TECHNICAL, VOCATIONAL EDUCATION AND TRAINING (TVET) INDUSTRY STAKEHOLDERS' INVOLVEMENT IN CURRICULUM IMPLEMENTATION IN SOUTH AFRICA.

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DECLARATION

I, Khanyisile Jane Msibi declare that this thesis is my own work and that where other sources have been used, they have been duly acknowledged and referenced. Further, that this thesis has not been previously submitted to any institution for the purposes of obtaining a qualification.

Signature: ██████   Date: 18 March 2021

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"For everything there is a season, and a time for every matter under heaven"

Ecclesiastes 3:1

ABSTRACT

Technical Vocational Education and Training (TVET) sector continues to produce graduates, however, there seems to be a deficit in the number of students who get registered and complete their qualifications. This is an indication that there is a challenge of quality that is experienced by the TVET sector within the curriculum implementation. The main objective of this study was to examine the involvement of stakeholders in the implementation of the TVET curriculum in South Africa. A document review and in-depth interviews were used to collect the data from the participants. This study was qualitative, it adopted the interpretivist paradigm, and drew from stakeholder theory for the theoretical framework. Snowball sampling was used to select the participants of the study and the thematic analysis approach was utilised to analyse data.

The findings of this study indicate that the relationship existing between TVET colleges and industry stakeholders is not from the curriculum implementation perspective; instead, it is based on student work placement. The participants from the industry revealed that in terms of training need analysis they, too, struggle to plan the training schedule for TVET graduates, and they do not believe that they are in sync with what the students consume as a theory. Findings from this study point to minimal involvement of stakeholders particularly when it comes to curriculum implementation, whereas if there was a close collaboration, joint interest would have arisen towards shared vision on curriculum implementation which would be aimed at improving the employability of the graduates. Based on the findings, some recommendations were made including the revising of the policy concerning the involvement of industry stakeholders in the curriculum implementation.

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LIST OF ABBREVIATIONS

DHET   : Department of Higher Education and Training

DoE   : Department of Education

ETDP   : Education Training and Development Practices

FET   : Further Education and Training

HRDC   : Human Research Development Council

HSRC   : Human Sciences Research Council

NATED   : National Technical Education

NCV   : National Certificate Vocational

NQF   : National Qualifications Framework

NSC   : National Senior Certificate

SETA   : Sector Education and Training Authority

TVET   : Technical Vocational Education and Training

VET   : Vocational Education and Training

CHAPTER 1

BACKGROUND AND AIM OF THE STUDY

1.1 The Technical, Vocational Education and Training (TVET) historical background

South Africa's public Further Education for Training (FET) colleges, which are now referred to as Technical Vocational Education and Training (TVET) colleges were created in 2002 (Akoojee, McGrath & Visser, 2008). In terms of the FET Act 98 of 1998, with the merging of former technical colleges, colleges of education and training centers now fall under the Department of Higher Education and Training (DHET). The reasons for the merging of various former institutions into larger TVET public colleges were to position them to meet social and economic demands and to make them a central feature of the government's strategy to tackle skills shortages, job creation, and economic growth (Sheppard & Sheppard 2012). TVET was created to assist learners to acquire skills that would prepare them to be employable. This indicates that TVET colleges are essential and vital in the social and economic transformation of South African society.

The Green Paper for Post School Education and Training (2012) points out that the vision for the public FET colleges is one of the vibrant institutions that offer vocational and occupational qualifications, and to be the primary sites for vocational skills development (DHET, 2012). TVET programmes are designed to train students in different areas of knowledge and skills. The qualifications are intended to provide theory and practical skills that could lead to employability. The practical component of the study is expected to be offered in a simulated workplace environment. Students are expected to be provided with opportunities to experience work situations during the period of study (DHET, 2012).

TVET education is primarily taught at post-secondary education level but learners from secondary schools are also accommodated especially those from grade 9. There are two types of vocational training: National Certificate in Vocational (NCV) and National Accredited Technical Education Diploma (NATED). NATED Programmes (commonly known as N-programmes), were designed for industries and offered as trimester course for engineering while a semester is applied for business studies (The Green Paper for Post School Education & Training, 2010). After completing the N6 certificate, a student can then complete 18 months in the industry for practical experience to achieve a National N Diploma (NQF level 5). In 2007 the Department of Education introduced the National Certificate Vocational at public FETs which is offered from levels 2, 3 and 4 of the national qualification framework (NQF), level 2, which is equivalent to grade 10, level 3, grade 11 and level 4 equivalent to grade 12. The NCV was originally meant as a general-vocational qualification for young people completing Grade 9, as an alternative pathway to intermediate occupations, but colleges began to allow, and even to encourage, learners who had finished schooling levels up to the National Senior Certificate (NSC) to attend (White Paper for Post-School Education & Training, 2013).

The NCV offers programmes a variety of vocational fields namely hospitality, tourism, engineering, business, information technology and computer science, and safety in society. These programmes aim to enhance employment and self-employment and to enable access to higher education. These programmes consist of both theory and practical components, with four vocational subjects that link to the field of specialization and three fundamental subjects, namely mathematics or mathematical literacy and life orientation (White Paper for Post-School Education & Training, 2013). The Green Paper for Post School Education and Training (2013) defines

vocational education as the middle level of education which provides knowledge and skills to enter the economy while occupational education is defined as educational programmes that are focused on preparation for specific occupations, as well as ongoing professional development and training in the workplace. This gives a clear picture that TVET is all about reacting to the skills shortage in the South African economy, and it should be preparing students mostly with skills that are needed in the workplace.

The TVET sector continues to produce graduates, although there seems to be a discrepancy in the number of students who register and complete their qualifications on record time (Paterson, Keevy & Boka, 2017). These researchers further state that this is an indication that there is a challenge of quality that is experienced by the TVET sector with its curriculum implementation. The problem could be in the quality of training that is currently provided to students and their competency thereof is likely not to meet the expectations of employers. The quality of TVET college qualifications such as diplomas and certificates is generally lower in terms of skills possessed by the graduates versus the skills required by the market, thus unlikely to improve the employment prospects, acknowledges van Broekhuizen (2016).

Perhaps, another approach to improve the quality of TVET college qualifications lies in engaging the employers with the purpose of strengthening and improving its curriculum, so that students could be directed on the right path. Some scholars further note that vocational training generally has witnessed many challenges ranging from a curriculum that has little or no relationship with the workplace, lack of teacher motivation, and inadequate facilities (Okoye & Arimonu, 2016). It seems that those who articulated the objectives of TVET had a clear vision, which, the

implementers seem to have failed to achieve in South Africa. The quality of training offered in TVET colleges is deteriorating. This may contribute to the worsened unemployment among young people mainly since their skills as entrants of the labour market deviate from the skills that employers demand (van Broekhuizen, 2016). Kraak (2010) points out that skills-mismatch has worsened South Africa's existing skills shortages and poorly affected employability.

The South African experience of TVET attention, dominated as it is with concerns around access and massification, has not been a positive one. Enrolment in the public TVET Colleges sector increased radically after 2010, with a particularly sharp increase between 2011 (400 273 learners) and 2012 (657 695 learners) (Needham, 2019). Akooje (2016) argues that the increase of student enrolment at TVET colleges has not been accompanied by complementary increases in resources, either human or infrastructural. For instance, the increase of 64.3%13 (400 273 in 2011 expanding to 657 695 in 2012) in student numbers has only seen a mere 2.17% increase in staffing in the same period. The challenges to individual TVET colleges as a result of this skewed expansion can only be surmised from these statistics (Akooje, 2016).

1.2 Research problem

One of the primary roles of education in any society is to create employable people who will have a significant contribution to the development of a country. However, the constant shortage of skills in the labour markets is an indication that education institutions are not producing the much required skills by the labour market hence qualified individuals still remain unemployed (Lee, 2009). The creation of TVET institutions in South Africa was earmarked to respond to the shortage of vocational skills and other critical skills for the industrial sector yet graduates from these

institutions remain unemployed. The lack of employment of graduates has affected the economic development of the country and frustrated the unemployed graduates.

The TVET institutions produce graduates annually, yet the needs of the community and the country is not met due to the scale of the TVET sector and poor quality output (Rasool & Mahembe, 2014). In its current form, the TVET sector is unable to produce the type of skills as required by the prospective employers (Lee, 2009). The best way to counter the shortcomings of the TVET sector is for the employers to have a responsibility to assist graduates to gain experience. Strydom and Mentz (2010) support such an approach and further indicate that for the South African higher education to improve graduate throughput and success, students should participate in activities that contribute to their improved chances of success. However, Lee (2009) argues that there is a lack of stakeholder partnership between TVET and industries in Africa and that in South Africa this problem is caused by disagreements, different interests and perspectives as well as difficulty in reaching agreements among parties. While student participation in industrial work is crucial, little participation is noted in South Africa. Further, while the role of creating such an environment also rests with the TVET institutions, these institutions fail to establish meaningful collaborative partnerships by engaging relevant stakeholders to take part in enhancing graduate employability.

In the United States where the TVET system is modelled, Orr (2001) indicates that colleges forged formal and informal relationships with employers, labour, public schools, universities, and community agencies, to create new or to improve vocational programmes and services and promoted broader strategic planning for workforce development. According to Field, Musset and Álvarez-Galván (2014) South African TVET has been criticized by the organisation for economic

co-operation and development (OECD) for being unable to involve industry more fully in curricular design. The argument by Field et al., (2014) is that involving industry would facilitate local employer engagement, which in turn would support work placements for students. The primary purpose of this endeavour is to inform the approaches through which the TVET should engage the process of workforce development by using relevant stakeholders. This study is well placed to explore whether TVET in Newcastle has established such collaborative partnerships to enhance graduate employability.

1.3 Research objectives and questions

The TVET colleges in South Africa operate within an environment that has different stakeholders some of whom could be useful if given the opportunity. In trying to explore how the TVET colleges engage the surrounding key stakeholders in the curriculum implementation, the study has one main objective, supported by other three objectives.

1.3.1 Objectives

The main objective of this study is to explore how stakeholders from industry are involved in the implementation of the TVET curriculum in South Africa. This is substantiated by the following three interrelated objectives.

- To explore how stakeholders from industry understand involvement in TVET curriculum implementation in South Africa.
- To examine the nature of involvement in TVET curriculum implementation by stakeholders from industry in South Africa.
- To analyse why stakeholders from industry are involved in TVET curriculum implementation in South Africa the way they are.

1.3.2 Research questions

The overarching research question is: *what is the involvement of stakeholders from industry in the implementation of TVET College curriculum in South Africa?* Based on the background of the research objectives discussed above, the study poses the following research questions.

- What do stakeholders from industry understand by involvement in the implementation of the TVET curriculum in South Africa?

- How are stakeholders from industry involved or not, in the implementation of the TVET curriculum in South Africa?

- Why are stakeholders from industry involved or not in the implementation of the TVET curriculum in South Africa the way they are?

1.4 Significance of the study

This study is significant in that it identifies the stakeholders who could participate in the curriculum implementation of TVET colleges and assess their role in curriculum implementation. The findings of this study are thus useful in understanding the roles of stakeholders in the TVET curriculum implementation. The study demonstrates the need for collaborative curriculum implementation that could enhance the employability of the TVET graduates in South Africa.

1.5 Limitations of the study

The limitations of this study were in two-fold: firstly, the process of securing the appointments with the participants particularly the industry stakeholders were difficult since participants were thinking that I was profiling them on their activities for the TVET sector. To allay their fear, I had to explain in detail what the study entailed and that their participation in the study was solely meant

to find answers on what role they play in the TVET curriculum implementation. The second hurdle was limited resources as I did not have a sponsor. I had to bear all the costs personally and, as a result, I was not able to reach participants who were in remote areas.

1.6 Conclusion

The chapter began by outlining the TVET historical background of the TVET sector to set the tone for the relevancy of stakeholders in TVET affairs. The chapter provided the background and aim of the study. It also gave a brief overview background which is set within the historic and current background of the TVET College. The research questions were posed and the objectives of the study were mentioned. The study pointed out the research problem, significance, and limitations of the study. The next chapter aims to provide theoretical perspectives on key concepts related to the study.

1.7 Chapter outline

The study consists of five chapters:

Chapter 1   Provides a brief background to the study which outlines the history of the TVET Colleges in South. This chapter further outlines the research problem, research objectives, the significance of the study as well as the limitations of the study.

Chapter 2   Presents literature on the involvement of stakeholders in the curriculum implementation, engaging with various works of literature. It is evident that in terms of how the curriculum is implemented in the TVET sector it still needs to be reviewed to accommodate the key stakeholders from its inception to the point where graduates have completed their qualifications. Several studies on the TVET

sector argue that the curriculum should be informed by the industries to minimise the graduate mismatch with what the industries are targeting. It was for such a reason that this study advocated for the involvement of stakeholders in curriculum implementation.

Chapter 3	Outlines the research design and methodology of the study. This study was qualitative, it adopted the interpretivist paradigm, and drew from stakeholder theory for the theoretical framework. Snowball sampling was used to select the participants of the study and the thematic analysis approach was utilised to analyse data.
Chapter 4	In this chapter the results from the collected data are presented and elaborated. Some of the main themes include curriculum understanding, training needs analysis, training activities and teaching training.
Chapter 5	Covers the discussion of results, and it also includes the recommendations that arose during data collection and the conclusion of the study. Generally, the findings that are discussed in this chapter suggest that there is a lack of strategic partnership between TVET colleges and industry stakeholders concerning curriculum implementation.

CHAPTER 2

LITERATURE ON THE INVOLVEMENT OF STAKEHOLDERS IN CURRICULUM IMPLEMENTATION

2.1. Introduction

This chapter outlines the literature concerning the involvement of stakeholders in TVET curriculum implementation. Central themes that are outlined in this chapter include industry stakeholders in the TVET sector and the factors affecting strategic partnering between TVET colleges and industries. Curriculum development and implementation in TVET College also features as the centre part of the study. This is followed by the last segments of the discussions based on how stakeholders can be involved in curriculum implementation. The chapter also gives a brief synopsis of the TVET curriculum in other countries particularly the neighboring countries. Finally, the rationale for strengthening the partnership between TVET colleges and industries is explained.

2.2 Stakeholders from industry in the TVET sector in South Africa

The concept of vocational education is relatively new in South Africa and for this concept to sink well in the society more collaborative work between colleges and relevant stakeholders should be established. According to Freeman (1984), a stakeholder could be any person or a specific group of people either affected by the organisation or able to influence the achievement of its objectives. The Human Resource Development Council (HRDC) (2014) endorses the creation of collaborative work between TVET colleges and relevant stakeholders and further emphasises that such partnering would enable the TVET colleges to become responsive to the needs of stakeholders

especially the labour market. Kettunen (2014) indicates that the stakeholder relationships will work in favour of the TVET especially if the institution can recognise and acknowledge its stakeholders. The South African TVET colleges have the responsibility to engage stakeholders in various processes to receive sufficient support for strengthening the core business of TVETs.

The core business of higher education institutions orbits around the curriculum to produce capable and employable students. However, as noted, the evidence has shown that somehow TVETs are struggling to produce employable students. Onyene, Salisu, Johnson, and Olusanya (2014) indicate that usually, the slow progress in terms of producing employable graduates might be a consequence of educators' inability to comprehend the vocational educational curriculum. Given the notable predicament, Onyene et al. (2014) suggest a collaborative initiative between the TVETs and the whole society as a strategy for ensuring the success of TVETs' programmes. They argue for the incorporation of indigenous orientation into the curriculum and a move from a book to real-life situations. This indicates that stakeholders in higher education are necessary to assist the TVETs with the design and implementation of the curriculum to respond to the needs of society.

The White Paper on Post-School Education and Training (2013) points out the importance of developing and maintaining close working relationships between education centres and employers. Further, the White Paper notes that TVET Colleges are required to develop partnerships with industry and business. Albashiry, Voogt and Pieters (2015) emphasise the point of a collaborative partnership between TVET and the other parties. They argue that if the collaboration is inadequate TVET curricula are unable to meet the needs of the stakeholders.

2.3 Factors affecting strategic partnerships between stakeholders in TVET

A multitude of factors affect the success of strategic partnerships. However, there is a consensus as to which issues are important when coming up with ideas regarding strategic partnerships in the TVET sector. According to Mitchell (1998), three main factors enhance or constrain the strategic partnership. The first factor involves the economic situation, the degree of technological progress, and the extent of private sector development in the context of increased global competition of the given country. The second factor is the strong political commitment required to shape the links with industry. According to Atchoarena (1995), to create the appropriate environment for the partnership to develop, it is the government's task to formulate the laws, policies, and mechanisms enabling the stakeholders to take responsibility and to participate, not only to defend their views but in the best interest of all parties.

Strategic issues for which clear legislation is required include access, provision, financing, certification, and social dialogue. The last factor that constrains or enhances the strategic partnership is the involvement of local key stakeholders. They have been seen as the main actors in the vocational education and training field and they impact significantly on the skill development of the local workforce (Bünning, Frank, Schnarr, & Alexander 2007). According to Mitchell (1998), the ever-changing local needs can be responded to if partnerships are responsive towards local demand. Sustainable partnerships depend greatly on the power granted by governments to the private sector and the government's degree of control over shared systems with the private sector. Also, the strengths and weaknesses of each partner must be taken into consideration at all three levels of partnership to make collaborations effective.

2.4 Curriculum development process in TVET

The concept of curriculum development is not easy to define in a single description (Carl, 2009). Rogers and Taylor (1998) provide a broad definition of curriculum development as comprising all the activities whereby an education system plans and guides teaching and learning. This teaching and learning can take place in groups or with individual students, inside or outside a classroom, in an institutional setting like a school, college, university, a training centre, or a community organisation. As is the case with a variety of definitions of curriculum development, so there are a variety of curriculum development models (Taylor, 2008). In this study, Finch and Crunkilton's (1999) model has been primarily used due to its application by the authors to curriculum development in VET. According to this model, the process of curriculum development in VET is characterised by three main phases: Phase one - Planning the curriculum; Phase two - Establishing curriculum Content; and Phase three - Implementing the curriculum. Each phase comprises several key tasks. Phase one: Planning the curriculum (also known as the design phase) includes making decisions about the curriculum and collecting and assessing both institutional and community-related data. Phase two: Establishing curriculum content includes setting curriculum goals and objectives, determining the content, and making decisions about content. Phase three: Implementing the curriculum includes dissemination of the curriculum, identifying and selecting materials, the development of materials, the development of the school/college to work transition, and assessing or reviewing the curriculum (Finch & Crunkilton, 1999).

