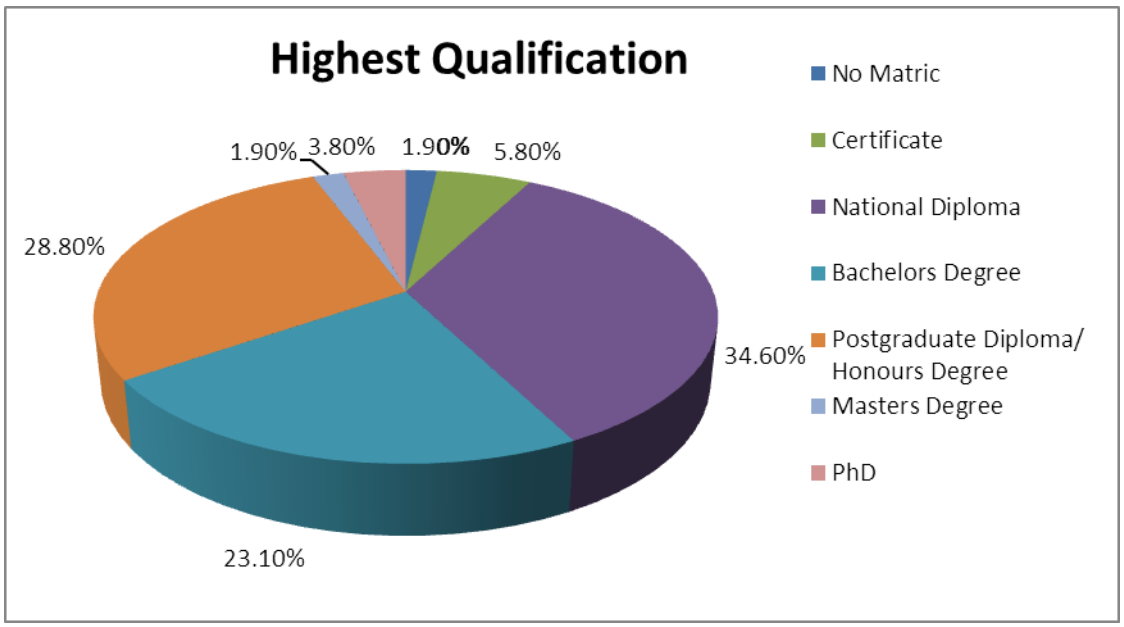
Figure 3.2 Age group



The participants' qualifications are displayed in Figure 3.3, which shows the distribution percentages. The graph shows 1.9% of the participants had no matric,

5.8% has obtained a certificate, 34.6% had obtained a national diploma, 23.1% had obtained a bachelor's degree, 28.8% had obtained a postgraduate qualification diploma or honours degree, 1.9% had a master's qualification and 3.8% participant had a doctoral degree.

Figure 3.3 Highest Qualification



The results report the participants' positions within their colleges, and Figure 3.4 indicates the following. 7.7% were appointed as managers, 3.8% were heads of departments, 57.7% were lecturers, 17.3% were admin officers or assistants, 5.8% were working in a particular functional department and 7.7% were doing their internships.

Figure 3.4 Position

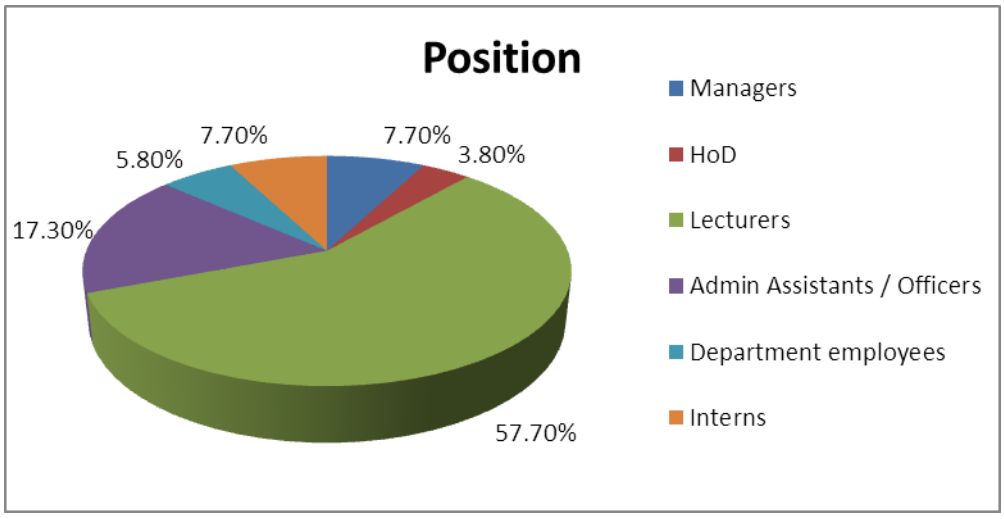
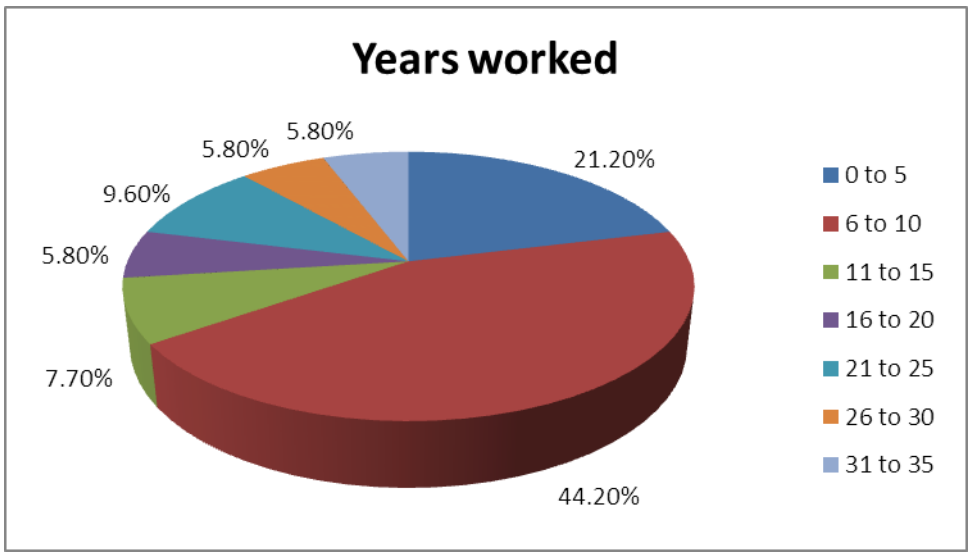


Figure 3.5 below shows the amount of years the participants had worked in their respective TVET colleges. Results show that 21.2% had worked 0 to 5 years, 44.2% worked 6 to 10 years, 7.7% had worked 11 to 15 years, 5.8% worked 16 to years, 9.6% worked 21 to 25 years, 5.8% worked 26 to 30 years and 5.8% worked 31 to 35 years.

Figure 3.5 Years worked



3.7 EMPIRICAL STUDY RESULTS

The North-West University statistical services were used to conduct the frequency analysis, descriptive statistics, reliability and internal consistency with the use of the SPSS software package for the selected constructs and the correlation between the constructs. The quantitative results are presented below with all the questions being answered by the respondents.

3.7.1 Frequency analysis and descriptive statistics

The following discussion illuminates the descriptive statistics that are emphasised as the lowest and highest ranking values for the calculated frequencies, standard deviation (S) and the arithmetic mean (x) of the research study questionnaire. Refer to the attached annexure C for the complete questionnaire.

3.7.1.1 Assessment of questionnaire results for Section B: Skills development for students

The results are displayed in Table 3.1 and will be discussed starting with questions yielding the highest mean (x) values for the respondents' insight of the point to which they agree with the statements on skills development for students.