2.4.1 Phase one

Carl (2009) defines the planning phase as one during which key decisions are taken which must be based on accountable criteria. Irrespective of whether the curriculum is being revised or a new one is being developed, the curriculum ought to be planned to meet the needs of all the critical

stakeholders (Finch & Crunkilton, 1999). In particular, a VET curriculum must take into account national human resources needs, the requirements of business and industry, as well as the needs of teachers, students, parents, and society as a whole. Furthermore, for a curriculum to be fully accepted as representative of the ideal for nation-building, it has to be planned in such a way that it entrenches the values and interests of the different stakeholders that constitute the nation (McGrath, 2007). It is within the planning phase of a curriculum that the methods of curriculum development, a team approach, and responsible decision-making are paramount (Carl, 2009).

Curriculum planning includes long-range planning and strategic planning. Long-range planning is premised on the principle of all things staying on the same basis; while strategic planning is aimed at scanning both the internal and external environments. Strategic planning is an intense process that is characterised by a series of steps, looking into the strengths, weaknesses, opportunities, and threats (SWOT analysis) to the formulation of vision and mission statements, developing specific plans, applying the strategies included in the plans, monitoring and evaluation (Finch & Crunkilton, 1999).

2.4.1.1 Decision-making in planning the curriculum

Most curricula are organised around at least two levels of aims: very general or broad goals, and much more specific learning activities and objectives. Making decisions on what knowledge competencies and skills to include in any curriculum is time-consuming (Finch & Crunkilton, 1999). Decision-making in curriculum-planning involves two major areas: policy decisions and operational decisions. Policy decisions deal with goals, objectives, and some basic structures for achieving these goals and objectives. A national curriculum for VET must, first of all, align with

the overall government policy, and also with the subsets of the government policy, such as the economic policy. Public policies govern virtually all aspects of education in all education systems, including the curriculum, whereby they determine what teaching and learning are provided, how, to whom, in what form, by whom, and with what resources (Levin, 2008). Operational decisions involve the day-to-day activities of the curriculum and serve towards the smooth running of the curriculum, and also deal with the management of the approved curriculum. The decision-making process consists of several stages, each of which builds on the next. They include, according to Finch and Crunkilton (1999), stage one: defining the problem or opportunity and clarifying alternatives; stage two: establishing standards for each alternative; step 3: gathering institutional related data that align with the standards; stage 4: analysing the data; stage 5: deciding which alternative is supported by the data.

2.4.1.2 Collecting institutional and community-based data

When TVET curricula are being planned it is important to understand the provisioning system (school, college, training centres, or workplace as site, among others) and related data, such as student enrolments, staff capacity, infrastructure, existing programmes, and articulation in the education system and trends. Data-gathering should include inputs from the community (for example the lecturers, students, parents, businesses, industries, and the public) which are crucial as an attempt to promote the acceptance of any new programme or the reform of an existing programme. In many cases, the lack of community data and inputs has led to a misunderstanding about the TVET, which leads to its low status in general (Billett, 2004). The community and its relationship to planning quality vocational programmes need to be forged through partnership during assessment and evaluation of what already exists. Inputs from community groups help to

create a curriculum that will not only serve the students, but also the community in general (Finch & Crunkilton, 1999). Seeking community data, particularly of the industries and the businesses, assists in making decisions about the demand for the curriculum and the sub-sets of the curriculum (Billett, 2000). Furthermore, collecting data and seeking ideas and suggestions from the students and the lecturers of TVET is essential (Powell, 2014).

The students and the lecturers are well-positioned to appraise existing practices and to indicate what works and what does not work. Further, the process of following-up on former students to track their employment data is an important step to solicit sound and realistic data on the effectiveness of the TVET programme offerings and also, to encourage TVET graduates to contribute in the review of the programmes. An analysis of the placement records of graduates in business and industry should be carried out to gather job-performance data (Rosenbaum, 2001). From this process, distinct trends that have a strong implication on the future enrolments of students and the assessment of facilities will emerge which will facilitate the planning of the new curriculum (Finch & Crunkilton, 1999).

2.4.2 Phase two: Establishing the curriculum content

Carl (2009) indicates that content is a core aspect of the curriculum; it determines the nature and extent of the curriculum, and the content is used to achieve the goals and aims of the curriculum.

2.4.2.1 Setting the goals and objectives of the curriculum

The goals and objectives of a curriculum have to be established first before the content is identified to prepare the students for employability. The process of establishing meaningful curriculum goals

and objectives is protracted and time-consuming. Broad VET goals are of prime importance to prepare students for entry into the national economy as well as for advancement in their chosen career. The goals of the curriculum are at best broad and therefore unmeasurable; they serve as foundations to further curriculum-building because through the goals the purpose of the curriculum is provided. Some curricular goals are national, state/provincial, or community-based (Finch & Crunkilton, 1999). McNergey and Herbert (2007) also point out that the assessment or review of any curriculum is based on how well the goals have been met.

Finch and Crunkilton (1999) argue that the objectives should flow from and be congruent with the goals. Objectives include general objectives, specific objectives, terminal objectives, enabling objectives, and performance objectives. Some curricular outcomes are measurable or unmeasurable. Objectives, on the other hand, are measurable outcomes in a curriculum. Measurable outcomes are easy to assess and yield quantifiable data. In developing curriculum objectives, a detailed and systematic effort needs to be made to communicate exactly what is expected of the student. In this regard, a TVET programme must have a considerable number of objectives that are measurable to assure and to determine the competency level of the students. Sequencing the order of objectives allows for a coherent flow of the content and needs to be decided upon in establishing and arranging curricular goals and objectives. This will help with the objectives that are best to meet the students' needs (Finch & Crunkilton, 1999).

2.4.2.2 Determining the content of the curriculum

As with planning the curriculum, determining the curriculum content entails a protracted process of deciding which content to include or exclude. Determining curriculum content presupposes the

outcome or throughput of a curriculum. What is put in as content not only determines the teaching and learning strategies, it also informs the monitoring and evaluation processes of the curriculum (Carl, 2009). In vocational and technical education, determining the curriculum content becomes pivotal, given the important purpose the curriculum has to serve in the broader context (Finch & Crunkilton, 1999). Finch and Crunkilton (1999) argue that factors such as time and the funds available, internal and external pressures, national, state/province and local requirements, skills needed by employers, business and industry concerns, and the particular level of content to be provided need to be considered before deciding on curriculum content.

The hurried making of content decisions could have adverse consequences that could potentially lead to a protracted-time required to remediate weaknesses and misjudgements and this, in turn, creates a burden on the budget for curriculum development. Finch and Crunkilton (1999) assert that irrespective of whether a curriculum is being developed or reviewed, the authentic context within which it is to be implemented has to take into consideration its relevance and cost-effectiveness. This, accordingly, determines the scope and range of the curriculum.

The ensuing discussion deals with the above factors as postulated by Finch and Crunkilton (1999). Time and money are inseparable when considering the development, implementation, monitoring, evaluation, and review of the curriculum. For example, the time assigned to develop the curriculum would determine the strategies to be used in deciding on the curriculum content. This implies that a prescribed time within which the content is to be established should be decided on early to facilitate progress. Likewise, the money allocated for procurement (for example traveling expenses and printing, and the short-term contracts of personnel, including researchers, experts, and

consultants) has a huge impact on determining the scope of curriculum development, in particular. This could be influenced by the fact that some strategies may require additional funds over and above what was allocated for the establishment of content, while others may not require any additional funds (Finch & Crunkilton, 1999).

Internal and external pressure could constrain or enhance the determination of the content. In deciding on the content to be included or excluded in a curriculum, various issues could impinge on the process. Self-interest and the best interest of others are two of the critical elements that individuals and groups within or outside the educational environment could use to either accelerate or decelerate the process. Individuals or groups could agitate for the inclusion of specific content. A lack of consensus could impact negatively on decision-making in respect of the content and even influence strategies in the collection of the data (Finch & Crunkilton, 1999).

Government requirements as a factor, nationally, provincially, and locally, could either contribute or inhibit the facilitation of the determination of the curriculum content. National governments at times dictate specific content, and also when, where, how, and how long it is to be offered and to whom, and when it is to be assessed. Such stipulations have the potential to inhibit teacher creativity and innovativeness. In such contexts, to meet the intended curriculum goals, the lecturers of vocational and technical education are prescribed to teach the specified content without adapting it to the needs and experiences of the students (Finch & Crunkilton, 1999). The skill needs of employers are crucial factors influencing the TVET curriculum. All education is an attempt to prepare individuals for employability. The curriculum content is in most cases aligned closely with the skills needs of the employers. However, this is even more important in TVET institutions which

have to provide the students with content that will address the identified needs of the industry. Therefore, curriculum developers should not lose sight of the skills needs of both the students and that of the industry when making decisions on content selection for the TVET curriculum. In aligning the VET curriculum content to industry needs, it is incumbent upon the curriculum developers to consider current and future workplace basics and skills needs (Finch & Crunkilton, 1999).

2.4.2.3 Making decisions in respect of the content

The scope of the curriculum influences decision-making in respect of the curriculum content. Finch and Crunkilton (1999:166) argue that "sound content decisions serve to bridge the gap between the identification of potential content and the development of objectives." They postulate this formula:

Potential Curriculum Content – Constraints = Usable Curriculum Content

The explanation of the above formula is as follows: Potential curriculum content consists of that which has been determined potentially relevant to students through one or more of the strategies (cf. par. 2.4.2.1) above. Constraints are those factors that may place serious limitations on the teaching of certain content. Usable content is that which best contributes to the students' benefit and, given existing constraints, can be taught. This formula is designed to enable content decision-making to the point where it is most meaningful and manageable for use in designing instruction (Finch & Crunkilton, 1999).

Constraints related to curriculum content are "limitations present in the teaching-learning process" (Finch & Crunkilton, 1999). The four relevant areas that exist as constraints in this process are, namely the student, the instructors [lecturers] and the support staff, the curricular arrangement, and the employment setting. These factors have the potential to limit the curriculum content and are discussed in the ensuing section.

a) The student: The VET student shapes the curriculum content. The admission requirement level to enroll at a TVET should be considered and related questions should be asked: What are the students' general and applied skills? Are they interested and motivated? What are their maturity levels? These factors impact the amount and type of content to be included or not.

b) The instructional and support staff: The instructors and support staff also have the potential to limit the determination of the content. Questions such as: what content are the VET lecturers qualified to teach? Are a sufficient number of lecturers available to provide the needed course-work in core content areas (for example mathematics, science, English)? Are sufficient numbers of lecturers available to teach vocational specialisations (for example, engineering, tourism, and marketing)? Are qualified personnel available to provide adequate support services, such as guidance, placement, and counselling?

c) Curricular arrangement: This represents the broadest range of concern in decisions on curriculum content. Specific questions need to be answered when making curriculum decisions to identify constraints. The following are several questions that may be asked,

namely: what time is or can be made available to teach the students? What content coverage is required for the certification or licensure of the graduates? What money is available for equipment, resources, and supplies in support of certain content? Answers to these questions may help avoid or address the potential threats to the quality of the curriculum content.

d) Employment-setting: The employment-setting that VET graduates enter is crucial in identifying constraints in content decision-making. This raises questions such as: what minimum employability level is expected of the graduates. What occupational areas will the graduates be prepared for? Which experiences may be best obtained in the work settings? Answers to these questions will facilitate the making of decisions in respect of curriculum content and alleviate constraints that limit the content that could be decided on.

2.4.3 Phase three: The implementation of the curriculum

The implementation of a curriculum is not simply an extension of the planning and adaptation process; it is a phenomenon in its own right (Fullan & Pomfret, 1977). The implementation, particularly of a new curriculum, could presuppose various possibilities; it could be that the curriculum being implemented is either obsolete or unsuccessful; that perhaps the outcomes of the intended curriculum have not been realised; or that there is a gap between the intended curriculum and the implemented one (Paudel, 2009; Bantwini, 2010). The intended curriculum is defined as the one prescribed by the policymakers, the implemented curriculum is the one put into effect in the classroom, and the attained curriculum as the one about what is being learned by the students (Schofield, 2001; Handal & Herrington, 2003; Paudel, 2009; Bantwini, 2010). There may be a mismatch between the intended, the implemented, and the attained curricula. Consequently, a

mismatch in itself could lead to a change in the curriculum, and thus to the development and implementation of a new one.

2.4.3.1 Dissemination of the curriculum

The effective implementation of the curriculum depends predominantly on its effective dissemination (Carl, 2009). The dissemination phase follows after the planning/design phase has been completed and finalised. The phase comprises the preparation of curriculum utilisers through the distribution or promulgation of information, thought, and concepts to make them aware of the envisaged curriculum (Carl, 2009). This phase is important for the meaningful and successful implementation of the curriculum. The implementation of a new curriculum or a revised one fails or is even resisted as a result of its defective and injudicious dissemination. Carl (2009) argues that effective dissemination is a requirement not only for the effective implementation of a curriculum but also for the institutionalisation thereof.

The implementers of a curriculum need to be thoroughly prepared for its successful implementation. Carl (2009) puts forward that the implementers bring with them different attitudes and, depending on how the new curriculum is introduced to them, they can either accept or reject it. Carl (2009) further states that how information is disseminated often determines how acceptable the curriculum will eventually be. He indicates that the disseminated information may be received in various divergent manners and that the designers have to consider this aspect in deciding on which strategy to use to disseminate curriculum information (Carl, 2009). Therefore, the level of preparedness of those who will be involved in the implementation process is a factor that needs serious attention.

According to Carl (2009), change is an inherent part of the dissemination. He argues that change in the curriculum is precipitated by various aspects in an attempt to address specific group needs. The needs could be national, regional, provincial, and/or community needs. This makes the dissemination phase a crucial phase in conveying information concerning curriculum change. The phase opens up opportunities to solicit inputs from the stakeholders; inputs that further sensitise them to the change, in turn encouraging acceptance and support of the curriculum (Carl, 2009). Involving all the stakeholders effectively creates opportunities for successful implementation. The prime function of dissemination is the preparation of all those who will be involved in curriculum change. Carl (2009) argues that curriculum change is resisted due to various factors. He lists a few of these factors, such as fear of the unknown and the new, the security associated with the existing curriculum, a lack of self-knowledge as regards one's abilities, a lack of motivation, fear of criticism, insufficient support by education leaders, indistinct and faulty dissemination of the curriculum and ambiguity about and a lack of understanding of the nature and extent of the envisaged change (Carl, 2009).

These factors attest that the lecturers as the implementers of the curriculum in this context are not the cause of resistance to curriculum change. Such an argument indicates that it is imperative that the means and strategies that are to be used to disseminate a new curriculum be devised to turn around, what Carl (2009) terms 'limiting powers/inhibiting factors' into 'facilitating powers/factors'. For Carl (2009), facilitating factors are pleasurable and positive, and he attests that curriculum dissemination is part of system administration with the meeting, plans of action, timetables, distribution of information circulars, and organised in-service training

programmes, and thus is a structured and planned process. These factors include a renewal climate, that is, a positive climate necessary to stimulate enthusiasm and dedication for the implementation of the new curriculum. Accordingly, within this climate, there must be a conscious attempt to cultivate high group morale, as this will determine the quality of involvement and cooperation (Carl, 2009). Inherent in a renewal climate is thorough planning, good communication, a high level of curriculum expertise in facilitators and consumers, the involvement of all the interested parties, and effective leadership (Carl, 2009).

Carl (2009) perceives the inhibiting factors, on the other hand, as those factors that render the dissemination phase as an unplanned and unstructured or a 'spur-of-the-moment' process. Carl (2009) points to the three inhibiting factors like the education system, the organisational and social structures, and the human factors. In the educational system, the factors are, namely a lack of financial support, political pressure from the authorities, vulnerability in terms of community needs, excessive centralisation in respect of educational control, traditions, and poor salaries. The organisational and social structures are characterised by a lack of long-term planning and objectives, excessive accentuation of bureaucracy, weakly-developed channels of communication, and an absence of coordinated action on the part of the participating organisations and a dissemination liaison person from the top of the structure.

Carl (2009) lists numerous human factors that have a limiting and inhibiting effect on curriculum change. They are, namely, poor leadership, incapability, poor training, and defective skills, a lack of time, personal and psychological qualities, administrative duties, individual and mutual differences in preparedness, a variety of educational philosophies, defective understanding by the

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users of the curriculum, negative attitudes and emotions, passivity, defective self-confidence, periods of confusion and an absence of encouragement and motivation. The above is a result of the chance dissemination and decreases the possibility of the successful implementation of the curriculum because it is unplanned and unstructured (Carl, 2009).

The dissemination of curriculum change is a concerted and conscious exercise that has to be planned with rigour. The intention is to prepare the lecturers for the change in curriculum, irrespective of the depth and extent of the change. The strategies used need not alienate the lecturers from effecting the change effectively and efficiently. Carl (2009) cites two strategies of curriculum dissemination, namely power strategies and/or influencing strategies. A power strategy is a macro-level strategy that renders the lecturers passive with little or no say in the decision-making process (Carl, 2009). An influencing strategy attempts to coax the lecturers. Though manipulative, an influencing strategy affirms the value of lecturers and thus makes them amenable to curriculum change. In conclusion, curriculum dissemination is the bedrock of successful curriculum implementation. The dissemination phase is planned and structured in a concerted effort to distribute information to prepare the lecturers for the implementation of the curriculum.

2.4.3.2 Engaging the lecturers as curriculum implementers

According to Spillane et al. (2002), the implementation of the curriculum has to include preparing and engaging the lecturers (or teachers) as agents of the curriculum implementation process. For Spillane et al. (2002), a key dimension of the implementation process is whether, and in what ways, implementing agents come to understand their practice, potentially changing their beliefs and attitudes in the process. Accordingly, curriculum implementers (for example, VET instructors or

lecturers) have "first to notice, then frame, interpret, and construct meaning" (Spillane et al., 2002). Spillane et al. (2002) stress the supremacy of implementing agents in the implementation process. It implies that the implementing agents, whether national or school-based, should share a common sense of what the national curriculum requires. This, in turn, suggests the need for consultation and co-operation between the implementing agents.

Similarly, Handal and Herrington (2003) argue that teacher belief, not only "represents implicit assumptions about curriculum" they also "act as cognitive and affective filters through which new knowledge and experience are interpreted". Louis, Febey, and Schroeder (2005) posit that the stage, or rather the extent to which teachers engage or resist policy text depends on how the new policy was signaled and presented to them. When consulted, teachers engage with the policy in a significant way. To reinforce this, Louis et al. (2005) state that when teachers are confronted with the implementation of a curriculum, how they interpret it will be determined by whether they engage with the change significantly, incrementally change or resist it outright. The implication is that should the values that underpin the curriculum differ from the implementing agents' beliefs, values, and culture there could be a propensity to influence the degree of the success of the implementation.

Teachers use the cognitive processes to understand new information to determine whether it is consistent or inconsistent with their prior knowledge (Spillane et al., 2002; Louis et al., 2005). Any discrepancy with the usual way of doing things needs to be communicated and not imposed on the teachers to ease change, and thus prevent dissonance. While considering the influence of prior knowledge on change, the role of context and culture as conditions mediating change should not

be precluded (Paudel, 2009). Sense-making is a characteristic of a cognitive perspective that could be made as a collective. The lecturers work as a group and at times influence one another in decision-making. Louis et al. (2005) assert that groups are the most effective unit of change if the goal is to alter the educational system. Like Spillane et al. (2002), they define collective sense-making as the process by which individuals and groups evolve shared understandings of their setting (Louis et al., 2005). They further perceive sense-making not as an event but as a "process by which teachers' and administrators' interpretation of external demands culminate in formal or informal decisions about how they collectively respond to externally initiated policies" (Louis et al., 2005:179). Spillane et al. (2002) argue that a curriculum is first noticed, framed, and interpreted to construct meaning through a longitudinal process of consultation, review, and trail.

Each of these activities is discussed as follows:

a) Noticing: There are various forms of noticing about the curriculum implementation process. Louis et al. (2005) argue that sense-making occurs when people notice a situation that does not fit with their usual routines and use the experience to find patterns that help to explain new situations. In noticing, implementing agents, or 'street-level bureaucrats', as Lipsky (2010) calls them, start to associate some aspects in the new curriculum with their existing knowledge of the curriculum. This is undeniable, particularly for teachers who are already teaching and have experience and perhaps, expertise or specialties. Teachers, Louis et al. (2005) argue, make sense of a situation as they react and reflect on it as individuals.

b) Framing: Spillane et al. (2002) put forward that "teachers and other implementing agents tend to assimilate the new knowledge about instruction into their existing frameworks for understanding", while most, when faced with a change in the curriculum, tend to notice and attend to familiar ideas and ignore the unfamiliar ones largely because they lack "a mental framework to connect and explain the unfamiliar ideas". This poses a problem in adjusting or adapting to the new curriculum. Their frame of reference becomes a barrier to assimilating the new curriculum. Louis et al. (2005) point out that when teachers feel that their legitimacy is threatened or their professional judgment is undermined, they oscillate towards collective sense-making. This will then inform their frame of reference. It is the teachers' response (noticing) to the new curriculum which forms their frame of reference. This could be one of acceptance, rejection, or compromise (Spillane et al., 2002).

Interpreting: There are various ways implementing agents interpret a new curriculum the teachers' cognitive limitations, the school context, the teachers' beliefs or power relations. Cognitive limitations have the potential to bring about resistance to change, particularly where there is a difference in the interpretations of policy. The context around which the curriculum is to be implemented also has a bearing on how the teachers interpret the curriculum. Depending on where the educational institution is located, namely urban, rural, or semi-rural, could influence the teachers' perception, and thus their interpretation of the curriculum. Likewise, the perceived power of the policymakers could affect how the teachers/lecturers interpret the curriculum. Also, when it comes to how the teachers interpret the implementation of a new curriculum, one has to note the question of power relations. Louis et al. (2005) argue that there are more privileged voices that are listened to and attended to in terms of determining the groups' interpretation of policies. If the

voices of the teachers are ignored in an attempt to develop constructive responses to external demands, they engage in collective interpretations of the policy to counter their lack of power. This facilitates a change of the cognitive maps and behaviours since the cognitive engagement with policy creates learning opportunities.

The result is sense-making, largely due to heightened group interaction. As a consequence, a redefinition of values and attitudes is brought about. Louis et al. (2005) posit that organisational learning is a critical component of sense-making because it prevents teachers' current beliefs and experiences from interfering with their ability to implement and interpret policies in the manner policymakers intended.

2.4.3.3 Identifying, selecting and developing curriculum material

The identification, selection, and development of curriculum material are also crucial aspects of decision-making in respect of the content and impact on the effectiveness of a teaching-learning environment. Some type of logical procedure for identifying and selecting the curriculum material has to be developed. Defining what curriculum materials are to address the goals and objectives of the curriculum is a priority in an attempt to bring about a change of behaviour in the students. Various types of curriculum material exist, namely printed, audio-visual, and/or manipulative aids (Finch & Crunkilton, 1999).

An overall general description of the materials to be selected should be considered, including bias, readability, content, presentation, learning, support, and cost-effectiveness before a decision is made in respect of the selection of the curriculum material. This is a crucial exercise that will

ensure that the material selected caters for the characteristics of all types of TVET students. With technological advancement, there are many sources of curriculum materials, namely commercial publications, journals and magazines, curriculum centres, and private companies (Finch & Crunkilton, 1999). Finally, instructors (lecturers) should also as far as possible be involved in the identification and selection of the teaching materials to affect their successful implementation.

2.4.4 Assessing, evaluating or reviewing the curriculum

A comprehensive assessment of the curriculum is achieved when the focus is placed on the curriculum context, the input, the process, and the student. Context assessment defines and describes the environment in which a curriculum will be offered, identifies the needs that have been used as criteria, and pinpoints any constraints that hinder meeting the identified needs. Input assessment focuses on resources and strategic decision-making. The choice of the best resources and the provision that the resources are used effectively and efficiently are of prime importance in the assessment of the curriculum. Process assessment is closely aligned with instruction and deals directly with the operation of the curriculum. It is critical in examining the immediate effects of instruction, not only on the students' success, but it is also meaningful to the extent that inferences are drawn to its success in the world-of-work and beyond. The focus of the effectiveness of curriculum decisions must also consider former students in respect of their learning and future employment experiences to determine the quality of the curriculum because the graduates are the end-products of any curriculum (Finch & Crunkilton, 1999).

Setting the standards of curriculum assessment defines the quality of the curriculum and the assessment objectives. Hence a framework must be developed – an assessment plan - to serve,

gather, and examine the assessment data. The plan should include the rationale for the assessment and a description of the curriculum and the assessment design used. The results of the assessment could be used to improve further curriculum development and the improvement of the materials (Finch & Crunkilton, 1999).

2.5 Stakeholders' from industry involvement in TVET curriculum implementation

Curriculum implementation is a process of the school facilitating the interaction between the learner and the curriculum (Mufanechiya, 2015). The curriculum implementation is the point where the curriculum is put into action after it has gone through a rigorous development process. Given the strategic function of curriculum implementation, Matkovic, Tumbas, Sakal, and Pavlicevic (2014) see it as a recurring process which involves the effective and efficient execution of defined courses. The rationale for these authors to argue that curriculum implementation is the recurring process is based on the iterative activities which are embedded in the curriculum development process.

The implementation of the curriculum of any institution of learning, whether a school or TVET up to the university, requires a clear trajectory that should be stipulated by the educational policy of the government, in case the institution is a government entity. In South Africa, the Green Paper for Post School Education & Training of 2012 is the main source for the TVET curriculum trajectory; in that it stipulates that the curriculum of TVET colleges should address the needs of the students and industry. From the onset, the Green Paper lays a foundation for collaborative engagement among different stakeholders. If the curriculum has to address the needs of the industry, the TVET colleges should be aware of the needs of the industry and this can only happen

if the industry is part of the curriculum development processes. Otherwise, the TVET colleges may well feed students with a curriculum that is not responsive to the needs of the industries, which might further result in unemployed or unemployable graduates. The White paper for post-school education and training (2013) obligates TVET colleges to develop innovative curricula and ensure that curriculum development is institutionalised, with the long-term capacity to continuously update and improve the quality of programmes.

Koskei (2015) argues that apart from addressing the needs of the students and industry, the curriculum has to also respond effectively to the socio-economic issues of the society. In achieving the latter, Koskei (2015) states that the curriculum has to navigate through diverse stakeholders as well as interest groups to be coherent. According to Yaro, Arshad, and Salleh (2016) involving stakeholders in education and curriculum affairs is meant to improve the quality of the education system. The stakeholders are usually involved in curriculum affairs because of their invaluable expertise, which is required to shape the curriculum, which could respond well to the needs of the industries as well as society. Matkovic *et al.* (2014) argue that curriculum stakeholders can play a pivotal role in curriculum development as they would provide recommendations, feedback, critique, and advice. Koskei (2015) argues for an extensive role of stakeholders in that they should be involved in the entire process of curriculum development. While this assertion is relevant, the current study focuses on the role played by stakeholders, particularly the employers during the implementation of the curriculum.

The implementation of the curriculum is regarded as a crucial phase of the curriculum development process because its final destination is the classroom, which involves the interaction of various

stakeholders namely students, teachers, administrators, and the community (Olibie, 2014). These are not the only stakeholders who are responsible for the implementation of the curriculum, Middleton, Evans, Keegan, Bishop, and Evans (2014) state that other stakeholders could be policymakers, advisors, developers, designers, service staff, and managers. Middleton *et al*. (2013) further state that these may regularly take part in the curriculum implementation and be required to take certain responsibilities.

A study by Terblanche (2017) reports that TVET colleges are currently experiencing poor industry participation in areas such as student work placement opportunities, which leaves students stranded for most of the time. This increases the frustration for the colleges who cannot certify the competence of students without the practical experience. Terblanche (2017) further states that the reluctance of the industries to host TVET learnerships and apprenticeship students affects and delays students' opportunity to obtain their qualified tradesperson status. The lack of cooperation by the industries seems to be just among other problems, which have been identified, as Terblanche (2017) further states that there is poor industry participation in curriculum development and review process. Consequently, the TVET programmes fail to respond effectively to the needs of the industry.

It is evident that the industries, as major stakeholders in the TVET curriculum, are either not involved by authorities or, of their own accord, are not willing to be part of the TVET curriculum process. Besides the current challenge that has been identified by Terblanche (2017) regarding the non-responsiveness of the industries, Tom-Lawyer (2015) argues that curriculum implementation requires collaborative efforts from various stakeholders. The current study acknowledges that there

are many other stakeholders besides industries, however, the role which industries ought to occupy in TVET curriculum affairs is fundamental. This demonstrates why their involvement in curriculum development is important and if the non-response behaviour is not addressed the consequences of their behaviour would be catastrophic.

2.6 TVET Curriculum implementation in other countries

In Nigeria, for example, Vocational and Technical Education (VTE) is taught at the junior secondary level and is described as pre-vocational and academic. In this arrangement, those who may not continue to senior secondary also have some form of vocational training. Those qualified to senior secondary concentrate on technical, commercial, and other vocational courses to make them immediately employable (Seyi, 2014). Seyi (2014) states that the aims of all education institutions in Nigeria were character training and job orientation, to ensure job orientation and vocational training were run on the apprenticeship system.

Namibia vocational education and training (VET) is regarded as "an effective, sustainable system of skill formation closely aligned with the labour market that equitably provides the skills needed for accelerated development and the competencies needed by youth and adults for productive work and increased standards of living". Furthermore, all VET programmes are competency-based and set up in response to priority demands of business and industry, especially small and medium enterprises (Namibia VET Policy, 2005). UNESCO (2016) points out that VET reforms in Namibia are ongoing and this includes the involvement of the private sector in terms of governance, contribution to curriculum design as well as contribution to delivery. This is further supported by Lolwana (2017) who indicates that the nature of TVET requires that employers must be involved in significant ways.

In Botswana, technical colleges play a central role in the economic development of the country; there is a general mismatch between the throughput and the expected throughput by the industry in terms of acquirement skills (Moswela & Chiparo, 2005). Among the challenges that were identified by these authors to be a problem for graduates to acquire effective skills was the exclusion of prospective employers in curricula design. This led to the conclusion that Botswana still has to improve its technical colleges' curricula to enhance the employability of the graduates.

2.7 Establishing a partnership between TVET and industries

The partnering between the TVET sector and industries has been a growing concern for much-developing countries and South Africa is no exception (Raihan, 2014). In most instances, TVET colleges use a curriculum created by academics with little or no understanding of the industry requirements or local needs. This, in turn, results in more unemployable graduates who cannot even be innovative in terms of creating job opportunities that might be useful for the local economy. The partnering of TVET colleges with the industries is something that is encouraged since the economic sector remains volatile and more unpredictable. This would benefit both the TVET colleges while the industries would not struggle to get employable candidates, since there would be sufficient employment pool.

Some scholars have a different perspective of the manner TVET colleges should partner with industries. For example, Ugwoke, Ezeji, Eden, and Etonyeaku (2016) indicate that this partnering can be done in terms of work-integrated learning and in their perspective, this could improve the employability of graduates. Dang (2016) indicates that before work-integrated learning is used as

a mode of facilitating the TVET industry partnership or collaboration, a strategic partnership between stakeholders in TVET should be established. Mitchell (1998) states that a strategic partnership comprises a formal agreement between two or more parties that have agreed to share finance, skills, information, and other resources as they are in pursuit of a common goal. This demands committed parties who see value in collaborating with others for a common goal. TVETs are in dire need of such collaborative networks to improve the employability and value of the TVET sector in the South African economy. The need to produce skilled manpower demands the active involvement of all relevant stakeholders of TVET. This can be implemented through the establishment of strong partnerships, argue Woldetsdik and Lumadi (2015).

As it may be known, the current TVET delivery system requires the exertion of efforts by all partners, from international as well as global perspectives. Accordingly, the government, as the main partner of TVET, may be vested with the responsibilities of law and policy-making, controlling quality management of the TVET system and providing support to TVET colleges. Moses (2016) writes that preparing an effective curriculum that integrates both theory and practice where students practice in the industry what they have learned during school-based (classroom & laboratory) training is paramount. Yet most stakeholders who are supposed to engage in such exercise are yet to establish a tangible strategy of collaboration. Introducing students to the world of work enables them to become productive and fit in the labour market needs. However, their exposure to the world of work should not be without some proper streamlined collaborative partnerships between different stakeholders. Moses (2016) further indicates that cooperation makes institutions aware of the job opportunities for which they have to train the students, and this happens with ease with the participation of industries in curriculum preparation, as indicated

earlier by Raihan (2014). Similarly, the industry also becomes aware of the ways they can benefit from the training institutions, especially during the recruitment process.

The current policy position by the South African government on the matter regarding TVET partnering with the industry is that the government has vowed to establish a relationship with this sector. The DHET intends to forge a strong relationship between the TVET colleges and the industry, in line with the Green Paper (DHET, 2012) to ensure the development of the intermediary skills repertoire of the students. A symbiotic relationship between the colleges and the industry, based on value proposition, has the potential to encourage the industry to play a significant role in college curriculum development. Through this partnership, the TVET college sector would determine the skills needed in the labour market.

Forging economic workplace-learning partnerships would not only create opportunities for the students for practical training; it would also keep college lecturers abreast of the developments and trends in the industry, at the same time opening up the possibility for the employability of the college graduates (DHET, 2013a). The partnership between the TVET college sector and the industry would make the sector responsive to the economic needs of the country. The ideal partnership sought by the government is likely to yield positive results if the level of a partnership of stakeholders, particularly the industrial partners, could be elevated to the strategic partnership. The data of the current study established the nature of partnership existing between TVET and industries - the findings are contained in chapter four.

2.7.1 The rationale for strengthened partnerships between TVET and industries

The TVET institutions are needed to strengthen links with industries to improve networking between academia and industries to create a better understanding of each other's needs and to identify how they can be met through the industry programmes. The domestic industries should have a link with the industries abroad to enhance the indigenous standard. The TVET institutions will have a link with their home industries to determine their standard and to develop their curriculum. With an apprenticeship, the students with technical know-how will be able to get a job in the industries (Raihan, 2014). The enhancement of employability & economic stability will be the ultimate ambition in this regard. In most emerging economies, educators and industry operate in different worlds and often have little contact with each other. Frequently, their social networks and association linkages have no overlap.

Surveys often show a complete lack of understanding or respect for the interests and commitments of the other group (Kamin, Cartledge, & Simkin, 2010). The practice has been for the government to provide free training in skills determined by a government, independent of employer demand. The system uses the curriculum created by academics with little or no understanding of industry requirements or local needs (Obwoge, Mwangi & Nyongesa, 2013). The adoption of market-responsive TVET is still an on-going process in developed countries and a very new experience in emerging economies or those moving away from a centralised, command, and control dominated recent history (Smith & Comyn, 2003). In these circumstances, educators have no experience in marketing or tailoring services to customers' needs. They often see a market orientation as cheapening the values of education and giving up a sense of social responsibility in the pursuit of revenue. They have no tradition of market responsiveness and a very real fear of becoming

salesmen. They are also afraid of the unknown as their orientation; experience and education have in no way prepared them for this new orientation in TVET. In trying to improve the collaboration engagements between TVET colleges and industries, Raihan (2014) argues for different endeavours to be adopted such as a consumer-driven approach, effectiveness, curriculum upgrading, collaboration initiatives, internships, and institution-industry partnerships as well as training programmes.

Consumer-driven approach: Raihan (2014) indicates that industries are the primary consumer of TVET graduates. Industry participation in TVET curriculum and workplace training opportunities is the primary way of achieving this. If employers are not involved in the process of the specific skills attitude and behaviours required by graduates, they are less likely to see any relevance between TVET and their skills needs.

Effectiveness: Very few countries can afford to provide a comprehensive and effective TVET system purely through government financing. In many developed countries, it is estimated that up to 80% of skills development is provided by the industry for its workers. Beyond this, in countries with reasonable links between industry and TVET institutions, 20% to 40% of TVET institutional revenue is generated by the entrepreneurial activities of the individual institutions (Raihan, 2014). This is often seen as a part of beneficiary-based financing of TVET. It assumes that all parties benefit to some degree and, hence, can support TVET in a corresponding manner. If Industry sees no benefit in the linkage, they will not support such a programme, and legislation will be largely ineffective.