- Question 6: The TVET College is a real source for the development of technical skills for students x= 3.13 and S=0.561.
- Question 7: The TVET colleges provide a wide range of learning experiences for students needed for certain occupations x= 3.10 and S= 0.495.
- Question 15: The TVET College curriculum encourages practical learning component, rather than just theory x= 2.92 and S= 0.589.
- Question 10: The learning programmes offered by the College are in line with the current workplace technologies x= 2.87 and S= 0.687.
- Question 14: The TVET College curriculum is designed to meet workplace requirements; hence making it easier for students to cope with job expectation x= 2.83 and S= 0.617.
- Question 9: Students are able to demonstrate their ability to perform in accordance with the acceptable standards in the workplace upon completion of their studies x= 2.83 and S= 0.678.
- Question 8: The TVET College is responding to the needs of the labour market by developing scarce skills x=2.81 and S= 0.742.
- Question 16: The TVET College is able to direct students to a study path (career choice) that will maximise their full potential x= 2.75 and 0.556.

These scores show that the respondent somewhat agree on give statements. Due to the fact that 57.7% of the respondents were lecturers, it gives the reader more insight as to how the core business of teaching and learning is rated in terms of these expected outcomes.

Questions yielding the neutral mean (ẋ) values (ranging from between 2.5 and 2.7) for the respondents perception of the degree to which they agree with the following statement on skills development for students:

Question 11: The College makes use of the latest technologies in terms of equipment, learning material and machines x= 2.52 and S= 0.754. This shows a neutral response pattern, respondents might not be as glued up on the latest technologies especially with looking at the age demographic. 67.2% of the respondents were over the age of 35.

Questions yielding the lowest mean (ẋ) values (below 2.5) for the respondents perception of the degree to which they agree with the following statement:

- Question 13: There are adequate employers keen to offer college students workplace experience x= 2.40 and S= 0.728.
- Question 12: The TVET College standard of education is comparable to international standards x= 2.35 and S= 0.711.

The prospect after completion of studies does not reflect well for students in this set of results. This can be caused by the misalignment between industry labour needs and college programme offerings. Another case in point may be the slow growth of the economy that the country has become accustomed to in recent times, which has resulted in little job opportunities for graduates.

Table 3.1: Skills development for students

Statements	Number of responses	Strongly Disagree	Disagree	Agree	Strongly Agree	Mean	Standard Deviation
6. The TVET College is a real source for the development of technical skills for students	52	0%	9.6% (5)	67.3% (35)	23.1% (12)	3.13	0.561
7. The TVET colleges provide a wide range of learning experiences for students needed for certain occupations.	52	0%	7.7% (4)	75% (39)	17.3% (9)	3.10	0.495
8. The TVET College is responding to the needs of the labour market by developing scarce skills.	52	5.8% (3)	21.1% (11)	59.6% (31)	13.5% (7)	2.81	0.742
9. Students are able to demonstrate their ability to perform in accordance with the acceptable standards	52	3.8% (2)	21.2% (11)	63.5% (33)	11.5% (6)	2.83	0.678

in the workplace upon completion of their studies.							
10. The learning programmes offered by the College are in line with the current workplace technologies.	52	3.8% (2)	19.2% (10)	63.5% (33)	13.5% (7)	2.87	0.687
11. The College makes use of the latest technologies in terms of equipment, learning material and machines.	52	7.7% (4)	40.4% (21)	44.2% (23)	7.7% (4)	2.52	0.754
12. The TVET College standard of education is comparable to international standards.	52	11.5% (6)	44.2% (23)	42.3% (22)	1.9% (1)	2.35	0.711
13. There are adequate employers keen to offer College students workplace experience.	52	7.7% (4)	40.4% (21)	46.2% (24)	5.8% (3)	2.40	0.728
14. The TVET College curriculum is designed to meet workplace requirements; hence making it easier for student to cope with job expectation.	52	1.9% (1)	23.1% (12)	65.4 (34)	9.6% (5)	2.83	0.617
15. The TVET College curriculum encourages practical learning component, rather than just theory.	52	1.9% (1)	15.4% (8)	71.2% (37)	11.5% (6)	2.92	0.589
16. The TVET College is able to direct students to a study path (career choice) that will maximise their full potential.	52	1.9% (1)	25% (13)	69.2% (36)	3.8% (2)	2.75	0.556

The results for section B that measured the skills development for students indicate an overall mean of 2.78 and a standard deviation of 0.425. This average essentially reveals that the participants are swaying more to the ‘agree’ when considering the construct holistically. So a further analysis will ensue on each of the key questions relating to the development of students.

The results indicate that the respondents believe that the college is a real source for the development of technical skills for students, a frequency of 35 (67%) respondents

agrees to the statement with 12 (23%) strongly agreeing. In essence the overwhelming majority of the participants accept this statement as being true with the x= 3.13.

Colleges provide a wide range of learning experiences for students needed for certain occupations resulted with a mean of 3.10 and S= 0.495. Again this shows a very strong believe that college are multifaceted in terms of their delivery of education.

Question 8 dealt with the college's ability to respond to the needs of the labour market, in other words testing the flexibility of colleges in term of skills they provide to students. This revealed an x= 2.81, displaying that respondents are in between 'agree' and 'disagree' but swaying more towards agreeing with the statement.
Question 9 speaks mainly to the outcomes of the education and training provided by the college and not the process itself. Upon completion of their studies students entering the workplace are expected to perform at a certain level of acceptable standards, which is directly related to their source of training. The results show a mean of 2.83 and S= 0.678. Respondents are in between 'agree' and 'disagree' but swaying more towards agreeing with the statement.

Question 10 puts it to the reader that learning programmes offered by the college are in line with the current workplace technologies. The impact of technology has a profound impact on skills, for instance some occupations have become redundant, rendering employees to learn 'new' skills in order to remain in the employ. The results show x= 2.87 and S= 0.687. Respondents are in between 'agree' and 'disagree' but swaying more towards agreeing with the statement.

Question 11 puts it to the reader that in the classroom or workshop in which learning takes that the college makes use of the latest technologies in terms of equipment, learning material and machines. The result show x= 2.52, respondents are rather in between the two extremes 'agree' and 'disagree'. This particular statement related to the previous (Question 10), the teaching methodologies should be complemented by the use of the latest technology in the classroom so that students are acquiring skills that are in line with workplace technologies.

The literature directed the researcher to analyse the skills development approach in the other countries, hence Question 12. This essentially aims to draw a comparison to of the college to international standards. The respondents under study had been exposed to quite a few exchange programmes with overseas colleges, so they were a reliable source to draw a comparison. They result shows x= 2.35 and S= 0.71, although this particular result is not a key focus of the study, it is interesting to note how respondents rate the college compared to world standards.

Question 13 seek to find out if there are adequate employers keen to offer college students workplace experience, Results show x= 2.4 and S= 0. 728, indicating that there students completing their studies may struggle to gain workplace experience.

Question 14 directs the study towards the design of the curriculum. The College curriculum is designed to meet workplace requirements; hence making it easier for student to cope with job expectation. The response indicates an x= 2.83 and S= 0.617. Participants are leaning towards ‘agree’.

Further probing regarding the curriculum seeks to uncover, whether the TVET College curriculum encourages practical learning component, rather than just theory. Results reveal an x= 2.92 and S= 0.589, more participants are in agreement with the statement.

The success of a student also depends to a large extent on the student leveraging on their talents and strengths. The final question in this section aims to unravel whether the college is able to direct students to a study path (career choice) that will maximise their full potential. This is more focused on the career guidance or career counselling capabilities and it reveals an x= 2.75 and S= 0.556, essentially showing that majority agrees to the statement.

3.7.1.2 Assessment of questionnaire results for Section C: Staff development

When analysing the results in Table 3.2 regarding the staff development, these results show the following. The questions yielding the highest mean (x) values

(values more above 2.7) for the respondents' opinion of the degree to which they agree with the statements on staff development.