Curriculum upgrading: In academic education, the curriculum is relatively stable. In TVET, a 3-year-old curriculum may be teaching the history of technology and not the skills currently required by industry. Constant feedback from industry is the primary input to updating curriculum along with graduate input on the relevance of their institution-learned skills to performance requirements. The industry-institution collaboration will have ensured the effective correspondence between the engineers in the industries and the teachers in the institutions. Consequently, the methodologies of teaching-learning can be improved and updated as the teachers are the creators of those methods and techniques of teaching.

The collaboration initiatives: according to Raihan (2014) collaboration initiatives may be taken on by TVET institutions for various reasons. Of the most emphasised collaboration objectives, feature; the improvement of research capacities and commercialisation potentials, the improvement of technical skills, reducing demand and supply mismatch, enhancing employability skills, and promotion of knowledge transfer between institutions and the community. The following collaboration initiatives of TVET-industries may consider enhancing employability skills in South Africa.

The internship programme in the industry is collaboration between institutions of higher learning and industries, which permits students to be attached to industries. This training programme is part of the pre-employment skills development process. To support industrial training programmes, a large industry is a necessity.

The success in supporting the learning experience of these collaborations depends highly on suitable matches between the students' fields of study and the industry field. Students tend to prefer living near their homes during the industrial attachment period to reduce living costs but suitable industries may not be available at these locations. Some industries are reluctant to give challenging work to trainees, resulting in students being 'undertrained' technically and socially.

Institutions, too, are facing a challenge in finding suitable industries. In general, the programmes have been rather successful as the numbers of students securing work after graduation as a result of their training are quite high. Students returning to universities or polytechnics after industrial training often feel more confident in their ability to learn and undertake vocational-related tasks. As a developing country, the gap between theoretical and practical components is increasing, collaboration initiatives will play an effective role and learning in the institutions will be enhanced by the programme that is aimed at updating the curriculum. Toady's new technology will be old tomorrow. Therefore, appropriate know-how on the innovations is required to cope with the demand of the job markets.

Institution-industry collaborations are expected to enhance research capabilities on both sides, improve productivity, and increase commercialisation potentials of products generated from the research projects (Needham, 2019). To promote institution-industry collaboration, organisational support should be provided via the centre for research and centre for TVET-industry relations. As a consequence, many memorandums of understanding have been signed between institutions and industry as an indicator of willingness to collaborate, although an equal number of activities has not materialised (Raihan, 2014). Optimising research capabilities is one of the goals of collaborations in the higher education sector. In the institution-institution collaboration, sharing of

resources such as research equipment and expertise is prevalent. A typical collaboration is a research project undertaken by technical experts of two or three universities.

The main aim of the *work-based learning (WBL) programme* will be to enhance the employability potential of graduates by promoting their soft skills, technical and vocational skills (Bahari, 2012). The WBL curriculum will co-developed by the TVET institutes and related industries. A study revealed that some benefits such as improved facilities through industry donations and teachers' knowledge and skills improvement can be possible by the WBL programme. Despite its potential benefits, the WBL faces several hurdles in terms of students' logistics (Bahari, 2012).

Traineeship programmes will be representing institution-industry collaboration to be introduced into the TVET system. The programmes will involve upper Polytechnic students to work in the industry two days a week as part of their pre-skills development process. These traineeship programmes will only be offered to students in the skills stream. The traineeship will aim to provide job training for TVET students, as well as provide workshop facilities, training materials, and products. Some companies are adopting the TVET institutions as a centre of excellence for training their workers (Australian Chamber of Commerce and Industry and Business Council Australia, 2002). Some industries are reluctant to accept students that have yet to become skilled. Thus, to invite better participation from industries, the government has to kindly improve the human resource development fund given to participating industries in which industry can claim a portion of training related expenditure (Kamin et al., 2010). Some knowledge of financial assistance programme is vital to ensure that students manage their financial needs when they

secure employment. To prepare students for real working life, they must be exposed to financial management issues.

2.8 Conclusion

In this chapter, literature is reviewed concerning stakeholders' from industries involvement in the TVET curriculum implementation. The process that is followed in the development and implementation of the TVET curriculum was discussed. It is evident that in terms of how the curriculum is implemented in the TVET sector, it still needs to be reviewed to accommodate the key stakeholders from its inception to the point where graduates have completed their qualifications. Several studies on the TVET sector argue that the curriculum should be informed by the industries to minimise the graduate mismatch with what the industries are targeting. It was for such a reason that this study advocated for the involvement of stakeholders in curriculum implementation.

The chapter makes a compelling case for TVET colleges to consider partnering with industries. This would be done for a variety of initiatives, which include, among others, curriculum updates and bridging the technological gap. The relevancy of this partnership is much more needed now to give TVET college graduates a sense of belief in their skill relevance and employability. It evident in the neighbouring countries that indeed some of their TVET curricula are tailored to respond to the needs of the industries. This can be done when industries are part of the TVET curriculum processes. South African TVET colleges could draw some lessons as well on how industries should be enticed to partner with TVET colleges to improve the graduates' output. The next chapter discusses the research methodology.

CHAPTER 3

RESEARCH DESIGN AND METHODOLOGY

3.1. Introduction

The focus of this chapter is to give a full description of the research methodology that was engaged in this study to determine industrial involvement in the implementation of the TVET curriculum in South Africa. In this chapter, the main focus is to supply a full and comprehensive description of the research design, the methodology that is adopted in this study, the research paradigms as well as the theoretical framework preferred in this study. It also unfolds the data collection strategy and analysis applied in the study. The chapter wind-ups with a discussion of the trustworthiness of the data collection methods in qualitative research and discusses how these two requirements were achieved in the current study.

3.2 Paradigms of research

A research paradigm is often defined as a general philosophical orientation about the world and the nature of research that a researcher brings to a study (Creswell, 2014). There are numerous paradigms from which a researcher chooses; however, the type of information that is necessary to complete the study influences the choice of paradigm. Several researchers have written about research paradigms. Mackenzie and Knipe (2006) classify common research paradigms as positivist (post-positivist), interpretivist/constructivist, transformative, pragmatic. These are briefly explained in turn.

3.2.1 Positivist (post-positivist) paradigm

Positivist often looks for the discovery of universal and critical theory or rules (Thanh & Thanh. 2015). In this paradigm human beings are viewed objectively, as a result, social scientists look to different avenues to study human society (Babbie, 2011). Positivism may be seen as an approach to social research that seeks to apply the natural science model of research as the central point for investigations of social phenomena and explanations of the social world (Denscombe, 2010). Post positivists work from the assumption that any piece of research is influenced by several well-developed theories apart from, and as well as, the one which is being tested (Mackenzie & Knipe, 2006). Since this study was not based on applying the natural science model, it could not associate with the positivist paradigm.

3.2.2 Transformative paradigm

The transformative paradigm situates its research in social justice issues and seeks to address the political, social and economic issues, which lead to social oppression, conflict, struggle, and power structures at whatever levels these might occur (Kivunja & Kuyini, 2017). This paradigm seeks to change politics to confront social oppression and improve social justice in the situation. This study was not aimed at exploring issues hinging on social justice per se, as such a paradigm could not be adopted.

3.2.3 Pragmatism paradigm

According to Kivunja and Kuyini (2017), pragmatism paradigm arose among philosophers who argued that it was not possible to access the 'truth' about the real world solely under a single scientific method as advocated by the positivist paradigm, nor was it possible to determine social reality as constructed under the Interpretivist paradigm. The research located within this paradigm usually rejects the positivist notion that social science inquiry can uncover the 'truth' about the real world meanwhile emphasising workability in research. A rejection of the positivist notion is that social science inquiry can uncover the 'truth' about the real world. It emphasises on 'workability' in research (Kivunja Kuyini, 2017). Pragmatism is not committed to any one system of philosophy or reality (Mackenzie & Knipe, 2006). This study was not coached in workability parameters rather to explore stakeholders' involvement in TVET curriculum implementation and thus, this paradigm could not be adopted.

3.2.4 Interpretivist/constructivist paradigm

Interpretivism usually seeks to understand a particular context, and the core belief of the interpretive paradigm is that reality is socially constructed (Thanh & Thanh, 2015). In this regard interpretivists accept and seek multiple perspectives, being open to change, practicing iterative and emergent data collection techniques, promoting participatory and holistic research, and going beyond the inductive and deductive approach (Kivunja & Kuyini, 2017). Interpretivists believe that an understanding of the context in which any form of research is conducted is critical to the interpretation of data gathered. The interpretive paradigm is also called the phenomenological approach.

Given the research objectives of this study, the interpretivist was ideal to enable this study to fulfil its ultimate goal. According to Thanh and Thanh (2015), the interpretivist researchers avoid using rigid ways of inquiry to obtain evidence; their main focus was to engage the research participants who are directly involved in the activities which the researcher was investigating. By adopting the interpretivist paradigm I utilised an inclusive approach that accepted multiple views from diverse individuals, Goldkuhl (2012). Del Rosaria and Goh (2007), state that researchers who adopt this paradigm acknowledge that rich insights in a complex world cannot be generalised particularly when the researched areas have unique and varied individual circumstances. In the context of the current study, the TVET stakeholders provided their insight concerning their participation in the TVET curriculum implementation.

3.3 Theoretical framework: Stakeholder Theory

This study draws on the Stakeholder Theory, which helps stakeholders to justify the need for a collaborative approach in TVET curriculum implementation. In this section the Stakeholder Theory is justified and the preferred stakeholder framework to explain the activities that should be undertaken by various stakeholders towards assisting the TVET students to improve their relevance and employability is outlined.

The Stakeholder Theory originates from the works of Freeman (1984). According to Freeman (1984), a stakeholder could be any person or a specific group of people either affected by the organisation or able to influence the achievement of its objectives. The emphasis on the stakeholders is on the final results of any activity which should take into consideration the returns of the results for all stakeholders involved (Mainardes, Alves & Raposo, 2010). This theory has been predominantly associated with private organisations due to shareholder characteristics (Gomes, 2006). The centre for ensuring the adhesiveness of the stakeholders is organisational managers. Asiyayi (2015) indicates that the managers' responsibilities are to meet the needs, interests, and ideas of the stakeholders. Freeman's definition still enjoys the popularity within the field of stakeholder research as it is found to be comprehensive and accommodating of each internal (employee) and external stakeholders (customers), together with people who in some cases don't see themselves as stakeholders (i.e. business community/community activists/parents).

Every organisation including the TVET colleges operates amongst a variety of stakeholders, the community, businesses and much more. Asiyai (2015) states that the survival and success of the TVETs depend on the involvement of stakeholders. However, the stakeholders become invaluable

to an organisation if they are engaged in the processes of the institution. The legitimacy of higher education to society is increasingly evaluated by the level and the quality of the higher education institution's commitment to its community of stakeholders and inherently of greater depth than any simple maintenance of contacts. It rather means that the organisation seeks out and adopts means of involving the stakeholders so as to best perceive how the latter value the services provided and just how these can be improved (Mainardes et al., 2010).

The TVET managers should be able to identify the stakeholders in order to ensure each stakeholder's interest receives the necessary attention. Bui (2017) states that by identifying and managing relationships with key stakeholders who influence challenging issues, TVET might be able to improve the employability of graduates. The Stakeholder Theory could be useful to TVET in the efforts to establish stakeholders' role in curriculum design. Figure 1 depicts typical stakeholders in the TVET college sector.
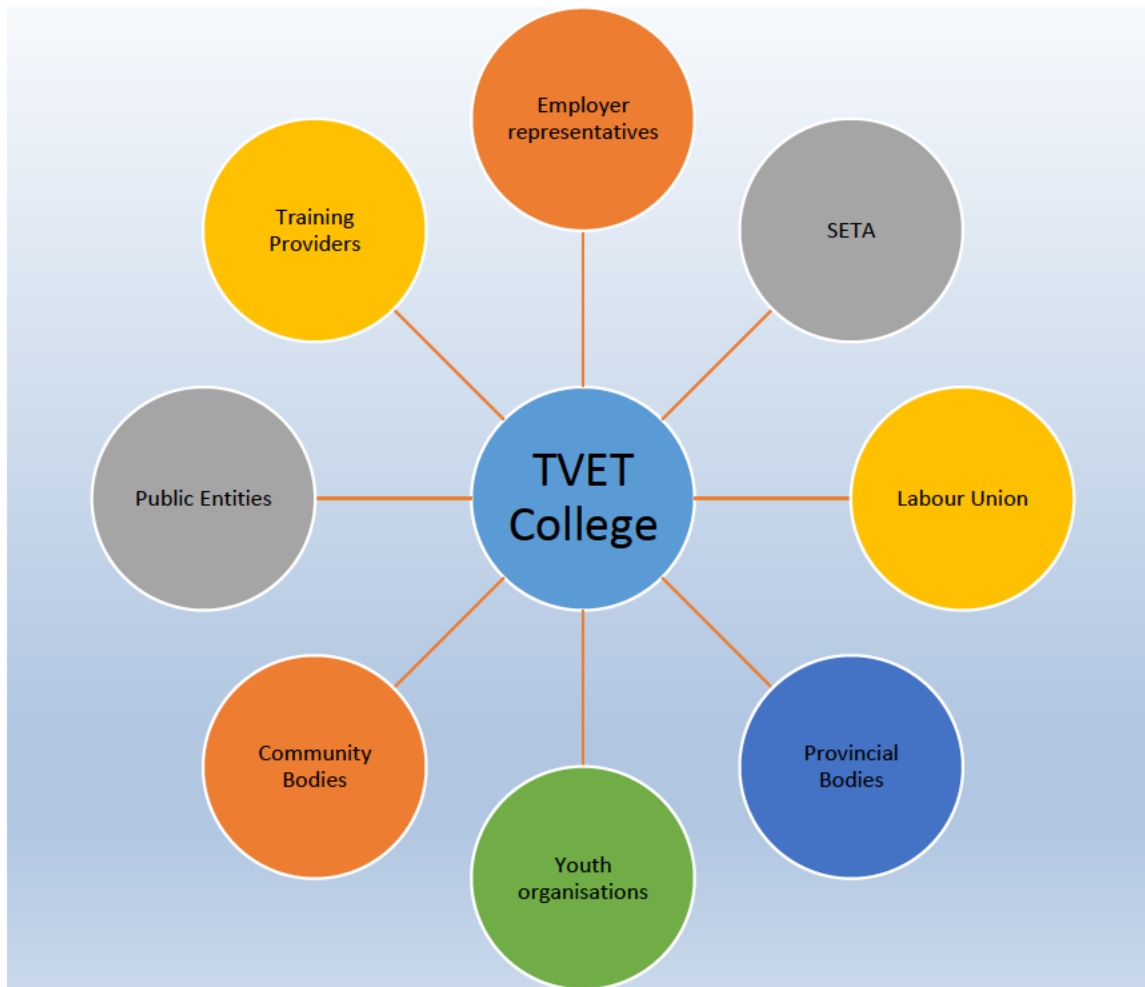
Figure 1: Stakeholder relationship in the TVET sector

(Source: HRDC, 2014:17)

Figure 1 depicts the stakeholders that TVET colleges are likely to forge partnerships with and who would enable the college to function optimally. According to HRDC (2014:17) colleges exist within an environment that is endowed with multi-stakeholders. This study thus advances the line of researchers that have demonstrated the benefits of having certain legitimacy with their stakeholders (Mainardes et al., 2010; Ihugba, 2012; Asiyai, 2015). It forms the advantage of this study in understanding a way to establish an enabling setting favourable to stakeholders, which attracts their commitment and sensible relationship with the organisation. King III report

advocates for organisations to become corporate citizens by responding to society's needs where they operate (Institute of Directors, 2002).

In a social corporate environment, the relationship between the organisation and its stakeholders should be mutually beneficial. Organisations are required to reach an agreement with stakeholders, based on mutual respect, dialogue, and collaboration, to minimise conflict with available resources (Ihugba, 2012). Proactive organisations that recognise these varied claims and interests have, therefore, proven to maximise their engagement with their stakeholders in order to acquire the ethical right to access available resources. In the context of this study, stakeholders are referred to as all individuals and groups who have an interest in TVET curriculum implementation.

The essential part of this study is also to identify the existing stakeholders and ascertain which among them participate in the curriculum implementation. Donaldson and Preston (1995) pointed out that the objective of instrumental stakeholder theory is to understand how managers deal with stakeholders, how they represent their interests and the impact of the stakeholder approach in the achievement of various corporate goals. They (Donaldson and Preston, 1995) further explain that the instrumental own interest is conceived as the interest of the organisation, which is usually to maximise shareholder value. This means if TVET managers treat stakeholders in line with the stakeholder concept, the TVET colleges will be more successful in the long run and increase efficiency.

In the context of this study, stakeholders are referred to as all individuals and groups who have an interest in TVET curriculum implementation. Drawing from the Stakeholder Theory this study examined the following:

(1)   Which stakeholders from industry are involved in the TVET curriculum implementation?

(2)   How TVET management view the involvement of stakeholders from industry in curriculum implementation.

(3)   How stakeholders from industry are involved in curriculum implementation, and

(4)   What areas need attention to improve the participation of stakeholders from industry in curriculum implementation?

3.4 Research strategies

The study was conducted at Majuba TVET College and an appropriate research strategy is a case study. Each TVET college in South Africa has its unique strategies to engage with different stakeholders who have an interest in the functioning of the college. A Case study is a strategy of inquiry that a researcher uses to explore a programme, event, activity or process in-depth (Creswell, 2009). In this case, I focused on the curriculum implementation and the role of TVET industry stakeholders thereof. Yin (2009) indicates that a case study is useful in many situations to contribute to people's knowledge. Leedy and Ormrod (2010) further state that a case study is used when a researcher intends to learn more about the poorly understood phenomenon. In this case, I perceive the involvement of stakeholders from the industry in the TVET curriculum implementation in South Africa as a poorly understood phenomenon.

The most feasible way to accomplish the objectives and answer the research questions of this study was to gather qualitative data through the use of the case study design. In a case study a researcher explored a single phenomenon bounded by time (Jonker & Pennink, 2010). The study sought to gain an understanding of the involvement of industries in implementing the TVET curriculum. To achieve a clear understanding and effectively communicate it with the audience of the study I ought to pay attention to the conveyed words, expressions, and the attitude of the involved participants. Moreover, it is worth indicating that each TVET college in South Africa has its unique strategies to engage with different stakeholders who have multi-interest in the functioning of the college.

The case study approach method is a very common method of qualitative analysis and it entails a careful and complete observation of a social unit, be that unit a person, a family, an institution, a cultural group or even the whole community. It is an approach of study in depth rather than breadth. The case study places greater emphasis on the full analysis of a limited number of events or conditions and their interrelations, Kothari (2004). A Case study is a strategy of inquiry that a researcher uses to explore a programme, event, activity or process in-depth, Creswell (2009).

In this case, I focused on the curriculum implementation and the role of TVET industry stakeholders thereof. Yin (2009) indicates that a case study is useful in many situations to contribute to people's knowledge. Leedy & Ormrod (2010) further state that a case study is used when a researcher intends to learn more about the poorly understood phenomenon. In this case, as a researcher of this study I conceived the involvement of stakeholders from the industry in the TVET curriculum implementation in South Africa as a poorly understood phenomenon

3.5 Study setting:

This study was set in the Amajuba District Municipality, which is positioned in the Northwestern corner of KwaZulu Natal province, South Africa. Amajuba District Municipality comprises three local municipalities which are Newcastle, eMadlangeni and Dannhauser (Local Government, 2015). The Amajuba District Municipality has one public TVET college which is called Majuba TVET. The participants in the study were drawn and located within the district municipality.

Map of Amajuba District municipality and surrounding towns:

Majuba Growth Development plan, vision 2030 revealed that the district has four main sectors that massively contribute to the economic growth of the district which are metal products, textile and clothing industry, and food and beverage industry.

3.5.1 An overview of Majuba TVET College

In the previous chapters I outlined that Majuba TVET College is located in Amajuba and Umzinyathi district, in the northern part of Kwa-Zulu Natal. The College has eight campuses spread over the wide geographical areas that include Newcastle, Madadeni and Dundee. The college offers a wide range of diverse nationally recognised vocational and occupational programmes.

The college is governed by the College Council and the Senior Management structure, which includes the Principal, and the following Deputy Directors: Academic Services, Corporate Services, Financial Services and also various portfolios at a campus levels, such as Campus Managers and Heads of Departments. The College is a public academic institution and it is under the full authority of the Department of Higher Education and Training (DHET). Therefore, the college ought to comply with the legislations and polices that are prescribed by DHET.

3.6 Methods of data production

A research methodology is a general approach taken by a researcher to undertake a research project, Williams (2007). This section presents a description of the selected methodology. The research methods covered below including participation selection, sampling strategies, and data collection as well as data analysis. For this study, the research instrument that was used to collect data was an in-depth face-to-face interview.

3.6.1 Sampling strategies

In this study, twenty two participants were sampled by means of snowball sampling. Sampling is whereby the decision is made about relevant participants necessary for the study, Henning (2006). Snowball sampling consists of two steps which I also performed. Sampling is the process of selecting a subset of the population of interest for purposes of making an observation and statistical inferences about the population, Bhattacherjee (2012).

The sampling process can be done in various ways which are limited to two categories namely probability and non-probability. In terms of probability sampling, every sampled group member has an equal chance to be selected. Probability sampling involves sampling methods such as simple random sampling, systematic sampling, stratified sampling, cluster sampling, and double sampling, Cooper and Schindler (2008). In the non-probability sampling the opportunity of each case being selected is indefinite since judgment is utilised. Non-probability sampling involves sampling methods such as convenience sampling, purposive sampling, judgment sampling, quota sampling and snowball sampling, Cooper and Schindler (2008).

Using snowball sampling method, I identified potential subjects at the TVET college who in turn helped in suggesting other participants. The sampling process can be done in various ways which are limited to two categories namely probability and non-probability. In terms of probability sampling, every sampled group member has an equal chance to be selected. Probability sampling involves sampling methods such as simple random sampling, systematic sampling, stratified sampling, cluster sampling, and double sampling, Cooper and Schindler (2008). In the non-probability sampling the opportunity of each case being selected is indefinite since judgment is

utilised. Non-probability sampling involves sampling methods such as convenience sampling, purposive sampling, judgment sampling, quota sampling and snowball sampling, Cooper and Schindler (2008).

It is imperative to understand the objectives of the study before deciding on which sampling method to adopt. For example, if the ultimate aim or objective of the study is to generalise the interpretations of the study to the entire population, then the researcher ought to select a sample random and the larger sample, Creswell (2013); Johnson and Christensen (2004).

Several sampling strategies are used in qualitative research and these include purposive sampling, snowball sampling, and quota sampling. In purposive sampling, the participants are carefully chosen based on the researcher's prior knowledge of the target population, Berg (2006). Snowball sampling involves identifying a few participants and asking them to find additional persons to participate in the research, Miles and Hubberman (2006). In quota sampling, the units are chosen into a sample based on pre-indicated characteristics so that the aggregate example will have a similar distribution of characteristics accepted to exist in the population being studied.

A non-probability sample is used when a researcher sought to understand the phenomenon that is under investigation, it is not practical to apply this kind of a sample strategy if the goal of the study is not to generalise the results, Creswell (2013); Johnson and Christensen (2004). Non–probability convenience sampling is often adopted by researchers when selection involves individuals or groups that happen to be available and are keen to take part in the research at the time. It is also called "volunteer sampling" or 'accidental sampling", Mugenda and Mugenda (2003).

3.6.2 Participants selection

In the qualitative research study, it is extremely imperative to apply the proper and appropriate sample selection because inappropriate means of selection procedures could seriously impede the findings and the outcome of the study, Cohen (2011). In this study, snowball sampling was used for the purpose of the research to select the sample of 22 participants. Cohen, Manion and Morrison (2011) state that snowball sampling is valuable particularly in qualitative research. Cohen et al. (2011) state that snowball sampling is useful where communication network is undeveloped. The calling for a snowball approach was essentially with this strategy, the researcher would approach few respondents who participate in the curriculum implementation of the TVET colleges, thereafter, the respondents would be asked to recommend others they know who also meet the set criterion (Bhattacherjee, 2012).

Participants were nominated from five major industries within the Amajuba District Municipality; these participants reflected a major interest in ascertaining their involvement in the implementation of the curriculum. The initial research plan was to select two representatives from each of these industries to participate in the interview process. In determining which participants are to be interviewed, I had to consider the objectives of the study, which are:

- To explore how stakeholders from the industry understand involvement in TVET curriculum implementation in South Africa.
- To examine the nature of involvement by stakeholders from the industry in the implementation of the TVET curriculum in South Africa.

- To analyse why stakeholders from the industry are involved in the implementation of the TVET curriculum in South Africa the way they are.

The TVET colleges have various stakeholders with some particularly who are in partnerships with and who enable the college to function optimally. This study utilised snowball sampling, this particular sampling strategy was much effective and the participants assisted in accessing knowledgeable people, such as those who have in-depth knowledge about a particular issue that is possible under their professional role, power, and access to networks Ball and Forzani (2007).. I approached a few respondents some of whom who participate in the curriculum implementation of the TVET colleges.

3.6.3 Data production

The process of data production usually occurs after the research problem has been identified and a research plan has been outlined. The idea behind the data production strategies is to address the research problem under investigation. In the qualitative study, researchers must use the appropriate method for data production; hence qualitative researchers are interested in understanding human behaviour, experiences and perceptions, Johnson and Christen (2012).

While deciding on the appropriate method to utilise on data collection it is worth outlining that two approaches can be used to gather data that are primary and secondary. Primary data are collected at an initial phase of research, they are original data or first-hand data, while secondary data are existing data, which have already been collected by someone else, Kumar (1999). Mouton

and Marais (1991) postulated that within qualitative research there are three commonly known methods to gather data, which are participant observation, the use of personal documents and interviewing.

In the current study, in-depth face-to-face semi-structured interviews were used as the central method of data collection. An in-depth face-to-face semi-structured interview approach was implemented and this approach facilitated an understanding of the phenomenon from the perspective of the participants under investigation. Seale, Giampietro, Gubrium and Silverman (2004) describe an in-depth face-to-face semi-structured interview as a social encounter where speakers collaborate in generating retrospective and prospective accounts or versions of their past or future actions, experiences, feelings, and thoughts.

3.6.3.1 In depth interviews

LeCompte and Preissle (1993) have outlined six types of interviews that are currently used in the qualitative studies, which are as follows: standardised interviews; elite interviews; ethnographic interviews; in-depth interviews; life history interviews; and focus group interviews. Interestingly, scholars have set out some key or main characteristics of qualitative research interviews. Kvale (1996) stipulated that qualitative research interviews should:

- Engage, understand and have a crystal clear meaning and interpret the key features of the life world of the participants.
- Be able to explore and expose the nuanced description of the life world of the participants.
- Be portraying positive and enriching experiences for all participants involved.

- Be in a position of accepting that an interview may stimulate and provoke new and changes in the participants themselves.

- Apply a deliberate openness and intentional openness to new data and phenomena, rather than being too pre-structured.

In conducting this study perspectives and interactions within the college stakeholders were viewed as being of paramount importance. My goal in the study is to provide greater coverage of the phenomenon investigated and to collect a high quality of data within the group of college stakeholders. Before the in-depth face-to-face semi-structured interviews, the research process was explained and the participants were offered the informed consent form. Participants were informed that their participation was intentional and voluntary, however, they are at liberty to withdraw from the research at any time.

Participants were contented and satisfied with the process, the nature of the research and the research topic and thus consented to the interviews. During the in-depth face-to-face semi-structured interview gatherings, I probed the participants for more detailed explanations on the questions (*see Appendices 2 & 3*). The participants were permitted to answer the specified questions, raise any issues that were relevant to the interview and to make general comments. McGrath (2013) asserts that when conducting interviews, the researcher ought to follow to the interviewees' culture of language and opinions in ensuring that there is a smooth flow of understanding of a phenomenon under investigation.

The in-depth face-to-face semi-structured interviews were conducted were conducted in English, although there were times when participants would use their native language, which is isiZulu, mostly to prompt or strongly express some idioms. It is worthy to outline that the participants' home language was not English; their command of the language is good due to their education and professional position. Conducting the interviews in English permitted me to transcribe the interviews as presented by the participants without translating the interview responses. However, in occurrences where the participants articulated themselves in a language other than English, for example isiZulu, this information was translated during the transcription stage.

Generally, there has been a minimal involvement of industry stakeholders concerning curriculum implementation. This could be caused by the awareness about the importance of involving industries in the TVET college academic affairs. Having this concern in mind I also conducted an in-depth face-to-face interview with the Deputy Director of Academic Affairs Project Manager (student placement unit) and with a motive of understanding college perspective about the industrial involvement of academic affairs. An in-depth face-to-face semi-structured interview is a face-to-face discussion involving a sole individual at a time and is ideal for gathering data as it will permit or assist me (interviewer) to discover questions in a broader sense and, at the same time, award more freedom and flexibility to probe during the dialogue since the researcher will control the dynamics of the data collection process, Canals and Corona (2017).

3.7 Data analysis

Data analysis is a process of establishing, and making sense of the data or information by consolidating, reducing and explaining what people have alluded during the data collection phase,

Merriam (2009). The qualitative research study seeks to optimise variation from the raw data, as the researcher endeavours to discover common features, differences, and patterns from the data collected from all participants, Creswell (2013). As a researcher of this current study, I decided to transcribe interview data for analysis. Cohen (2013) argues that transcribed data can supply accurate information and accurate verbatim record of the interview.

3.7.1 Thematic analysis of data

This study was guided by the tenets of the theoretical framework, and it has adopted the thematic analysis approach. Generally, thematic analysis is underpinned on six phases namely becoming familiar with one's data, generating initial codes, searching for themes, reviewing themes, defining and naming the themes, and producing the report (Nowell, Norris, White & Moules, 2017).

3.7.1 Becoming familiar with the data

This was the first step wherein I read and re-read the interview transcripts. According to Maguire and Delahunt (2017), during this step the researcher should be familiar with the entire body of data before going any further. During this time several useful notes were made to capture some of the early impressions during the interviews (Nowell *et al*., 2017). I repeatedly read the interview transcripts to familiarise myself with the data.

3.7.2 Generating initial codes

As part of generating the initial codes, the researcher started to organise the data in a meaningful and systematic way (Maguire & Delahunt, 2017). Nowell *et al*. (2017) maintain that coding reduces a large amount of data into small segments of meaning and that there are different ways

to code and the method of coding is determined by the researcher's perspectives and research questions. Novell *et al*. (2017) further state that during coding the researcher identifies important sections of text and attaches labels to index them as they relate to a theme or issue in the data. For example, in the case of curriculum understanding or training needs analysis codes for such theme were "CU" and training needs analysis "TNA". CU denotes curriculum understanding while TNA denotes training needs analysis.

3.7.3 Searching for themes

According to Novell *et al*. (2017) the phase of searching involves sorting and collating all the potentially relevant coded data extracts into themes. In this case, I examined the codes and some of them fit into a theme as it can be seen in the next chapter (Chapter four). At the end of this step, the codes had been organised into broader themes that seemed to infer specifically to the research questions of the study. The following are the examples of themes that were developed:

- Theme 1: Curriculum Understanding
- Theme 2: Training Needs Analysis (TNA)
- Theme 3: Training Resources
- Theme 4: Industries' views about the quality and competency of TVET programmes

3.7.4 Review themes

After the previous step, and during this phase, the researcher reviewed, modified and developed the preliminary themes identified in step 3. The essence in this phase is checking whether themes make sense. Maguire and Delahunt (2017) state that at this point the researcher ought to gather all the data that are relevant to each theme.

Table: Sample of reviewed themes

Theme 1	Curriculum Understanding
Sub-theme 1.1	Stakeholders' from industry general understanding of TVET curriculum
Sub-theme 1.2	Readiness and preparedness of stakeholders from industry to jointly work with the TVET College team in curriculum implementation.
Sub-theme 1.3	Importance of stakeholders' from industry involvement in curriculum implementation
Theme 2	Training Needs Analysis (TNA)
Sub-theme 2.1	Industrial stakeholders' views on the TNA
Sub-theme 2.2	TVET College perceptions about the involvement of stakeholders in TNA
Theme 3	Training Activities
Sub-theme 3.1	Industrial stakeholders of the training activities
Sub-theme 3.2	TVET College perception of training activities
Theme 4	Teaching and Training Resources
Sub-theme 4.1	Facilities for adequate teaching and training
Sub-theme 4.2	Competency of trainers to use training equipment.

3.7.5 Define themes

During the fifth phase, I determined the aspects of the data that each theme captures and identifies as what is of interest about them and why (Braun & Clarke, 2006). For each theme, I conducted and wrote a detailed analysis, identifying the story that each theme tells (Braun & Clarke, 2006). Nowell et al. (2017) suggest that theme names need to be succinct and immediately give the reader a sense of what the theme is about. In this process I chose names such as "curriculum understanding" "training need analysis" and "training resources". These themes were meant to

capture participants' views on various aspects of curriculum implementation and their role in the process of curriculum implementation at TVET College.

3.7.6 Write-up

The final phase begins once the researcher has fully established the themes and is ready to begin the final analysis and write-up of the report (Braun & Clarke, 2006). The write-up of a thematic analysis should provide a concise, coherent, logical, non-repetitive, and interesting account of the data within and across themes. I used direct quotes from the participants which are an essential component of the final report. Short quotes may be included to aid in the understanding of specific points of interpretation and to demonstrate the prevalence of the themes. More extensive passages of quotation may be included to give readers a flavour of the original texts.

3.8 Trustworthiness of the study

Anney (2015) states that qualitative research trustworthiness criteria consist of the following to ensure the rigour of qualitative findings.

- CredibilityTransferability

- Dependability

- Confirmability

Likewise, Lincoln and Guba (1985) advocate that in determining the value of research findings, the trustworthiness of research findings is essential. The concepts of trustworthiness, reliability, transferability, and credibility are also used when working with qualitative data. According to MacMillan and Schumacher (2001), validity is the degree of shared understanding between the participants and the researcher between the definitions and concepts. According to Silverman

(2004), accuracy, on the other hand, is the degree to which study results are free of unintentional circumstances.

3.8.1 Credibility

Anney (2015) defines credibility as the confidence that can be placed in the truth of the research findings. Creswell (2012) pointed out that the data are considered to be credible if they are trustworthy and the results can be verified. To address credibility in this study, I ensured that the study measures what it is intended for, and made sure that the researcher used the precise methods of data collection. There are many credibility strategies, but for this qualitative study, I established the investigation's rigor by incorporating the participants ' recorded responses from an audio recorder with the written notes that were made during the focus group and semi-structured interviews. Live audio recordings were to ensure that the data to be transcribed and analysed are as trustworthy as possible. To verify accuracy and synthesis, I allowed participants to perform member checks and to review the transcribed data. Each process took place in the comfort of all the participants ' natural settings to make it easy to provide the necessary information.

3.8.2 Transferability

According to Anney (2015) transferability refers to the degree to which the results of qualitative research can be transferred to other contexts with other participants, it is the interpretive equivalent of generalisation. Krefting (1990) argues that transferability in qualitative research is the criterion against which the applicability of qualitative data is assessed.

Concerning the transferability rule, Shenton (2003) suggests that the results of a qualitative analysis must be implied within the scope of the organisations' specific qualities and perhaps the geographic area in which the fieldwork was performed. Keeping in mind the ultimate goal of determining the degree to which findings may be true for individuals in different settings, comparative projects using similar strategies and led in different situations may well be of great value. I was limited to the participating TVET College and industries within the vicinity of the Amajuba District. In ensuring transferability, I have provided sufficient information concerning the manner in which data for this research were gathered, including the place from where data were collected, the sample, sample size and sampling strategy, and the interview schedule which I used during the interview sessions.

3.8.3 Dependability

Dependability refers to the degree to which the conclusions are free of unintended study circumstances, Patton (2002). It implies in a qualitative study that if any other researcher follows precisely the same protocol and performs the same research, the same observations and conclusions must be drawn, Yin (1994). According to Shenton (2003), triangulation may include the use of specific analysis, multiple methods, focus groups and individual interviews that shape significant information collection processes for a great deal of qualitative research.

Creswell (2012) states that the objective of dependability is to ensure that the same study conducted will result in similar findings and conclusions. I provided an elaborated methodology that enabled the study to be dependable within the understanding of interpretive inquiry. For example, this study utilised in-depth semi-structured interviews with follow-up questions to develop a full understanding of the context.

3.8.4 Confirmability

The concept of confirmability is the qualitative investigator's comparable concern to objectivity, Shenton (2004). In ensuring that biasness is reduced, I used member checking – asking selected participants to listen to tape records of the interviews and comment on transcripts to see whether transcription correlates with the interviews. Given that participants were in pairs yet occupying different roles, I chose one participant in each pair to assist with confirming whether the transcriptions were a true reflection of the actual interviews. There were no corrections from the feedback of the participants, which indicated that the transcription was indeed captured accordingly.