- Question 25: The success of the learner is dependent on the capacity, skill and ability of the lecturer x= 3.17 and S= 0.550.
- Question 19: There is a shortage of competent and qualified lecturers in specific subject areas x= 2.83 and S= 0.648, it should be noted that this question was negatively phrased.
- Question 26: The TVET College has partnered with universities to designed specific learning programmes aimed at training college employees x= 2.81 and S= 0.742.

When taking a holistic view of Q25 and Q19, the respondents strongly agree that the capacity of the lecturer is key determinant in the success of the students. In the very same breath there is strong feeling that there is a shortage of "competent and qualified lecturers". If this is the case, then the competency of the lecturer should be taken as a matter of urgency. This status quo is a recipe that will result in poorly trained students because of incompetent lecturers.

Questions yielding the neutral mean (ẋ) values (ranging from between 2.5 and 2.7) for the respondents perception of the degree to which they agree with the following statements:

- Question 24: The college lecturers have valuable industry experience outside of teaching x= 2.56 and S= 0.752.
- Question 21: The college has established partnerships with the private sector to assist in staff development x= 2.54 and S= 0.851.

Questions yielding the lowest mean (ẋ) values (below 2.5) for the respondents perception of the degree to which they agree with the following statements:

- Question 20: Staff development programmes in the College are equipping employees with the necessary skills to deal with the challenges they face in the workplace x= 2.46 and S= 0.779.

- Question 22: Retired professionals are recruited due to the scarcity of qualified personnel x= 2.44 and S= 0.777, it should be noted that this particular question was negatively phrased.
- Question 23: The TVET College established continuous development programmes to improve workplace performance x= 2.44 and S= 0.725.

The results from this set of question show that there is a misalignment between the skills programmes being implemented and the skills gap. Due to the ever changing and dynamic environment of the TVET landscape, it may have resulted in the college not being able to keep up with the advancement of the TVET sector.

It is imperative for the College to conduct a comprehensive skills audit to reveal what the organisational training needs are. Because this can potentially result in financial inefficiencies as money is being spent on meaningless training.

Table 3.2: Staff development

Statements	Number of respondents	Strongly Disagree	Disagree	Agree	Strongly Agree	Mean	Standard Deviation
19. There is a shortage of competent and qualified lecturers in specific subject areas.	52	1.9 (1)	25% (13)	61.5% (32)	11.5% (6)	2.83	0.648
20. Staff development programmes in the college are equipping employees with the necessary skills to deal with the challenges they face in the workplace	52	9.6% (5)	42.3% (22)	40.4% (21)	7.7% (4)	2.46	0.779
21. The College has established partnerships with the private sector to assist in staff development	52	13.5% (7)	28.8% (15)	48.1% (25)	9.6% (5)	2.54	0.851
22. Retired professionals are recruited due to the scarcity of qualified personnel	52	13.5% (7)	32.7% (17)	50% (26)	3.8% (2)	2.44	0.777
23. The TVET College established continuous development programmes to improve workplace performance	52	9.6% (5)	40.4% (21)	46.2% (24)	3.8% (2)	2.44	0.725

24. The College lecturers have valuable industry experience outside of teaching	52	7.7% (4)	36.5% (19)	48.1% (25)	7.7% (4)	2.56	0.752
25. The success of the learner is dependent on the capacity, skill and ability of the lecturer	52	1.9% (1)	1.9% (1)	73.1% (38)	23.1% (12)	3.17	0.550
26. The TVET College has partnered with Universities to designed specific learning programmes aimed at training college employees	52	5.8% (3)	21.2% (11)	59.6% (31)	13.5% (7)	2.81	0.742

Considering the dynamic and changing environment of the TVET sector and that colleges should be well positioned to effectively provide education and training to students that is in accordance to required standards. There should be an on-going process whereby staff in developed to adapt and perform. Section C, specifically Q20-Q21and Q23-Q26 indicate a mean x= 2.66 and S= 0.497. This average essentially reveals that the participants are in between the two extremes of ‘agree’ and ‘disagree’ but slightly swaying to the former. So a further analysis will ensue on each of the key questions relating to the staff development.

This statement was negatively phrased and removed when testing Cronbach’s alpha coefficient. The results indicate that the respondents agree that there shortage of competent and qualified lecturers in specific subject areas. The measure shows x= 2.83 and S= 0.648. This result reflects the unavailability of skilled and trained educators in certain areas, which is a cause for concern for the college.

This followed by the question regarding the development programmes in the college. Are these programmes equipping employees with the necessary skills to deal with the challenges they face in the workplace. The reaction was x= 2.49 and S= 0.779. This fundamentally discloses that participant disagree, with sufficient numbers opposing this statement.

Question 21 states that college has established partnerships with the private sector to assist in staff development. The feedback from respondents show x= 2.54 and S=

0.851, respondents are in between ‘agree’ and ‘disagree’ but swaying more towards agreeing with the statement.

This statement was negatively phrased and removed when testing Cronbach’s alpha coefficient. It states that retired professionals are recruited due to the scarcity of qualified personnel has a response showing participants x= 2.44 and S= 0.777.

Question 23 seeks to unearth whether the College has established continuous development programmes to improve workplace performance. The reaction from respondents x= 2.44 and S= 0.725. This suggests that participants are leaning more ‘disagree’, this discovery is vital as effective developmental programmes should be conducted on an on-going basis and specifically targeting areas of weak performance.

Question 24, lecturers have valuable industry experience outside of teaching reveals x= 2.56 and S= 0.752. Respondents are in between ‘agree’ and ‘disagree’ but swaying more towards agreeing with the statement.

The statement in Question 25, suggests that the success of the learner is dependent to a large extent on the capacity, skill and ability of the lecturer. The feedback x= 3.17 and S= 0.550, the overwhelming majority are in agreement to the statement. It is therefore imperative that the lecturer is suitably qualified and appropriately trained to perform effective, since their skills have an impact in the achievement of the student.

Question 26 seeks to find out if there is an existence of collaboration between the College and higher education institutions that is founded on developing college staff. The response x= 2.81 and S= 0.742, shows that participant agree to this statement.

3.7.1.3 Assessment of questionnaire results for Section D: Management of Skills development

When analysing the results in Table 3.3 regarding the management of skills development, these results show the following. The questions yielding the highest

mean (x) values (values more above 2.7) for the respondents' opinion of the degree to which they agree with the statements on the management of skills development.

- Question 35: There is a real gap for leadership and management development in the College x= 2.87 and S= 0.864.
- Question 34: The college skills development interventions are fruitless x= 2.60 and S= 0.664.

The above indication the highest mean values in relation to the statements given, the respondents perceive the college leadership to be in need of developing. It is interesting to note, given that 85% of the respondent were not in management or in a leadership position. Their assessment of the college leadership and skills development interventions is not very positive.

Questions yielding the lowest mean (ẋ) values (below 2.5) for the respondents perception of the degree to which they agree with the following statements:

- Question 30: The TVET College is able to identify areas of poor performance and development training programmes to address poor performance x= 2.46 and S= 0.753.
- Question 32: There is a duplication of training programmes within the workplace x= 2.46 and S= 0.699.
- Question 31: The college ensures that staff is equipped with the right set of skills to innovate x= 2.37 and S= 0.715.
- Question 33: The TVET College management has mechanisms to measure and improve the quality of skills development strategies x= 2.35 and S= 0.738.
- Question 29: The TVET College recruit a sufficient number of adequately prepared, and appropriately trained staff x= 2.33 and S= 0.706.
- Question 28: The TVET College staff is satisfied with the effectiveness of the development programmes x= 2.29 and S= 0.667.
- Question 36: The college ensures that staff is equipped with the right set of skills to adapt to the dynamic and changing work environment x= 2.25 and S= 0.813.

The lowest mean scores were recorded in the skills development management section. This highlights a real problem relating the recruitment of staff in the college.

Whereby there might be a staff shortage due the unavailability of appropriately qualified staff. Additionally, these puts even more pressure on the leadership to ensure that the new recruits are put through their paces to meet performance standards. This makes it all the more difficult to up skill a workforce that barely meets entry requirements. This predicament calls the college to re-think its recruitment practices.

It further appears that the college approach to skills development is of a 'business as usual' nature. There is no evidence to suggest that the college is progressively addressing the skills deficit with the workforce. There is therefore a need to formulate skills development strategies that identify the skills need.

Table 3.3: Skills development management

Statements	Number of responses	Strongly Disagree	Disagree	Agree	Strongly Agree	Mean	Standard Deviation
28. The TVET College staff is satisfied with the effectiveness of the development programmes	52	11.5% (6)	48.1% (25)	40.4% (21)	0%	2.29	0.667
29. The TVET College recruit a sufficient number of adequately prepared, and appropriately trained staff.	52	13.5% (7)	40.4% (21)	46.2% (24)	0%	2.33	0.706
30. The TVET College is able to identify areas of poor performance and development training programmes to address poor performance	52	9.6% (5)	40.4% (21)	44.2% (23)	5.8% (3)	2.46	0.753
31.The college ensures that staff is equipped with the right set of skills to innovate	52	11.5% (6)	42.3% (22)	44.2% (23)	1.9% (1)	2.37	0.715
32. There is a duplication of training programmes within the workplace	52	9.6% (5)	36.5% (19)	51.9% (27)	1.9% (1)	2.46	0.699
33. The TVET college management has mechanisms to measure and improve the quality of skills development strategies	52	13.5% (7)	40.4% (21)	44.2% (23)	1.9% (1)	2.35	0.738

34. The College skills development interventions are fruitless	52	0%	50% (26)	40.4% (21)	9.6% (5)	2.60	0.664
35. There is a real gap for leadership and management development in the College	52	5.8% (3)	26.9% (14)	42.3% (22)	25% (13)	2.87	0.864
36. The College ensures that staff is equipped with the right set of skills to adapt to the dynamic and changing work environment	52	19.2% (10)	40.4% (21)	36.5% (19)	3.8% (2)	2.25	0.813

The results for section D that measured the management of skills development indicate an overall x= 2.35 and S= 0.431. The structure of the statements in this section are posed in such a way that they focuses purely on the outcomes as a result of the management of skills development and not on the process per se. This average essentially reveals that the participants are swaying more to the 'disagree' when considering the construct holistically. So a further analysis will ensue on each of the key questions relating management of skills development.

The results of question 28 puts it to the respondents that they are satisfied with the effectiveness of the development programmes, the feedback show x= 2.29 and S= 0.667. This is an indication that a larger number responses disagree with the statement. The participants are in fact not satisfied with the effectiveness of the development programmes that may exist.

Question 29 puts it to the participants that the College recruit a sufficient number of adequately prepared, and appropriately trained staff, again we observe that x= 2.33 and S= 0.706. This is an indication of a respondents leaning towards disagree. It gives details regarding the kind of recruitment process taking place at the TVET College. Personnel being appointed by the institution are likely not to be meeting job requirements.

The following statement related to the College response to performance that is below par. The researcher puts it to the respondent that the College is able to identify areas of poor performance and development training programmes to address poor performance. The reaction is x= 2.46 and S= 0.753, fundamentally the respondents

are leaning more towards disagree. The College is not necessary implement any development interventions to address underperformance.

Question 31, The College ensures that staff is equipped with the right set of skills to innovate reveals x= 2.37 and S= 0.715, primarily what this means is that there is somewhat of disregard from the college to up skill respondents with developmental programmes that address innovation. Innovation proficiency is applicable considering the kind of dynamic environment in which employees are expected to perform.

Question 32, there is a duplication of training programmes within the workplace. The feedback x= 2.46 and S= 0699. There is an overall feeling that there may be somewhat of a duplication regarding the developmental programme put in place.

Question 33, Skills development programmes should be evaluated in order to assess the quality. This statement puts it to the participant that the College management has mechanisms to measure and improve the quality of skills development strategies. Results show x= 2.35 and S= 0.738, an indication that participants are in disagreement.

Question 34, college skills development interventions are fruitless. Feedback show x= 2.60 and S= 0.664, primarily indicating a middle ground but slightly swaying towards agree.

Question 35, the literature study educated the reader regarding leadership development in TVET colleges. There is a real gap for leadership and management development in the college was the statement that followed. Revealing x= 2.87 and S= 0.864, an indication of respondents agreeing to this statement. This result paints a very negative and distrusting picture of the college's ability to govern and manage.

Lastly, Question 36, the College ensures that staff is equipped with the right set of skills to adapt to the dynamic and changing work environment. Overall, respondents show x= 2.25 and S= 0.813, essentially respondent disagree, which is consistent with Question 31.

3.8 RELIABILITY AND INTERNAL CONSISTENCY

Cronbach's alpha is a measure of reliability and internal consistency and indicates whether items and subsets of items in the measuring instrument are highly correlated. Cronbach's alpha (α) is therefore a coefficient of reliability of items in a survey instrument and has to do with the quality of the measurement. If, for instance, an instrument such as a questionnaire produces different scores every time it is used under the same conditions, it will have low reliability. A value of $\alpha > 0.7$ is considered to be acceptable and a value of $\alpha > 0.8$ is considered to be good and is often used as evidence of an underlying or latent construct (Field, 2009:666; Sekaran & Bougie, 2009:325).

Cronbach's alpha as a measure splits the data in to all the possible ways and then calculates the correlation coefficient for each split and thus becomes the average of these values. The use of Cronbach alpha as a test for reliability is suitable for use with questionnaires that make use of Likert scale's (Field, 2009:675).

The following formula can be used to calculate Cronbach's alpha:

Equation 3.2: Cronbach's alpha coefficient

$$\alpha = \frac{k}{k-1}\left[1 - \frac{\sum_1^k \sigma_{Y_i}^2}{\sigma_X^2}\right]$$

Where:

α = Cronbach's alpha coefficient

k = number of items in the construct

$\sigma_{Y_i}^2$ = variance of item, i, where i = 1 to k

σ_X^2 = variance of the observed total item scores

In this study, Cronbach's alpha coefficient was used to determine the internal reliability of the dimensions in each construct and was conducted to test and validate the structures. To establish the Cronbach's alphas for the study, constructs and not the individual questions will be analysed. The results for reliability of the constructs are tabled in Table 3.4.

Table 3.4: Cronbach's alpha values for selected constructs

#C	Constructs	Questions	Cronbach's alpha	Mean	Standard Deviation
C1	Skills development for students	Q6 – Q16	0.865	2.78	0.425
C2	Staff development	Q20-Q21, Q23-Q26	0.758	2.66	0.497
C3	Management of skills development	Q28-Q36	0.758	2.35	0.431

Indicates reliability or internal consistency guideline values above 0.7 and above 0.5 can also be used but interpretation should be done with caution.

The overall Cronbach's alpha coefficient for the three constructs within the questionnaire exceeded 0.7 which deems the instrument reliable. Initially the CA for C2 was 0.463 and in order to ensure reliability for this construct, Questions 19 and 22 had to be excluded. The highest Cronbach's alpha obtained was for C1, 0.865. It can therefore be concluded that the questionnaire assessing the management of skills development within TVET colleges is consistent in what it is intended on measuring.

3.9 CORRELATIONS AND RELATIONSHIPS

Spearman's rank correlation coefficient is a nonparametric equivalent of the Pearson correlation and a procedure that measures the linear correlation between two variables. (Welman *et al.,* 2010:234). Table 3.5 shows the T-test for the equality of means. The guideline p value < 0.05, statistical significant difference between the means.