3.9 Ethical considerations

At the official level, which is the Majuba TVET College, permission was obtained and I followed the ethical protocols of the University of KwaZulu-Natal. When performing this work, ethical guidelines were observed, participants were asked for permission from the gatekeepers and informed consent. The participants showed willingness and interest to be involved in the study and signed the consent form (see appendices).

Before the commencement of the study, the participants were told that their participation was voluntary and that at any stage they could withdraw from the study. Voluntary informed consent allowed the respondents to decide to participate with no risk or induction that is irrational, Haverkamp (2005). Participants were also assured of the privacy and anonymity of all data collected. All names were changed and pseudonyms used, Haverkamp (2005). The participants were reassured and made fully aware that the goal of the research was to gain insight into their experience of perception about their involvement in the curriculum implementation, for TVET College, in particular, Majuba TVET.

3.10 Conclusion

This chapter focused on the design and methodology of research that underpins this study. Detailed information was explored in this chapter on the design of qualitative methods, their origins, their relevance to this study and their general characteristics. The following chapters use the proposed data presentation and analysis approaches to analyse the quantitative and qualitative data based on the methodological proposals made in this chapter.

CHAPTER 4

PRESENTATION OF RESULTS

4.1 Introduction

The present chapter outlines the findings which emerged during the study, using thematic analysis. Furthermore, it discusses a range of responses from the participants of this study using in-depth interview as a data collecting tool. The participants involved in the study are only confined within Amajuba District vicinity.

To gather data from the local industrial stakeholders and other participants from Majuba TVET College, this study was guided by an overarching research question, which provided the substance on which the research is built. This approach is supported by Blaikie (2008), who observed that by making choices through exploring research questions, the direction and focus of a study are undoubtedly defined, and results can ultimately be attained. The overarching research question is: *what is the involvement of industrial stakeholders in implementation of TVET College curriculum?* This overarching research question was broken down into three subsidiary research questions:

- What do industrial stakeholders understand about their involvement in the implementation of TVET Curriculum?

- How are the industrial stakeholders involved in the implementation of TVET Curriculum?

- What is the necessity of industrial stakeholders' involvement in curriculum implementation?

These questions were intended to establish an understanding of the TVET college industrial stakeholders' involvement in the process of participating in curriculum development. Questions were mostly directed to certain seniors of industries who voluntarily reflected strong interest to

become participants in this study. The study also considered a perspective of Majuba TVET placement team to seek answers from the research questions paused.

4.2 Demographic profile of participants

The sample of twelve participants in this study was selected purposefully as it included two representatives from the following industries, Textile, Clothing & Footwear, Metals, Agri-processing, Chemical, Banking and Majuba TVET College which are located within Amajuba District. The following industries were willingly engaged in the study, which are Textiles, clothing and footwear, Metals, Agri-processing, banking and Chemical. The College Project Manager and Deputy Director of Academics were also interviewed and provided with time slots to adequately respond to the questions.

Participant	Gender	Race	Nature of an industry
1	Female	Indian	Textile, Clothing & Footwear
2	Male	Coloured	Textile, Clothing & Footwear
3	Male	White	Metals
4	Male	Black	Metals
5	Male	Black	Agri-processing
6	Female	White	Agri-processing
7	Male	White	Chemical
8	Female	Black	Chemical
9	Female	Black	Banking

10	Male	Black	Banking
11	Male	Indian	Majuba TVET College
12	Female	African	Majuba TVET College

It is imperative to outline that the study sought to explore and understand the involvement of industrial stakeholders in the implementation of the TVET curriculum. The study should be understood in the background of the focus of the TVET College in South Africa, which is to equip young school leavers and South African youth with the necessary skills and knowledge, and to educate and train young school leavers, providing them with the skills, knowledge and attitudes that are demanded in the labour force.

4.3 Overview of the recent development for Amajuba District economy from an industrial perspective:

To have a crystal clear understanding of the analysis and discussion of results, it is necessary to afford a brief overview of the district economy. Amajuba District economy has undergone rapid changes over the recent years. As per Amajuba District Industrial Development Plan (IDP) 2019, manufacturing contributes 25.2% to the total district GVA, making it the main contributor to the district economy. The sector has experienced drastically changes over the past 30 years.

During the apartheid period, Newcastle was established as an industrial de-concentration point primarily for the processing of iron and steel products at ISKOR. Although government subsidies and policies remained in place, the iron and steel industry continued to operate in this area. During the 1970s and 1980s, the manufacture of textiles and clothing entered into the area as an additional

manufacturing sub-sector along with chemicals and associated steel processing plants (e.g. galvanising, fabrication, etc.).

Over the last 10-15 years, the economy has undergone a further change, with the deterioration of the textile industry in Newcastle, the decline of the iron and steel industry and the emergence of large scale retailing. Among other economic activities in the district that intensively boasts the economy are minerals such as coal, steel and iron. The district is mostly dominated by major companies such as Arcelor Mittal, Siltech and Karbochem, which are in the production of steel and iron (Trade & Investment: KwaZulu-Natal, 2016).

Theme 1: Curriculum understanding

In the literature review chapter, it has been outlined that curriculum offered by public TVET colleges is designed and developed by the DHET. At this stage, it is imperative to highlight that curriculum implementation could be viewed as a vibrant construct, meaning that it refers to an on-going process, specifications and re-defining essential characteristics of an innovation by developers and users during the planning and implementation phases of the planned change process (Akoojee, 2012). Here it became clear that many research participants from industrial stakeholders have a limited awareness of the TVET curriculum in general. Invisibility within the College procedures and lack of exposure of the DHTE TVET policies, as well as lack of dissemination of policy information were the most oblivious reasons stated by the participants pertaining to their limited knowledge about TVET curriculum.

➢ **Stakeholders' from industry general understanding about TVET curriculum**

Within this theme the main question I posed to the participants was to do with their experiences of and understanding pertaining to TVET curriculum. From the data that were generated, it was discovered that most industrial stakeholders in the TVET College have a minimal knowledge and experience about the curriculum. Based on the data collected from the ten industrial stakeholders who took part in the study, out of the participants who came from various industries, 30 per cent had received TVET graduates to offer them industrial training, while 70 per cent had never had an encounter with the TVET graduates. With this ratio it would be expected that most industrial stakeholders still lacked the proper understanding of what constitutes TVET curriculum.

One participant, when asked about his knowledge and understanding about the TVET College curriculum, reported that:

> I have an understanding to some extent, though I am not clear about TVET sector. I'm not sure if what I know is correct or not, because what I know about TVET college is what I normally hear in public when they are talking about TVET colleges (Snr HR Officer, Participant 1).

While the other participant reported that:

> Ever since TVET Colleges were established during post-apartheid era, we never had a strong working relationship with them, even though there were instances whereby the Majuba TVET College would request us as an industry to offer some training to their exit of final year students, we never had any knowledge about the specific level and the type of training required or expected from us as industries. Clearly, that should be an indication to you that we know nothing or some other colleagues might have a minimal knowledge about TVET curriculum (Training Manager, Participant 3).

Another industrial participant expresses his frustration regarding the curriculum as he contended that:

> Concerning the TVET current curriculum design it is that it is obsolete or out-dated! Part of the reason is due to over reliance (Training Manager, Participant 7).

> **Readiness and preparedness of stakeholders from industry to jointly work with TVET College team in curriculum implementation**

Mostly, the most common goal advanced for college-industry partnerships is the need to guarantee that the curriculum of TVET colleges is aligned to the needs and desires of the workplace to ensure a smooth shift from college-to-work. The preamble of the FET Act states that when it comes to training and skills development, two key concerns for the FET Colleges Act of 2006 are to:

> Restructure and transform programmes and colleges to respond better to the human resources, economic and development needs of the Republic, and to provide optimal opportunities for learning, the creation of knowledge and the development of intermediate to high-level skills in keeping with international standards of academic and technical quality" (DoE 2006, pg. 1) (Head of Department, Participant 8).

The above quote indicates that there should be a joint partnership with industries for TVET college to realise and achieve its mission and vision. Dealing with the issue of industrial stakeholders' readiness to work jointly with the TVET College in curriculum implementation, it was discovered that massive work still ought to be done for this goal to come into its realisation. Most industrial stakeholders impugned the quality of TVET graduates on the kind of lecturers whom they perceived do not have adequate industrial knowledge. One participant highlighted:

> The institutions that train TVET graduates need to re-structure on the quality of skills that the industries want. Mostly, what is taught to graduates is not geared for big industries, and the sad part is that none of the DHET curriculum expects would involve us to be part and parcel of what constitutes an impacful knowledge demanded by us , maybe if it's happening I have not yet seen or witness active involvement (Snr HR Officer, Participant 5).

➢ **Importance of stakeholders' from industry involvement in curriculum implementation**

The National Development Plan in South Africa (2012:321) outlines that it is essential to build a sound and strong relationship between the TVET College sectors and industries. This strong and sound relationship exists with an intention of ensuring a speedy absorption of TVET college graduates into the job market. The New Growth Path (2012: 20) states that strong attention is to be granted to TVET colleges as they are playing a central role in developing middle level skills of the youth. In South Africa, or any other developing country, TVET colleges could be viewed as an indispensable instrument that could assist in improving the quality life of people. Clearly, it is also affirmed that there is a strong demand for TVET to respond to the needs of the labour market and to win the confidence of industries that could be a strong motivator for smooth partnership. The White Paper (DHET, 2014) likewise, recognises the significance of partnerships between educational institutions and employers.

I had an interest in knowing whether the TVET College recognises and also strongly perceives the involvement of industrial stakeholders in curriculum implementation. The participant from the TVET College expressed the following sentiments:

> It is extremely challenging to involve our local industries at our level as the college, most things are planned, organised and implemented at the national level which is the DHET. The only task that solely lies on us at the college level is ensuring that we adhere to what has been given and recommended to us by the DHET. The partnership that we have started is when we use our own discretion with local industries. Of course, the DHET provides funding for us as the college to place our graduates in various sectors, but when it comes to ascertaining what industries desire from us, so that we implement curriculum that will cater for all needs of stakeholders involved, DHET is not efficiently and effectively executing that mandate! (Snr HR Officer, Participant 1).

It is interesting to report that there is a DHET's Partnership Framework (2013) which outlines that the establishment of an active partnership regime would be determined by the extent to which the DHET is eager to delegate authority and responsibility to TVET colleges to pursue partnerships. Equally important is the degree to which partners are keen and able to assume authority and responsibility, which clearly depends greatly on the strength and capability of these partners.

Theme 2: Training Needs Analysis (TNA)

Brown (2002) asserts that TNA is a continuous process of assembling data to determine and identify what training needs exist so that training can be developed and improved with an intention of assisting an organisation to realise its objectives. A TNA is needed to:

➢ identify the precise areas of concern in an organisation that can be addressed by a training programme

➢ negotiate with organisational management for relevant support

➢ establish evaluation mechanisms or tests

➢ Draw a training budget and outline the anticipated benefits of the training.

After having followed the outline steps of TNA, there could be an essential understanding of academic programmes that could be responsive and effective to the needs of all relevant industrial stakeholders.

➢ **Industry stakeholders' views on the TNA**

The views expressed by participants from industries is that TNA is not a unique or new phenomenon. Participants alluded that an ultimate aim of training is to enable trainees to acquire knowledge, skills and attitudes, and to relate these to the workplace or to their future prospective

business. Participants continuously expressed that for this to be achieved TVET programmes ought to be reviewed and relevant stakeholders' industrial needs must be attended to. One participant from industries expressed that:

> It can be extremely difficult to sit down and plan out a training schedule for TVET graduates in our larger organisations without first ensuring that there is a research background of some sort. You might be under the impression that you know the type of training TVET graduates need, only to find out that you are out of the picture. TNA assists you to highlight the crucial components that ought to be covered for graduates to be effective and relevant to industrial needs. That is why training needs are essential because they may uncover training needs that may not be considered at an initial phase (Training Manager, Participant 2).

The above sentiments outline that there ought to be strong collaboration between the TVET sector and industries that could greatly influence a great strategic planning in all curriculum aspects. Furthermore, the remarks above also indicate the views of more than 80 per cent of industrial stakeholders involved in this study about their engagement and their necessity to be involved in the curriculum planning and implementation. According to industry stakeholders, if the authorities from the DHET ever assessed their needs it was perhaps by observing the availability of possible internship or apprenticeship programmes, but none of the participants had ever been involved by officials from DHET to find out their inputs and contributions to curriculum. The industrial stakeholders have identified their lack of adequate contribution and representation as a main cause of problems of curriculum flaws within the TVET sector. A huge number of industrial stakeholders (8 out of the 10) cited the mismatch of the training offered to the needs of the industry as the major challenge they encountered when they eventually offer internships and training to the TVET graduates.

Six out of the ten industrial stakeholders interviewed observed that the TVET curriculum was not up-to date and required urgent evaluation to address the emerging technological and workplace changes in the industry. Only two, who were also heads of their organisations, had been involved in the curriculum development. Even they, however, conceded that although they understood the world's industrial trends, they did not have the authority and power to decide on what to include in the proposed revised curriculum.

One of the participants suggested:

> Since the focus of the training is employment, the skills and curriculum ought to be linked to the job market to ensure that there is no incompatibility among the training and competencies required in the labour market. To this end, the DHET ought to conduct a skills analysis that will direct across the entire TVET sector on what to offer (Centre Manager, Participant 6).

> ➤ **TVET College perceptions about the involvement of stakeholders from industry in TNA**

The labour market in South Africa tends to struggle in finding employees with relevant skills and knowledge to execute certain tasks (Winsman, 2014). This may be ironical, because there is a larger pool of TVET graduates who are unemployed. Two representatives of Majuba TVET who were interviewed observed that the TVET curriculum was not contemporary and needed a rapid review so that it can speak to the emerging technological and workplace changes in the industry. These two participants are also involved in the curriculum of the college. However, it is imperative to indicate that they agree that although they understood the world's industrial trends, they do not

have the power or autonomy to induce or conclude on what to include in the revision. One participant alluded that:

> As things stand now, the curriculum is taught as if all areas of industries around the country have the same needs. Yet this is not true. For example, Newcastle town has also been dominated by clothing and textile industries, yet there is nothing offered at this college that caters for such needs. Moreover, we lack proper ways of bringing industries on board when we are analysing training needs for industries, so, what is the use of teaching and continuously offering people the knowledge that is redundant and also, that will not reach to what is currently demanded by employers outside there? (Project Manager, Participant 11).

The above sentiments indicate that it is presumable that it would seem apparent that there should be some engrossment paid to the development of relevant TVET programmes and curricular that are receptive to the socio-economic demands of the country. It also becomes imperative to conduct an inquiry and analyse international frameworks on TVET education curricular and programmes development.

The two representatives from Majuba TVET College curriculum division who participated in the study offered very rich and useful information or data on the area of the perception they have with regard to the involvement of industrial stakeholders in TNA. Fortunately, both of these representatives are regular participants in the workshop of the TVET curriculum at the national level. Both of them exposed that curriculum experts appointed by the DHET draft the national training objectives. However, these experts must be appointed by the DHET, but most of them do not possess adequate knowledge of what constitutes a relevant TVET curriculum, hence they have spent most of their years in the basic education curriculum.

These two representatives from the college were very much understanding of the crucial need to involve industrial stakeholders in the TNA. It is interesting that they suggested that there ought to be skills needs assessment representatives from industrial stakeholders. This was a continuous movement of seeking industrial stakeholder's role and understanding in the implementation of the TVET curriculum. One of the participants from the college reported that:

> Regarding the TVET level, the current curriculum designs are obsolete. Furthermore, they have no credibility on what industries are seeking. Part of the reason is due to over reliance solely on curriculum reformers with a minimal involvement or support from industries. When curriculum reformers are working independently or without the involvement of industries that tends to result in an output that is redundant, output that is so unnecessary! If we want TVET to address socio – economic needs of this country, TVET curriculum reformers ought to invest immensely in revamping the curriculum. Currently one can clearly outline that the curriculum framework for TVET has also remained rigid, concentrating only on institution-based, full-time training or long course programmes. Moreover, the curriculum structure does not accommodate practical components for Financial Management or Human Resource courses! Beyond any shadow of doubt collaboration is a vital and necessary step in creating economic change through curricular reform. DHET ought to adopt a proactive approach in ensuring that it creates a strong strategy that will allow strategic partnership with industrial stakeholders, and that could assist to develop programmes to meet 21st century workforce needs. In addition, the scope of the curriculum must also cover a diverse range of skills. As we know, TVET academic programmes are not only aimed at equipping students with academic and theoretical knowledge, but they are also aimed at empowering young people to develop necessary business skills so that they can be self-employed, as is stipulated in the National Skills Development strategy (Deputy Director, Participant 12).

It is important at this present moment to indicate that the motivation for persuing this study was triggered by lack or minimum involvement of industrial stakeholders.

Theme 3: Training resources

The study also uncovered that the involvement of industrial stakeholders in the implementation of curriculum also lies on the availability of resources. It must be noted that vocational education is a kind of education that integrates both theoretical and practical perspective. For an example, a

TVET College learner must be able or have an ability to transform theoretical knowledge from the classroom environment to practicality. From both Majuba TVET College participants it was revealed that:

> The TVET College is in a shortage of adequate resources for ensuring that the delivery of high quality curriculum is not compromised. The College is in need of support materials, such as textbooks, trainee manuals, handbooks and lecturer guides. Other essential materials needed include manuals for guiding trainers or lecturers who conduct trade projects and for industrial trainers and supervisors of industrial attachments. This greatly compromises the quality of learning at this level, considering that many of these trainers hold basic teaching qualification (Project Manager, Participant 11).