Table 3.5: T-test for equality of means

Constructs (Equal variance not assumed)	p-value
C1: Skills development for students	0.278
C2: Staff development	0.152
C3: Management of skills development	0.396
Question 19	0.833
Question 22	0.861

Note: Since a convenient sample and not a random sample was used, the p-values are only reported for the sake of completeness and will not be interpreted.

Relationships

The t-test is used to show if there is a significant difference between the means, if p-value ≈ 0.2 there is small and no practically significant difference, p-value is ≈ 0.5 there is a medium and practically visible difference and if the p-value is ≈ 0.8 large, and practically significant differences.

Table 3.6 below shows a high difference of an effect size= 0.93 in the construct Section B: Skills development for students. This indicates that the qualification group of less than bachelor's degree had a practically significant difference between the means compared to those with university degrees and higher. Moreover, Table 3.6 reveals a medium difference of an effect size= 0.55 in the construct Section C: Staff development. This indicates that the qualification group of those with less than a bachelor's degree displayed a practically visible difference between the means compared to those that have university degrees and higher.

Table 3.6 Qualifications grouped relationships.

Qualifications grouped		N	Mean	Std. Deviation	Effect size
Skills Development for Students	Less than University (Matric, Certificate, Diploma)	22	3.00	0.33	0.93
	University (Bachelor, Honour, Master, PhD)	30	2.62	0.41	
Staff Development	Less than University	22	2.82	0.49	0.55
	University	30	2.55	0.48	
Management of Skills Development	Less than University	22	2.42	0.40	0.28
	University	30	2.29	0.45	
Question 19	Less than University	22	2.77	0.685	0.14
	University	30	2.87	0.629	
Question 22	Less than University	22	2.50	0.802	0.12
	University	30	2.40	0.770	

Finally, Table 3.7 reveals a medium difference of an effect size= 0.57 in the construct Section B: Staff development and affect size= 0.50 in the construct Section C: Staff development. This indicates that the number of years worked between 0 to 10 years worked had a practically visible difference between the means compared to those 11-35 years worked.

Table 3.7 Years worked relationship

Years worked group	Years worked	N	Mean	Std. Deviation	Effect size
Skills Development for Student	0 - 10	34	2.88	0.35	0.57
	11 - 35	18	2.60	0.50	
Staff Development	0 - 10	34	2.75	0.46	0.50
	11 - 35	18	2.49	0.53	
Management of Skills Development	0 - 10	34	2.39	0.43	0.26
	11 - 35	18	2.27	0.44	
Question 19	0 - 10	34	2.82	0.521	0.01
	11 - 35	18	2.83	0.857	
Question 22	0 - 10	34	2.44	0.746	0.00
	11 - 35	18	2.44	0.856	

3.10 QUALITATIVE ANALYSIS

Open-ended questions were used to analyse the qualitatively analyse aspects of the respondents' views pertaining to skills development in the institution. The questions were based on three themes, namely:

- skills development for students;
- staff development and;
- management of skills development.

3.10.1 Qualitative analysis of question 17.

Do you think the college plays a significant role in preparing students for work?

The respondent had to answer this question by indicating Yes or No. The definite answer that stood out in the responses received to this question was as follows:

- 39 form 52 respondents indicated **"yes"**; essentially they believe that the TVET college plays a significant role in preparing students for work, constituting the majority with 75%.
- 7 out of 52 respondents indicated **"no"**; these participants do not agree that the TVET college plays a significant role in preparing students for work, which constituted 13.5%.
- 6 out of 52 respondents were in between the two extremes, 11.5% whom indicated the following responses: "Yes and No"; "partially yes"; "Not really"; "Not sufficient", "Not enough" and "only for certain students".

It is clear from the above trends being identified by respondents that there is a consensus regarding the role of the TVET College in assisting student to prepare for work. It is also interesting to note that certain respondents feel that more can be done to further improve the impact of colleges in developing students.

3.10.2 Qualitative analysis of question 18.

Please provide a reason for your answer in (Question 17).

The respondents needed to provide an explanation for the answer they gave in question 17. The **positive responses** generated the list of the following trends:

- Colleges must engage employers/ industry to assure them that college is relevant and offer ready-made potential labour force.
- Especially students who cannot go the traditional academic route. They get to know practical expectations quicker.
- Students are able to execute their duties in the field of study.
- They can obtain hands on skills as well as theoretical education.
- Practical exposure prepares students; the TVET College is obliged by the education policy to expose students to the work environment. The majority of the programmes offered in the TVET College have a theory and practical component.
- They are required to do 70% practical component for their subjects.
- The syllabus is based on work related matters and allows student be assume better work citizenship.
- Some students are placed in workplaces during holidays to experience work related environment and internships upon completion of their studies.
- It is affordable and it caters for students who are less fortunate to get a qualification.
- Students are given 18 months to complete their practicals, which is sufficient to gain experience to prepare them for working environment.
- Programmes offered by the TVET College have more practical in their curriculum, e.g. civil engineering in NCV give the students practical work which prepares them for working environment.
- It plays a big role in preparing students for work e.g. work based exposure during holidays. Students are sent to different department to do practical work. It offers internships and lastly students have the opportunity to volunteer to gain experience.
- Students that have graduated are recruited to work for the college.
- Most students are working as artisans and administrators because of the qualifications they obtained at the college.
- Many students who complete their studies are given training or internships as part of preparation for the workplace.
- Colleges offer NCV studies which mix theory and practical for students. College artisan do practical which is 70% of the curriculum and students are placed in various companies for exposure and training.

From the respondents responses there is a clear and definite indication that plenty of positive outcomes in the design of the TVET curriculum, which places a lot of emphasis on both practical and theoretical elements. It is further noted that the college is a key enabler of skills development for those who do not have the means or the academic aptitude to enter universities.

The **negative responses** generated the list of the following trends:

- Only in selected programmes where theory and practical learning are integrated, in other programmes the practical component is omitted and emphasis is only on theoretical component which is not enough.
- Some courses are irrelevant when it comes to preparing students for work.
- Students are not exposed to a lot, too much classroom learning environment.
- Not every student is capable of performing after completion of their studies.
- It does not offer more of the scarce skills, most students after graduating from the college are not employable.
- Too much theory.
- Low pass rate and high unemployment among students.
- There is a lack of corporation between colleges and the labour industries with regard to work based exposure. There is a lack of communication and most employers are not clued up with TVET qualifications being offered.
- The programmes are not always relevant and necessary considering the current work environment. Some are a bit outdated.
- Students are always protesting because they are unhappy with the poor quality education.
- NCV qualification is not accepted by the outside world.

These responses give an indication that there are some grey areas in the manner the teaching and learning is delivered in the college. With some respondents expressing that 70% of practical work, while other say that there is too much theory. This reveals some level of inconsistency or could be that some programmes are offered in a less practical way than other. Furthermore, some courses are seen as being irrelevant or not to be considered as ‘scarce skills’.

3.10.3 Qualitative analysis of question 27.

How has the TVET College helped you as an employee in your own personal growth?

- One has learned a lot through SETA associations eg. assessor, moderator.
- Not at all, I take it upon myself to develop by furthering my studies.
- Attended leadership training, helped to develop new strategies and implement policies.
- My growth has been very minimal, I have not been helped in any way.
- With the kind of training I receive I feel that im developed and equipped to deal with certain challenges.
- They assisted me to obtain my matric and national diploma at the age of 46, as I never had the opportunity to study earlier.
- The training has enabled me to impart knowledge/theory and mentoring to students.
- Employee training and development opportunities gave me skills and knowledge to be able to progress and grow.
- None, They offer training that is not applicable for teaching.
- My pass rate has improved tremendously because of college interventions.
- It has never really assisted me as there are a few training programmes and most are irrelevant and duplicate.
- Not that much, they need to do more by giving the staff the relevant training and development in their specific subjects.
- They have done very little to improve my personal development.
- Helped me improve my computer skills and my office administration skills.
- The college gave me an opportunity to enrol for workbased learning courses such as RPL, assessor, and moderator.
- No support from the TVET college, no funding or bursaries available for support staff.
- Not much, development of staff in TVET colleges is only concentrating on lecturers but not support staff, but I'm hopeful that it will change.
- I am a qualified artisan at AngloGold Ashanti. The college formed a partnership with AngloGold to train and develop lecturers in their trade of choice.