> ➢ **Industry stakeholders' views about training resources**

Each of the stakeholders described above so far has the potential to play a significant role in the development of good and high quality of TVET curriculum. However, the execution and the promotion of such curriculum also depend on the availability of training resources from the industries' side. On the other hand, it is also crucial to outline that not all industries located within Amajuba District vicinity could be actively engaged in a positive way in the implementation of curriculum. With so many competing demands on the side of industrial stakeholders, five out of ten stakeholders interviewed, indicated that with often limited resources that they have, it cannot be profitable for them to utilise them when there will be no gain or advantage to their side. One of the industrial stakeholders' representatives lamented that:

> For effective training of TVET College students to occur, that is largely dependent on massive availability of physical facilities within the College. Considering that we are now moving with times, for example, there is a Fourth Industrial Revolution (4IR) that is now kicking in, Majuba TVET College must seriously consider in investing in equipment that is modern and emerging with times so that they can produce what is needed by us as industries. It is very risky to take students who have never been exposed to operate certain machinery and place them behind it, as mostly, these students are unable to handle or operate these equipment or machinery with great consideration, and

that forces us now to repair them and do services to them before time. My suggestion is that the college must outsource these so that there is no need for concentrating on the use of emerging modern and relevant equipment to fit in with our human capital. In other words, we can physically come to the College and give their students the relevant exposure that we require as industries, rather than them dropping their students to us, and expect us to become tutors or trainers, meanwhile we are in a mission of making a profit. Remember, the ultimate aim of establishing any business is based on profit motive. We, therefore, also try at all cost to ensure that we run away from anything that can make us to incur unnecessary expenses! (HR Manager, Participant 4).

Another concern also raised by one of the participants regarding resources is an issue of space. He contended that organisations or industries are short of office spaces, especially for the people who will adequately offer training to these TVET students. This participant affirmed that they are keen and willing to accept students for practical exposure, but they lack office space to accommodate them and trainers who are specifically allocated for such task, thus, most of the students do not get adequate training during the period of practical training.

It is interesting to allude that some participants exposed that students, during their practical training session, have a tendency to demand allowances and to reflect inadmissible behaviour. A participant from the banking sector lamented that:

Some of the students demand stipends during their training session, which is not what we have agreed upon with Majuba TVET College, as there are the ones who place students to us, of course, with our agreement. Another issue of concern is that some of these students disclose certain confidential information for our organisation! In most cases students that were in Financial Division were prone to expose financial matters of this company, therefore, I had to tighten my internal controls for Finance Division, which then eventually led Finance students not to be exposed to the rudimental knowledge in the Financial Division. Privately, they accept bribes from our business competitors, and this kind of behaviour is really frustrating! Actually, they do not conduct themselves well during this training session. I think the College ought to effectively communicate with these students that we are not obliged to pay them, even if it is a stipend - it should come from the College. They must know that we accept them for only one purpose as students - that purpose is to learn. They are not part-time

employees either, but they are learning. I am over emphasising that my friend, because in previous years I accepted some college students, hey, little did I know that I was inviting some troubles for myself - they wanted to be treated as permanent employees of this organisation! (Training Manager, Participants 7).

Considering these different views expressed by industrial stakeholders, one can conclude that even though most industries are willing to afford an opportunity of exposure to the TVET college students, the major barrier is the availability of resources. All the stakeholders interviewed in the District of Amajuba considered themselves as primary stakeholders who are in a perfect space in affording relevant industrial skills to Majuba TVET College students. However, it is worthy to indicate that most of them (seven out of ten) showed some hesitation on surrendering their resources to these students.

Furthermore, it is interesting to report that one of the industrial stakeholders' representatives expressed some concern about the centralised curriculum development. The sentiments were that TVET curriculum ought not to be rigid, it should cater for different needs of various regions and districts within South Africa, this is necessary because different parts of the country have diverse needs. These sentiments were considered valuable to all of the participants. The curriculum needs to be suitable for a specific district and region. Another participant expressed that:

> In rural areas, the local or TVET education institutions should offer courses applicable to the needs of the community that is located there. The courses offered at these campuses should deliver employment opportunities for the learners and we have to gain from the skills and talents of these learners. Curriculum should address the community needs as well as industrial needs. I believe that the College does have researchers to conduct research to establish the needs and demands of the community. Moreover, the college ought to know the challenges that we are confronted with, when dealing with the training session for their students. For example, what resources do we require, what strategies do we have to adopt that will fully benefit a student at the end of the day? (Training Manager, Participant 3).

➢ **TVET College perception of training resources**

Majuba TVET College representatives that were interviewed had been involved in curriculum design, implementation, monitoring and examination and in the placement of students for industrial practical exposure. Therefore, their views were important in this phase of training resources, as they were vigorously involved in design and choice of methods for the TVET sector. In this section I present the views of the Majuba TVET College representatives about the training resources at Majuba TVET College.

This section mostly involves the data that were carried out with Majuba TVET college representatives. As it might be known, effective and responsive TVET curriculum implementations require different training resources, such as equipment, human capital and even financial resources. Participants from the college expressed various concerns concerning training resources. College participants lamented that the quality of their TVET lecturers is problematic, which then eventually leads to the poor quality of TVET graduates. One of their major concerns as the College is that most lecturers tend to possess theoretical knowledge with a minimal exposure of industrial knowledge.

Participants expressed that the practical exposure should not only be limited to students, but the college ought to extend it to lecturers as well. They further alluded that industries have a crucial role in ensuring that adequate competences for both students and lecturers are achieved. Practical exposure is also essential for lecturers as well. One of the participants alluded that:

> Most lecturers do not have any training from industries, or they have never been exposed to industrial skills knowledge. The only knowledge that they carry is

pedagogical knowledge. Therefore, it becomes a major challenge for them to introduce or to lay that rudimental practical knowledge to students. As much as we desire to arm our lecturers with the knowledge that we feel they need for effective teaching, we are burdened with the limitation of financial resources. For example, some of our lecturers do not know how to operate computers, and they cannot use overhead projectors in their teaching and learning (Deputy Director, Participant 12).

The above expressed sentiments are an indication that there ought to be a strong bond or link between TVET colleges and industrial stakeholders, so that relevant and effective practical training can be established. Another challenge that the Majuba College participants voiced was that they do not receive adequate funding from the government, due to a large number of TVET colleges around the country.

Mostly, the College lecturers struggle to obtain adequate material for teaching and training, and eventually that tends to hamper or compromise the level of training and knowledge that students are supposed to be acquiring. One of the participants revealed that lecturers that are teaching computer - related subjects have been complaining about the status and the conditions of computers and printers. He mentioned that old computers are used for practical sessions, and there is a greater pool of students who are doing computer - related subjects. This participant lamented that:

We receive numerous complaints from our lecturers at the campus levels, mostly these complaints are about computer - related problems. As much as we have our own technicians who deal with computer - related issues, you find that it is extremely difficult for them to fix our computers, because they (computers) are old. They need to be replaced – the same applies to our printers; the college does not have enough budget to cater for the needs of these vulnerable students (Deputy Director, Participant 12).

The above response indicates that delivery of the quality and adequate academic programmes is undoubtedly compromised. It is irrefutable that most TVET sectors around South Africa are dealing with a challenge of inadequacy of teaching and learning facilities. While the participants were still revealing their frustration about the shortage of teaching and learning resources, they also outline that there are inadequate classroom facilities. Eventually, that alone deprives most students a chance to enroll in the TVET programmes. Understandably, the concern of teaching and learning facilities from these participants invokes the researcher of the study to seek more information about plans in place on the side of the College to address this challenge.

According to the College participants, funds that are distributed to TVET colleges are not, sufficient to accommodate all the needs of the College. Therefore, that forces the College management to compromise some of the equipment that is crucial for adequate teaching and learning. Subsequently, that will cause TVET academic programmes to be incapacitated in ensuring that their academic programmes are responsive enough to the needs of the society and the industries at large. Likewise, World Bank Report (2000), advocates that higher education suffers inadequacy in quality distribution of resource allocation and sufficient budgeting. This eventually affects enrolment and teaching and learning. Similarly, training of competences among graduates, employment opportunities and global competitiveness on the job market are affected, and this has become a major challenge to developing countries such as South Africa.

Theme 4: Industry stakeholders' views about the quality and competency of TVET programmes

The industrial stakeholders interviewed in this study were requested to express their general opinions about the academic programmes that are currently in place in the College, specifically Majuba TVET. It is worthy to outline that the majority of responses from participants revealed that much is still needed to be done by our government in the sector of vocational education so that their TVET image changes for the better and public perception about TVET colleges takes a positive paradigm shift. Participants revealed that TVET colleges nationally are still stigmatised, not only in public or society, but even the majority of industrial participants that were interviewed had adverse perception on TVET colleges.

In the case of South Africa, all of the participants viewed TVET colleges as institutions of learners who were not capable to achieve desirable results that will allow them or give them an entry to universities or to their institutions of choice. Therefore, according to these participants the academic programmes designed and curriculum developed only cater for certain levels of intellect for prospective students.

According to the assessments of these participants, the most growing task for TVET practitioners continues to be providing courses or modules within TVET institutions. Interestingly, participants are of the view that practitioners (lecturers), who are subject specialists with trade skills, are often regarded as successful teachers, rather than those with additional pedagogical skills. Similar sentiments are also shared by Gauld and Miller (2004) who assert that many employers tend to involve subject specialists in the provision of workplace training. Many employers send a message

that everyone can be a workplace trainer or training specialist once they have some experience in a specific content field. The study findings revealed that the lack of adequately qualified TVET lecturers in developing countries, and the rigid curriculum specifications of TVET courses and programmes, typically contribute to the stigma of TVET academic programmes in the country. As much as industrial stakeholders reflected willingness to embrace sustainable vocational education as a viable education, they find it difficult to trust the quality of TVET educational programmes. One senior executive officer made the following remarks regarding the TVET College programmes.

> Generally speaking, TVET systems have faced several difficulties in the past, some of them being that universities do not accept TVET qualifications, most universities argue that the qualifications offered at a college level do not match the qualifications provided by the universities. Clearly, that tends to create a huge stigma to us as industries with regards to what is offered at the TVET colleges! Furthermore, it also generates a misconception regarding TVET programmes in their own right. Another problem I would describe is the society's biased view of TVET College programmes as the weakest interconnection network in addition to the industry. I cannot dispute such sentiments. Furthermore, it is perpetuated by members of the society who view TVET colleges as a scapegoat for learners who dropped out of the school system (Head of Department, Participant 8).

The above sentiments could be induced by the lack of knowledge or the vision and goal for TVET colleges, to come straight to your question about DHET's initiative to turn TVET colleges into institutions of choice.

The above sentiments exhibit that when minimal or no attention is being afforded to the identification and application of the essential competences and skills that are mostly demanded by industries and are crucial for preparing students for the self-employment, then TVET academic training and programmes offered are unlikely to build the required competences for the job market.

Theme 4.1- Industry stakeholders' perceptions about TVET academic programmes

A significant number of industrial representatives (8 out of 10) cited that academic programmes are a mismatch in providing what they really require as industries. They highlighted that TVET academic programmes do not prepare students with what they require as industries, and moreover, students are faced with many obstacles when they enter the labour market. Study participants also exposed the poor links between technological skills, entrepreneurial skills, labour market needs and employable skills, which then suggest that TVET colleges are not viewed as a preferred choice of training for most of the employers and industries.

Participants also argued that in most cases the preparation of TVET academic programmes is theoretical - driven and unsuitable to meet the expected needs of the work force industry.

> I think for your commerce students you focus on the theoretical side of the curriculum now rather than executing the practical aspect. For example, Accounting students from your college are supposed to graduate with sufficient knowledge of Accounting software that is practical for us as a Banking sector. However, we find a situation where we spend a lot of resources training your graduates with basic knowledge (Bank Manager, Participant 10).

In other words, TVET providers have skills and courses, without knowing precisely whether the industry needs those skills. Another perception afforded by one of the industrial stakeholder was that mostly the quality of academic programmes is also determined by the competency of academic staff the College has employed. The study revealed that mostly industries are uncertain about the effectiveness and the relevance of Majuba TVET programmes. This is because in most cases the College has a tendency of employing lecturers that have a marginalised or no exposure to industrial workforce experience. The participants expressed that lack of industrial knowledge and experience

has a strong influence and impact on how they view the relevance and the quality of academic programmes towards industrial knowledge. One of the participants from industries expressed the following sentiments:

> Lecturers and instructors have a vital role in ensuring that students are to be adequately trained to become competent. The first point of training students ought to be their institutions of learning. Honestly, lecturers ought to ensure that their students have acquired and grasped complexity issues of the subject before they can deploy them to us as industries. An issue of proper establishment of skills and knowledge is paramount prior to taking students to industries for practical exposure (Training Manager, Participant 7).

Participants also expressed some concerns about the minimum passing grades that are established for TVET academic programmes, especially for students who have enrolled for NATED programmes. These have been viewed by industries as unsatisfactory passing requirements, and as a result, it emerged that TVET programmes are being compromised. Industries' participants also expressed that for students to exhibit a certain level of competence and have a progressive life, the quality of academic programmes offered at the TVET College must be of optimal value. A certain participant from Metal and Steel industries lamented that:

> Most of Majuba TVET students, especially from the Engineering field, are not adequately equipped with the knowledge that you expect that they should have acquired from the classroom! When they reach our premises for practical exposure we have to interview them. When we give them some basic Mathematical problems and a little bit of Science so that we establish their competency level and also to offer them training on an artisan pathway, they lack so much from classroom knowledge. It becomes worse when we give them psychometric testing that includes diagnostic skills (Training Manager, Participant 3).

I noted that most of the industrial participants have the similar views with regards to the academic programmes offered at Majuba TVET College. It is worthy to indicate that such views or sentiments are a strong indication of what the College ought to really consider in future when they hire their academic staff.

> **Industry stakeholders' perception about the quality of TVET college graduates**

Despite the fact that the study sought to gain an understating of industries and knowledge about their importance in the involvement of curriculum, the issue of their perception about TVET college graduate was also explored. After the establishments of TVET colleges in the democratic dispensation, there was alarming concerns of TVET graduates who lack employment. There has been a major concern raised by the participants in the study about the quality of TVET graduates in a workforce setting.

Many of the industrial participants (7 out of 10) bemoaned that most of the TVET graduates, particularly from the Engineering field, were more theoretical rather than practical in their approach to work. One of the participants lamented that:

> TVET institutions' graduates have very impressive academic performance in their academic transcripts - a whole string of as is in their academic transcripts. However, they are rather frustrating when they are given a chance to perform. The other day, I employed a graduate and when I asked him to repair a gearbox, he had a lot of trouble, but brilliant theories. We as employers, seek to absorb people who are balanced both in practical and theoretical traits. No employer wants to offer a job to someone with theoretical knowledge only (Snr HR Officer, Participant 5).

As per participants' view is, TVET college graduates required further training in order to acquire the practical skills and competencies needed, especially those in the Engineering field. Participants indicated that graduates need to be transformed from a theoretical perspective to understand practicality, particularly as it relates to the challenges of the modern Engineering or any relevant field, be it Hospitality or Finance.

4.4 Industry stakeholders' comments on the TVET graduates

Positive comments	Negative comments
The graduates are much better than the others from institutions (like Universities' of Technology) in terms of appreciating the values, ideas and ethical standards required for the profession; this helps them to effectively negotiate for business.	Graduates display limited practical knowledge and limited hands-on experience with most of the practical machinery models, and other means of robots that require strong human invention.
It is a strong starting point for the profession, but the programme needs to be refocused to meet the needs of the industry in full.	With such modern obstacles as new machinery or robots, models and the use of advanced equipment (e.g. computerised test kits), graduates are terrified.
To a certain degree TVET graduates can be counted on to do stuff with limited supervision.	Without guidance, the TVET graduates cannot "stand alone" unless they are thoroughly acquainted with the finer business details.
TVET graduates have the potential to learn quickly and are competitive, as they use the most effective means to get a job done.	Most time is lost on the TVET graduates being retrained.
They are able to take on obstacles, promising them a progressive future.	They still need a lot of "baking "because they have graduated half-baked.

Interestingly, participants also noted that TVET students lack career counselling programmes in the high schools they attended. Participants also alluded that most of the TVET students came from rural areas and were not exposed to career counselling and support to assist them in making their career choices.

4.5 Summary of the findings

The involvement (TVET) of industrial stakeholder in this study revealed that while technical and vocational education and training are recognised as a programme with the capacity to provide skills required for manufacturing, economic and national growth and also for jobs, the sector is plagued by challenges that can impede the programme from being achieved. Such problems, as revealed by TVET practitioners' responses when interviewed, include insufficient support, insufficient teaching, and learning facilities and negative perception of the TVET sector.

The findings of the study also exhibit that curriculum implementation is mostly theoretical in most of the academic programmes offered at the Majuba TVET college. This eventually causes most of the industries to have minimal involvement or no involvement at all in the implementation of the curriculum. The findings also revealed that academic programmes require a major part of practicals as students do not attain enough exposure due to inadequate availability of learning training equipment and practical rooms. This causes most of the students to exit the college with insufficient functional skills in the workplace. It is necessary to outline that findings also have revealed that the majority of TVET lecturers were inadequately prepared to provide quality instruction. The most notable reason is that they lack exposure to industrial knowledge, and skills are limited.

Findings also revealed that the majority of employers are left behind during study curriculum design. This is contrary to the UNESCO-UNEVOC, which affirms that cooperation with industry is a means of developing and improving the standard of training provided to students in TVET institutions. Without any doubts, this is a process of involving the industry in the overall education and training system to develop and enhance practical skills for students and encourage the placement of students in industries to gain workplace experience. Working with industry contributes to a better standard of education and training through the creation of shared curricula when they employ them.

4.6 Conclusion

This chapter has presented the data which were collected by means of in-depth interviews from various participants. As outlined in the previous chapter, the participants of this study represented the views from various stakeholders regarding their involvement in the curriculum implementation in the TVET College. The chapter presented the data in the form of themes as they emerged from the study. The next chapter will focus on the discussion of the findings in relation to research objectives and recommendations, as well as the conclusion.

CHAPTER 5

DISCUSSION OF RESULTS, RECOMMENDATIONS AND CONCLUSION

5.1 Introduction

This chapter will provide a discussion of the findings concerning the research objectives, recommendations, and conclusion. Furthermore, possible areas of improvement based on the findings of the study and further studies are outlined. The discussion, as outlined in this chapter, synthesises the findings with the literature review. In this section, the study identifies key findings concerning the involvement of stakeholders from industry in curriculum implementation in the TVET College.