- Not really because there are no opportunities for promotion.

There are a number of mixed reactions relating to how the college has assisted staff on their own personal growth. There is also evidence showing the staff personal growth is suffering as a result of the college financial constraints with some revealing no bursaries are available to assist them and there might also be a lack of motivation resulting from no promotional opportunities.

3.10.4 Qualitative analysis of question 37.

How effectively do you think the college implements Skills Development strategies?

Positives utterances

- Too much focus on lecturer training, all the training is similar and repeated.
- It is highly effective and with the right support from managers. It helps with skills and knowledge development.
- College does implement skills development but only to a certain level.
- The way skills development is implemented in the workplace creates an environment whereby employees have conflict with one another because some are left out.
- Very effective, we attend training regularly.
- It is very helpful especially to lecturers who are struggling.
- The college is putting in a good effort, but they can do better in future.

Negative utterances

- We need management that takes skills development seriously.
- Lack of funds and promotional opportunities hamper development.
- No strategies are visible, Skills development strategies are not well implemented as a result of financial constraints.
- Not at all, the College must re-think their approach to skills development.
- The College is not very effective in skills development.
- Not really, more can be done to improve and develop employees. The technology needs to be improved drastically.
- They need to be more creative when implementing skills development.

- They should try do more in assisting staff improve their qualification by providing bursaries.
- Skills development strategies that are implemented by the College are not sufficient according to my opinion, thus rendering itself less effective, they struggle to identify and properly address required skills.
- Not effective enough, not all areas are attended to, only concentrating on certain programmes.
- The skills development strategies in College are lacking, as the support staff do not get any development or training. The focus is mainly on academic staff.
- They need to expand the organisation so that we are able to grow within the college through promotions.
- The strategies are finance linked. We don't have money. Training is SETA linked and hence is not job specific. Soft skills are neglected (emotional intelligence, conflict resolution, critical thinking etc.) The strategy rests on getting staff to have a professional qualification as a lecturer, a right to assess and moderate. skills development are implemented, however the budget does not allow for development of all staff members at once.

The results from respondents' positive and negative expressions show a little bit of frustration coming through with some alluding to the fact that they are being left of developmental opportunities. If there is more transparency in the way skills development is being applied in the College, there will be no feelings of animosity among employees. Additionally, training interventions have also neglected critical soft skills such as problem solving and the like. These responses show a fundamental need to shift the way skills development strategies is perceived by employees.

3.11 CHAPTER SUMMARY

This chapter focused on the research methodology and findings of the empirical study. The procedures and scope of the quantitative as well as the qualitative research conducted in the study included the sample size and survey instrument. The empirical data was collected with the use of a questionnaire.

There was a subsequent analysis of the demographical profile of the respondents along with the frequency analysis, descriptive statistics, reliability and the internal consistency. The last section of the quantitative analysis was the correlations and finally the qualitative section open-ended questions were analysed and reported on.

CHAPTER 4

CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

4.1 INTRODUCTION

The primary objective for this study was to assess the management of TVET colleges in the development of technical skills within the North-West Province. Chapter 3 presented and discussed the empirical findings obtained in this research. Since this research was in the form of a mixed methods study, all the quantitative and qualitative findings were presented and discussed. This particular chapter provides the summary for this research. It presents and consolidates the findings obtained in this study and these include the literature findings and the merged quantitative and qualitative findings. Recommendations are provided and are based mainly on the empirical findings obtained in this study. Limitations of the study are also given. The last segment of this study provides concluding remarks about the present study.

4.2 SUMMARY

The study was divided into four chapters and the following paragraphs give a summary of each chapter. In the first chapter a problem statement as well as the research questions and objectives were given. The researcher also elaborated on the main methods used in this study as well as the contributions of this particular research and its delimitations thereof. In the last segment of the chapter the main concepts used in this study were defined and explained.

In Chapter 2, the literature review linked to the themes and or objectives indicated in chapter one was conducted. As such, in the literature review the researcher captured the orientation of the present study by initially discussing the global trends in countries such as China, Germany and India. The focus then shifted towards the impact of technology on skills demand. The theory then highlighted the unique and dynamic environment under which the TVET colleges operate. More so the researcher provided an overview of the TVET sector including the legislative developments that have taken place in the recent past.

This was followed by Chapter three, the mixed methods design and methodologies used in this study were discussed in detail. The explanatory mixed method design was elaborated since it was chosen to be applicable to this particular study. Both the quantitative and the qualitative methods were separately discussed and all details about each method were provided. Mainly, the population and sampling strategy, the survey instruments, the data collection process and the analysis of each method was fully described in this chapter. Finally, the quantitative and qualitative results were presented and discussed separately.

Chapter five, which is the closing chapter in this document, summarises this study and highlights and merges all the findings obtained in this research. Recommendations, mainly based on the empirical findings, are also suggested in this chapter. After the recommendations, the limitations of this study are also provided. The last section in this chapter finally presents the concluding remarks.

4.3 CORRELATIONS BETWEEN LITERATURE AND RESULTS.

Conclusions will be drawn about the assessment of the management of skills development in North-West TVET colleges with specific reference to the findings of the empirical research and literature reviewed.

4.3.1 Conclusion on skills development for students

The country's TVET colleges are seen as key differentiators of success to a skilled nation. The introduction of the White paper on Post-School Education and Training of 2013 has been one of the most ground breaking frameworks for the Post-School education and Training sector (PSET), particularly for TVET colleges. The document meticulously outlines the intended role of colleges and points out areas that need strengthening. It is clear from the in depth analysis of the literature, colleges operate in a unique environment. The White paper has identified the four most central areas necessary for TVET college to be most effective. These known areas were tested against the empirical evidence that emerged in the study and the subsequent results will be further discussed to in order to bring meaning, they include:

Strengthen the TVET system through building partnerships with employers and other stakeholders:

There is founded evidence of relationships that exist between industry and the colleges. However, there is no real framework guiding the existence thereof. This has resulted in employers not being able to keep up with the skills needed to remain competitive and as such colleges are not providing these needed skills for students to fill the void. It is therefore on this basis that there should be elaborate predetermined objectives that form a foundation for the existence of any partnership between a college and other stakeholders. Literature reveals (particularly international approaches to skills development) that how partnerships between TVET sector and society as a whole has contributed to the betterment of students. The design of the TVET curriculum is designed to suit a more practical learning experience, on these grounds, more effort should be put by colleges to ensure stakeholders buy in. It should be noted that the onus lies completely on the college to engage these partners in a meaningful way.

Increasing the responsiveness of colleges to local labour markets:

The awareness of colleges to respond to local labour market need depends to a large extent on college-industry partnerships. Strong linkage between these stakeholders will result in an alignment of the general vocational curriculum closer to the needs of industry. In the absence of this association TVET colleges can easily find themselves out of touch with labour demand. The empirical evidence indicates that college are somewhat responsive, they are however not as quick to respond as they ought to be. Furthermore, the result show the college curriculum has integrated some work related elements which allow students to assume a better work citizenship. However, the curriculum is constantly lagging behind modern developments and technologies and the implementation of the curriculum needs to be closely monitored. This will assist to eliminate any variations in the way that teaching and learning ought to take place.

Improving the placement of college graduates in jobs:

Strong partnerships and increased responsiveness to labour market both have a link to the placement of college graduates in the workplace. Literature indicates that having adequate employers keen to offer graduates workplace exposure is a one of

the measurable end-result of having this alignment intact. Outcomes of the study show that employers are not necessarily queuing up to absorb college graduates due to their inadequate or no exposure to work based learning. Additionally, colleges have tried to overcome this shortcoming by recruiting the graduates into the various college departments on 18 month internship programme basis, which is a prerequisite for learners to obtain national diplomas.

Creating a mix of programmes and qualifications that will meet the varied needs of students:

The theoretical revision points out that the funding model itself may also unintentionally prevent colleges from introducing new and innovative programmes. This inhibits the creation of a programme mix that will suit the needs the diverse mix of students. Based on what the study has uncovered, it should be known that this will impact the college ability to direct students to a career path that suits their preference and enabling them to maximise their full potential. Already students have limited options to choose from based on the college course offerings that have been scaled down due to the funding model effect.

The Department of Higher Education has to allocate more funds to TVET college and allow for some flexibility in the way funding is distributed with regard to the programme mix. Colleges must be empowered to offer programmes that are more technical. This is essential, as they have the mandate to absorb students, particularly those who do not have the aptitude to study at university. This is a real concern, more so when results have also reported that colleges offer little ‘scarce skills’ training.

Based on the four outcomes that have been discussed, it is evident that the strengthening of TVET colleges can be achieved through attaining the series of these interconnected goals, which cannot be isolated from one another.

4.3.2 Conclusion on staff development.

The evidence from the study has in line with the literature, indicated that there is a shortage of competent and qualified lecturer in TVET colleges. In response to this,

college have made an effort to come up with skills development initiatives that will address the shortage. The result shows that those responsible for implementing such initiatives have opted to prioritise the academic staff at the expense of support/ administration and managers. Moreover, these interventions have not been effective as they are not able to equip lecturers with the necessary skills to deal with work challenges. This has a profound effect on the efficiency rate of the college. There were suggestions indicating that training should be more aligned to areas where there is a need and avoiding duplication.

Moreover, staff development without the prospect of future growth opportunities through work promotions are deemed unnecessary. Some have a view that because of the lack of career progression, skills development programmes are fruitless. This can potentially have a detrimental effect on the staff morale.

4.3.3 Conclusion on the management of skills development.

The primary intention of this study was not to assess the process that goes into the management in skills development within TVET colleges, but to assess the outcomes thereof. Literature indicates that management of skills development strategies is most effective where they are able to identify and track skills demand through empirical evidence such as effective data collection and analysis systems, and where they foster training programmes which build cognitive and soft skills as well as technical skills. In effect, this approach to the management of skills development guarantees a competent workforce that is able to perform their complex tasks in an increasingly demanding and rapidly growing TVET sector.

The empirical examination shows the lowest mean x= 2.34 for management of skills development. This is an interesting discovery, considering that the skills development is of strategic importance in achieving organisational goals. Henceforth, respondents have expressed some very critical point of views. This was vented by participants expressing their lack of satisfaction regarding the implementation of these development programmes.

4.4 CONCLUSION ON SECONDARY RESEARCH OBJECTIVES.

Conclusion about the assessment of the management of TVET colleges in the development of technical skills will be made with specific reference to the empirical results of the research and literature reviewed.

4.4.1 Research Objective 1: Are Colleges providing students with relevant skills that meet labour market demand?

The conclusion from the empirical study shows that TVET colleges does not offer enough of the scarce skills courses, due to the fact that many students after graduating from the college are not employable. This finding is much in line with the literature which reveals that colleges are restricted from introducing new and innovative programmes because these programmes are not funded. In addition to the funding limitation, the empirical results further indicate that the College struggles to identify and properly address required skills for the local labour markets in which they operate.

Therefore, a combination of funding constraints from the State and a level of poor environmental awareness on the part of the College has resulted in the failure to eradicate youth unemployment within its geographic confinement. Although the College is the source of skills development through vocational education and plays a substantial role in preparing student for work, it does not necessarily equip students with the relevant skills to be employable.

4.4.2 Research Objective 2: What are the outcomes of skills development management in TVET colleges?

Respondents have a sense that management does not take skills development as seriously as it ought to do. This is mainly brought on by the duplication of training programmes which the respondents deem to be ineffective. There was a strong indication that lack of funds and promotional opportunities hamper personal development. Results show that little is known about the institution's skills

development strategies, which appear to be neglected according to some respondents.

Skills development strategies are not well implemented as a result of financial constraints. One of the main stumbling blocks to implementation of effective skills development is the limited financial resources of the colleges. In retrospect, the literature points out the current college funding norms and standards need to be reviewed in order to be flexible enough to allowing colleges to receive optimum funding. Further recommendations from theoretical study are that colleges receive performance based incentives. Government plans to implement the biggest expansion ever seen in the PSET sector, on the contrary there is a chronic problem of poor financing, which seriously hampers the skills development in TVET colleges.

4.4.3 Research Objective 3: How effective are staff development programmes in TVET colleges?

The results show that the programmes being implemented in the college are those with basic learning outcomes, for instance a programme introduced to improve computer literacy (MS Excel) and office administration skills. There is no attention paid to soft skills, these include emotional intelligence, conflict resolution and critical thinking skills which are neglected. Moreover, the focus is mainly training lecturers, whom are considered to be directly at the core of the college business. This is the case because the strategy rests on getting staff to have a professional qualification as a lecturer. This gives an indication that the lecturers are under qualified, henceforth there is much attention drawn to them. These training mainly comprise of ‘train the trainer: facilitation’, ‘assessor’ and ‘moderator’.

Based on the finding that there is selective and insufficient training and implementation of the skills development programmes for employees in TVET colleges. There should be effective communication within colleges, in order to constantly provide an update for employees on the skills development initiatives.

4.4.4 Research Objective 4: What is the status of partnerships that have been formed between TVET colleges and industry?

The respondents indicated that there is a positive indication of some relationships being formed between colleges and industry. The one example that was given was that the college formed a partnership with the local mining company to train and develop engineering lecturers in obtaining a trade test to become qualified artisans. However, the non-availability of comprehensive policies and guidelines on these partnerships can pose a real threat to its long-term sustainability. Statutory guidelines informing any partnerships with industry or civil society need to be established. This will assist to assess and evaluate the 'gains' made from such alliances.

4.4.5 Research Objective 5: Does the college provide a wide range of learning experiences for students?

The literature has demonstrated the profound effect of technology on skills demand and TVET colleges. The advancement of technology has had an increased effect in teaching and learning methodologies, henceforth exposure to and experience with wide range of learning experiences easily translates into marketable skills for students.

The literature suggests that expectations of practically oriented training are not met by many of the college programmes. This outcome is consisted of the result of the scientific study, which shows that some courses (programmes) enable the integration of multiple learning experiences to be quite easily adopted in the classroom more than others.

Although the curriculum design encourages a practical learning experience, in reality, the implementation fails to live up to this expectation. Essentially, this means that teaching and learning in colleges is inconsistently applied from one college campus to the next. Although learners are taught the same curriculum content, this situation results in some students being more 'employment ready' than others.

4.5 CONCLUSION ON PRIMARY OBJECTIVE.

A literature review and an empirical investigation were the two main methods used to respond to the primary research objective. The study revealed evidence suggesting that there is urgent need to allocate more financial resources to skills development. A lot has been done to address the gaps in skills development management in TVET colleges but there are still widespread challenges that persist. Therefore, colleges need to re-think their narrowed approach to skills development and start see it more as a strategic priority that should focus on the entire workforce and not only lecturers.

The challenge however that has been identified in the empirical study pertaining to the unavailability of promotional opportunities is something that should be addressed going forward. Colleges together with policy makers need to develop mechanisms that will create pathways for growth and leadership within the TVET sector. These mechanisms will encourage employees to respond more positively to skills development initiatives and perform at a higher level.

4.6 LIMITATIONS OF THE STUDY.

Limitation faced during the study regarding the literature review and empirical research will be discussed below. This study was only limited to TVET colleges in the North West province in South Africa. In that respect, all the results obtained, therefore, can only be generalised to TVET colleges in that particular province.

The second limitation is that a new questionnaire had to be designed and developed based on the findings of the literature review. This questionnaire is subject to the perception of the participants. Therefore, it was critical in the questionnaire to create the right ‘mind-set’ before answering the questions. And this has been a serious handicap to the study.

Finally, it was not feasible to get all the employees from the TVET Colleges in the North-West Province to participate in this study.

4.7 RECOMMENDATIONS FOR FUTURE STUDIES.

Many countries have written their own success story, as it has been observed in the theoretical analysis of the global perspectives to skills development. Nations with a robust emphasis on development the critical skills have a resolute economy that is able to withstand times of uncertainty. The very same approach is needed for South Africa to disintegrate itself from a nation of two contrasting worlds.

Future research in skills development particularly in the TVET sector is needed. Moreover, there are many other social and economic factors that can be investigated through empirical studies that will assist in dealing with the challenges of the high dropout rate in education at large. Additionally, more research focused towards the employers and SETAs whom are the key role players should be conducted, particularly in assessing their co-ordination.

4.8 CHAPTER SUMMARY

Chapter 4, the main findings of the empirical research study were discussed by combining the results from previous chapters. The various sections from the questionnaire were discussed along with the secondary and primary research objectives. The limitations of the study were explained and then the application of the results that led to the development recommendations.

This study has revealed how ineffective skills development management can have an adverse effect on the college's ability to achieve its strategic objectives. TVET colleges have a major role to play in the development of skills for the millions of NEET population. The distinct environments in which TVET colleges operate present a mammoth task for college leadership in dealing with the developmental challenges that arise. To make matters worse, there is no point of reference for this 'newly' established TVET sector that can assist college management navigate through the vocational education maze. It is therefore concluded that policy makers, researchers, industry, DHET, TVET colleges and civil society need to work in a co-ordinated manner.

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ANNEXURE A: QUESTIONNAIRE

Mr. P.D. Du Plessis
Study Leader: NWU School of Business and Governance
Potchefstroomkampus
Cell: 083 564 5706
pieterdp@live.co.za

Mr. J.C. Coetzee
Co-Study Leader: NWU School of Business and Governance
Potchefstroomkampus
Tel: (018) 299 4012
10306498@nwu.ac.za

Dear participant

Thank you for participating in this study on **Assessing the management of TVET Colleges in the development of technical skills in the North-West Province.** It forms part of the research I am currently conducting for the fulfilment of my MBA dissertation at the North West University (NWU) - School of Business and Governance.

The intended participants are staff employed in TVET Colleges in the North West Province. Data will be collected by means of a questionnaire and should not take longer than 10 minutes to complete.

Your participation in this study is voluntary and all information collected will be used for academic purposes only. Your anonymity will be maintained at all times. Feedback will be made available upon request.

Your participation would be greatly appreciated in this study. Thank you in advance for taking your time to make such a valuable contribution. Please complete this questionnaire before 17 November 2017.

Yours Sincerely,
MBA Student

TJ Tlhomedi

Section A: Biographical information

1. What is your gender?

1	Male	2	Female

2. What is your age group?

1	Under 20	4	31 – 35	7	46 – 50
2	20 – 25	5	36 – 40	8	51 – 55
3	26 – 30	6	41 – 45	9	56 – 60

3. Please indicate the highest qualification you have acquired.

1	No Matric	5	Bachelor's Degree
2	Matric Certificate	6	Honours Degree / Post Graduate Diploma
3	Certificate	7	Master's Degree
4	National Diploma	8	PhD

4. Please state your position at your institution.

	Position	DHET employee	Council employee
1	College Principal		
2	Senior Manager		
3	Manager		
4	HoD		
5	Lecturer		
6	Admin Assistant / Officer		
7	Department employees		
8	Intern		

5. How many years have you been employed at your organisation?

1	0 – 5 years	5	21 – 25 years
2	6 – 10 years	6	26 – 30 years
3	11 – 15 years	7	31 – 35 years
4	16 – 20 years	8	36 – 40 years

Section B: Skills development for students

The FET College Act (Act 16 of 2006) states the Colleges should enable students to acquire knowledge, practical skills and occupational competence. Please read the following statements and indicate on the scale below whether you *Strongly Agree, Agree, Disagree or Strongly Disagree* with the following statements.

Statements	Strongly Disagree	Disagree	Agree	Strongly Agree
6. The TVET College is a real source for the development of technical skills for students.	1	2	3	4
7. The TVET Colleges provide a wide range of learning experiences for students needed for certain occupations.	1	2	3	4
8. The TVET College is responding to the needs of the labour market by developing scarce skills.	1	2	3	4
9. Students are able to demonstrate their ability to perform in accordance with the acceptable standards in the workplace upon completion of their studies.	1	2	3	4
10. The learning programmes offered by the College are in line with the current workplace technologies.	1	2	3	4
11. The College makes use of the latest technologies in terms of equipment, learning material and machines.	1	2	3	4
12. The TVET College standard of education is comparable to international standards.	1	2	3	4
13. There are adequate employers keen to offer College students workplace experience.	1	2	3	4
14. The TVET College curriculum is designed to meet workplace requirements; hence making it easier for students to cope with job expectation.	1	2	3	4
15. The TVET College curriculum encourages practical learning component, rather than just theory.	1	2	3	4
16. The TVET College is able to direct students to a study path (career choice) that will maximise their	1	2	3	4

full potential.				

17. Do you think the Colleges plays a significant role in preparing students for work?

_____

18. Please provide a reason for your answer in (Question 17).

_____

_____

_____

_____

_____

Section C: Staff development

The development of staff through training and development programmes is an important vehicle to improve the performance of the organisation. Please read the following statements and indicate on the scale whether you *Strongly Agree, Agree, Disagree or Strongly Disagree*.

Statements	Strongly Disagree	Disagree	Agree	Strongly Agree
19. There is a shortage of competent and qualified lecturers in specific subject areas.	1	2	3	4
20. Staff development programmes in the College are equipping employees with the necessary skills to deal with the challenges they face in the workplace	1	2	3	4
21. The College has established partnerships with the private sector to assist in staff development	1	2	3	4
22. Retired professionals are recruited due to the scarcity of qualified personnel	1	2	3	4
23. The TVET College established continuous development programmes to improve workplace performance	1	2	3	4
24. The College lecturers have valuable industry experience outside of teaching	1	2	3	4
25. The success of the learner is dependent on the capacity, skill and ability of the lecturer	1	2	3	4
26. The TVET College has partnered with Universities to designed specific learning programmes aimed at training college employees	1	2	3	4

27. How has the TVET College helped you as an employee in your own personal growth?

Section D: Management of Skills development

Management of skills development within an organization plays a critical part in the success of the company, with regards to how skills development is managed. Please read the following statements and indicate whether you *Strongly Agree, Agree, Disagree or Strongly Disagree.*

Statements	Strongly Disagree	Disagree	Agree	Strongly Agree
28. The TVET College staff is satisfied with the effectiveness of the development programmes	1	2	3	4
29. The TVET College recruit a sufficient number of adequately prepared, and appropriately trained staff.	1	2	3	4
30. The TVET College is able to identify areas of poor performance and development training programmes to address poor performance	1	2	3	4
31.The College ensures that staff is equipped with the right set of skills to innovate	1	2	3	4
32. There is a duplication of training programmes within the workplace	1	2	3	4
33. The TVET College management has mechanisms to measure and improve the quality of skills development strategies	1	2	3	4
34. The College skills development interventions are fruitless	1	2	3	4
35. There is a real gap for leadership and management development in the College	1	2	3	4
36. The College ensures that staff is equipped with the right set of skills to adapt to the dynamic and changing work environment	1	2	3	4

37. How effectively do you think the College implements Skills Development strategies?

Thank you for your participation!!!