5.2. Research findings relating to research objectives:

This study was conducted to achieve three objectives illustrated below:

5.2.1 To explore how stakeholders from industry understand involvement in TVET curriculum implementation in South Africa

The findings of the study revealed that participants, particularly the ones from the industries who are regarded as stakeholders in this research, have less understanding of their involvement in TVET curriculum implementation within their area. To this effect, some of the participants indicated that ever since the TVET College was established there has not been a clear partnership between external stakeholders and the college. It is important to provide a brief elaborative analysis based on the responses from participants. These responses suggest that there is a lesser likelihood of proper and effective communication between Majuba TVET College and local industries. That could mean that industries lack knowledge and understanding of what constitutes real learning during a training activity if the industrial trainers increasingly make use of their discretion, their

sensory and intellectual capabilities in the learning process instead of using what is recommended by the TVET College, and curriculum experts from DHET.

This implies that certain stakeholders from industries are not part of the process of TVET curriculum implementation and in this case, it is the drivers of the economic means who ought to provide employment opportunities who appear less knowledgeable in this regard. The views of the participants are in line with the curriculum development and implementation process as described in the existing literature wherein the stakeholders' industries, in particular, play no significant role towards the whole curriculum process (Finch & Crunkilton, 1999; Carl, 2009). These researchers outline various models for curriculum development up to implementation and evaluation. In their models, there is no evidence on the role of stakeholders in curriculum implementation. The current situation concerning TVET curriculum implementation and the involvement of stakeholders is contrary to what is stated in the Stakeholder Theory which is the anchoring framework to this study.

As explained by Freeman (1984), a stakeholder is any person or a group of people either affected by the organisation or able to influence the achievement of its objectives. Concerning the curriculum development, stakeholders from the industries hold a prime position to influence the achievement of the TVET objectives of producing employable graduates. Contrary to the current situation as described by the participants, other researchers propose and support the tenets of the Stakeholder Theory, by stating that the survival and success of the TVETs or any organisation depend on the involvement of stakeholders (Asiyai, 2015). Bui (2017) affirms the latter assertions and further adds that for a TVET college it is imperative to identify and manage relationships with

key influential stakeholders, this would have a significant impact on improving the employability of graduates. HRDC (2014) insists that colleges exist within an environment that is endowed with multi-stakeholders some of which are not well recognised, as the findings of this study have revealed.

As the evidence indicates that stakeholders from industries are less knowledgeable about the stakeholder involvement in curriculum development, it is likely that TVET colleges might not respond to the needs of potential employers' needs or even those of the labour market. In a counter-argument towards the established situation, HRDC (2014) indicates that TVET colleges must create collaborative work between themselves and relevant stakeholders - in this way the TVET College would be in a better position to respond to the needs of the stakeholders. The study by Kettunen (2014) also affirms the position of stakeholder relationship and further indicates that such a relationship stands to favour TVET colleges.

Other key findings of the study are the selective involvement of stakeholders from industries in TVET activities. To this end, industry stakeholders revealed that they are often requested by the TVET to offer training to the exiting graduates. The findings reveal that industry stakeholders find this odd as they are not certain of the nature and level of training they ought to provide to the exiting graduates. This confusion is caused by the fact that industry stakeholders do not participate from the time curriculum is developed, yet they are expected to play an enabling role for the graduates and the TVET College. These findings justify the findings by the study conducted by Terblanche (2017) which reported that TVET colleges are experiencing poor industry participation in areas such as work placement opportunities, something that affects the future of graduates.

Expecting the industries to participate in the end product is unfair to the industry stakeholders, since they do not participate in the curriculum development process.

Similarly, in Botswana, Moswela and Chiparo (2005) found that graduates could not acquire necessary skills when the prospective employers were excluded from the curriculum design. According to these researchers, the exclusion of prospective employers in curriculum design harms graduates' employability in Botswana. In buttressing the latter argument, Raihan (2014) states that the issue causing the gap between TVET colleges and industry stakeholders is that in most instances, TVET colleges use a curriculum created by academics with little or no understanding of the industry requirements or local needs. Without being involved industry stakeholders remain at the periphery in terms of curriculum development and implementation.

Some scholars feel that if industry stakeholders are not fully involved in TVET curriculum implementation, it is the responsibility of TVET colleges to ensure that they establish collaborative partnerships with industries (Ernest et al., 2016; Dang, 2016; Woldetsdik & Lumadi, 2015; Moses, 2016). These scholars suggest that the partnership between TVET college and industry stakeholders should be forged in terms of work-integrated learning. The study by Dang (2016) supports the latter view, however, it insists that before implementing work-integrated learning TVET colleges should forge a strategic partnership between themselves and industries. Moses (2016) opines that a strategic partnership would assist TVET colleges to be aware of the job opportunities for which students should be trained.

Raihan (2014) concurs and further states that with the participation of the industry stakeholders during curriculum preparation, the industry stakeholder will also benefit by recruiting well-prepared graduates. Furthermore, the industry is the primary consumer of TVET graduates. Therefore, industry participation in TVET curriculum and workplace training opportunities are the primary ways of achieving a consumer-driven approach in curriculum implementation. Raihan (2014) argues that if employers are not involved in the process of the specific skills attitude and behaviours required by graduates, they are less likely to see any relevance between TVET and their skills needs.

5.2.2 To examine the nature of stakeholders' from industry in involvement of TVET curriculum implementation in South Africa

Concerning the second objective, the findings of this study reveal that TVET colleges still struggle to involve stakeholders from industry in TVET curriculum implementation. The general government position regarding TVET and stakeholder from industry involvement as of 2012 was to establish a relationship between TVET and industries. The intention of DHET is based on building a strong relationship between the TVET colleges and the industry to develop the intermediary skills repertoire of the students. According to DHET (2012), the relationship between TVET and industries should be a symbiotic one and be primed on value proposition where each party benefits from the relationship.

The findings of the current study suggest that the envisaged type of stakeholder relationship between TVET colleges and the industries seems to be a pipeline strategy that is yet to materialise. In this regard, participants from the TVET College explained that it is extremely challenging to

involve nearby local industries at TVET college level, since at the college most things are planned, organised and implemented at the national level, which is the DHET. The participants further alluded that the sole task left at the TVET college level is ensuring that they adhere to the recommendation by DHET.

According to the participants from the TVET College, they have used their discretion to develop partnerships with the local industries for which they use DHET funding to support their students within the different sectors during the work placement. The established relationships are based on student placement for their practical experience accumulation; they are not entirely based on a value proposition. The participants further revealed that given that the function of the forged formal relationship between TVET colleges and industries rests with the national department, it is impossible to ascertain the expectations of the industries from the TVET students. Furthermore, participants felt that if the situation was different the TVET colleges would have implemented a curriculum that caters to all of its stakeholders; it is the belief of the participants from the TVET College that in this regard the DHET is not efficiently and effectively executing its mandate.

The findings of this study indicate that the relationship existing between TVET colleges and industry stakeholders is not from the curriculum implementation perspective; instead, it is based on student work placement. The participants from the industry revealed that in terms of training need analysis they too struggle to plan the training schedule for TVET graduates, they do not believe that they are in sync with what the students consume as a theory. In this way, participants feel they are unable to meet the expectations of the TVET graduates in terms of their training needs.

Affirming these findings is the study by Okoye and Arimonu (2016), whose study found that vocational training has generally witnessed numerous challenges, some of which include the curriculum that has little or no relationship with the workplace. The current study has established that the lack of synergy between the TVET curriculum and the industry skills requirement is caused by the lack of stakeholder involvement in curriculum design and implementation. The role of industry stakeholders in curriculum implementation is superficial, which renders it insignificant. If this situation persists, van Broekhuizen (2016) insists that it will exacerbate youth unemployment, since their skills as entrants in the labour market differ from the skills that employers demand. Raihan (2014) indicates that collaborative initiatives reduce demand and supply mismatch.

The participants from the industries further added that as industries they aim to absorb people who have both theory and practical on balanced terms. Such a set up reduces the need for prolonged training especially in the case where a graduate has a more theoretical background. The participants went further to indicate that it would be easier for the industries to understand the training needs of the graduates if industry stakeholders are involved from the beginning of the curriculum design and implementation. These findings are affirmed by the existing literature, for example, Koskei (2015) indicates that the TVET curriculum has numerous stakeholders to cater to students, industry and socio-economic issues of the society and all of these stakeholders should be involved accordingly in the affairs of the TVET College. This, according to Koskei (2015), can be achieved by allowing the TVET curriculum to navigate through diverse stakeholders as well as interest groups to be coherent.

Yaro et al. (2016) concurs that when stakeholders are involved in education, particularly in curriculum affairs, the main reason for their involvement is to strengthen the quality of the education system. In such a setup stakeholders bring onboard their invaluable expertise required to shape the curriculum for it to respond well to the needs of students, industry and socio-economic issues of the country. Matkovic *et al*. (2014) view such stakeholders as curriculum stakeholders and further add that they can play a pivotal role in curriculum development as they would provide recommendations, feedback, critique, and advice. In this regard, Koskei (2015) argues that curriculum stakeholders must be involved in the entire curriculum development process.

5.2.3 Analysis of industry stakeholders' in involvement of TVET curriculum implementation in South Africa

The Stakeholder Involvement Theory forms part of the foundation of the researcher's frame of thoughts and reasoning in analysing the stakeholder relationship between TVET colleges and surrounding industries with specific reference to curriculum implementation. As acclaimed by Freeman (1984), a stakeholder is any person or a specific group of people either affected by the organisation or able to influence the achievement of its objectives. These individuals have a synced mentality which is to enhance the performance of the organisation. Each organisation has its unique sets of stakeholders who are in charge of its operation; the same applies to the TVET colleges. It can be seen from Chapter Three (of this study) that TVET colleges have a plethora of stakeholders. However, in this study I focused mainly on the industry stakeholders, with particular reference to curriculum implementation. Asiyayi (2015) notes that the stakeholders become

invaluable to an organisation if they are engaged in the processes of the institutions. Their value becomes unknown when they are not engaged in the processes of the institutions.

Findings from this study point to minimal involvement of stakeholders, particularly when it comes to curriculum implementation, whereas, if there was a close collaboration, joint interest would have arisen towards shared vision on curriculum implementation which would be aimed at improving the employability of the graduates.

The minimal involvement of stakeholders from industries in curriculum implementation is due to the type of collaborative partnerships which are based on the student placement. The findings in this study indicate that TVET Colleges have utilised their discretion to develop partnerships with the local industries for which they use DHET funding to support their students within the different sectors during the work placement. The established relationships are based on student placement for their practical experience accumulation; they are not entirely based on a value proposition. It stands to reason that the TVET College's approach to stakeholder involvement is based on the end product where graduates have reached the completion of their qualification. It follows, therefore, that industry stakeholders' role in student development is at the student placement, and this approach only shows a superficial collaboration between TVET colleges and local industries. In this regard, industries have a limited role in the manner the TVET colleges develop their students; this prevents the industries from knowing the role which they should play during the student placement tenure.

Government legislation such as the White Paper on Post-School Education and Training (2013) points out the importance of developing and maintaining close working relationships between education centres and employers. Furthermore, the White Paper states that TVET colleges are required to develop partnerships with industry and business. In this case, the government gives TVET colleges a leeway on forging the partnership with the stakeholders from the industry and businesses. However, the limitation in this provision is that the partnership that should be established is related to curriculum design and implementation.

Adopting a selective partnership perspective with industry and businesses could leave TVET colleges in a dilemma situation, as industries will continue to play their partial stakeholder role without objecting. The main issue, in this case, is for the TVET colleges to start a partnership with industries and businesses when the curriculum that will be used to train their prospective employees has already been designed. In this case, it is conceivable for the industry stakeholders to regard themselves as providers of work-integrated learning for TVET graduates and possible employers and nothing beyond that point. Such a consideration is against the tenets of Stakeholder Theory and it has to be corrected by reconfiguring the collaborative work, thereby granting the industry stakeholders a more involving task in curriculum implementation.

5.3 Recommendations

Generally, the findings of the study suggest that there is a lack of strategic partnership between TVET college and industry stakeholders, and given these findings, the study recommends that:

- The DHET should consider revising the policy regarding the involvement of industry stakeholders in the curriculum implementation. The current policy prescribed by the White paper on Post-School Education and Training is silent on the role of industry stakeholders in the curriculum design and implementation.

- The DHET should provide a clear guideline for the TVET colleges to assist them with the standards to which the strategic collaborative partnership between TVET colleges and industry stakeholders would be placed. DHET must review the role of industries in curriculum design and implementation.

- The findings of the study reveal that the industry stakeholders do not have sufficient knowledge about TVET curriculum implementation. For the DHET to implement effective changes, the TVET managers should report the lack of cooperative relationships between their respective colleges and industry stakeholders on matters concerning curriculum implementation.

- The DHET should make use of business organisations such as Business Unity South Africa (BUSA), which is a non-profit company representing organised business in South Africa. It is my view that by neglecting organisations such as these, a lot of benefits are missed in terms of shaping the curriculum that would respond towards the business needs.

5.4 Conclusion

This study holds a view that industry stakeholders have a great role to play in the curriculum design and implementation, only if they are accorded the role. This study was underpinned by the Stakeholder Theory which is commonly used in the business environment. This theory was used

to frame the investigation and discussions in this study. Freeman (1984) describes stakeholder as any person or a specific group of people either affected by the organisation or able to influence the achievement of its objectives. TVET colleges operate within different stakeholders, however, the study found that industry stakeholders, in particular, possess less knowledge about TVET curriculum implementation. It was apparent that the only time when industry stakeholders are involved in TVET college matters is when they have to offer workplace training for the college's graduates.

The evidence from the study suggests that stakeholder from industry involvement is not entirely exercised from a value proposition perspective; industry stakeholders hold a valuable resource (a job) which of late has become scarce. However, industry stakeholders encounter numerous challenges concerning the preparedness of graduates. This issue emanates from the fact that when the TVET curriculum is on the design stage, the government employs the services of curriculum experts, something that some of the participants in this study rebutted as problematic. The concerns raised by the participants were that the procured curriculum experts usually possess a basic education curriculum which has a limitation on the TVET curriculum. The industry stakeholders thus get neglected from the inception of the curriculum, but they are supposed to offer workplace training to graduates (the final product) they perceive to be unprepared.

For TVET colleges to become prosperous in producing the student throughput that is relevant to the industry stakeholders, stakeholders, particularly industries, should be regarded as strategic partners for the TVET colleges. However, this recognition ought to begin from the curriculum

design up to implementation, in this way the industries would be receiving graduates that possess anticipated levels of theoretical grooming.

To correct the lack of well-trained TVET graduates, the TVET colleges should consider teaching students a syllabus that is relevant and also respond to the needs of prospective employers. This can be achieved through cooperative partnerships. Such cooperation makes institutions aware of the job opportunities for which they have to train the students, and this happens with ease with the participation of industries in curriculum preparation. Similarly, the industry also becomes aware of the ways they can benefit from the training institutions, especially during the recruitment process.

5.5 Area for future research

It became evident in this study that stakeholders hold a special space in the TVET sector. In this regard, the future studies should focus on investigating or exploring whether industry stakeholders can provide a productive workplace for TVET graduates.

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Appendix 1: Ethical clearance approval letter

UNIVERSITY OF ™
KWAZULU-NATAL

INYUVESI
YAKWAZULU-NATALI

01 August 2019

Ms Khanyisile Jane Msibi (215079132)
School of Education
Edgewood Campus

Dear Ms Msibi,

Protocol reference number: HSS/0476/019M
Project title: The involvement of Stakeholders from industry in the implementation of the Technical, Vocational Education and Training (TVET) Curriculum in South Africa

Approval Notification – Expedited Application

In response to your application received on 27 May 2019, the Humanities & Social Sciences Research Ethics Committee has considered the abovementioned application and the protocol has been granted **FULL APPROVAL.**

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment/modification prior to its implementation. In case you have further queries, please quote the above reference number. PLEASE NOTE: Research data should be securely stored in the discipline/department for a period of 5 years.

The ethical clearance certificate is only valid for a period of 1 year from the date of issue. Thereafter Recertification must be applied for on an annual basis.

I take this opportunity of wishing you everything of the best with your study.

Yours faithfully

Dr Rosemary Sibanda (Chair)

/ms

Cc Supervisor: Dr Lester Brian Shawa
cc Academic Leader Research: Dr Ansurie Pillay
cc School Administrator: Ms Sheryl Jeenarain

Appendix 2: Interview Schedule: TVET Participants

Interview schedule: TVET

1. To what extent has Majuba TVET curriculum implementation achieved its objectives for which it was developed?

2. What level of resources available (both financial and human) to implement the curriculum?

3. What structures (such as committees, working groups and authorized individuals) are most effective to oversee and co-ordinate the implementation of the curriculum?

4. To what extent do you involve stakeholders during the curriculum implementation at your college?

5. What agreement have you established with stakeholders in terms of curriculum implementation?

6. What specific role do stakeholders play in curriculum implementation at your institution?

7. Are there any other challenges that Majuba TVET continues to face in the implementation of its curriculum? What are they? How are they being addressed?

8. What would stakeholder benefit from participating in curriculum implementation as your college?

9. What policy framework do you rely upon to establish partnership with stakeholders for the purpose of curriculum implementation?

Appendix 3: Interview Schedule: Stakeholders from the Industry
INTERVIEW QUESTIONS - INDUSTRIES

1. Briefly describe your understanding about TVET curriculum implementation.

2. Have you been approached to participate in curriculum implementation at TVET College?

If the above answer is **NO**, please respond to Question **A**. If the above answer is **YES**, please respond to Question **B**.

QUESTION A

3. Why do you not participate in relation to curriculum implementation at TVET College?

4. If the above answer is yes,

5. To what extent do you understand your activities as a stakeholder in curriculum implementation?

6. Which area of expertise do you think you can contribute with to TVET College?

7. What innovative programmes do you think you can be involve in TVET College brought towards strengthening the curriculum?

What methods and tools you think can be used to support the curriculum implementation?
QUESTION B

3. What is your role in curriculum implementation at TVET College?

4. To what extent do you understand your activities as a stakeholder (industry) in curriculum implementation?

5. What agreement have you signed with any TVET College in relation to assist with curriculum implementation?

6. Which area of expertise do you contribute with to TVET College?

7. What innovative programmes has your involvement in TVET College brought towards strengthening the curriculum?

8. What methods and tools can be used to support the curriculum implementation?

Appendix 4: Participant consent form

If you give permission to participate in the study, please sign below:

I (name and surname) ………………………………………………….., the …………………………(Position in the company) of………………………………………………….. (Name of the company), give permission for my subordinates   to   participate in the study.   I confirm that   I understand the nature of the project, and that I can withdraw their participation at any time if found that this study infringes human rights.

Signature ……………………………………………………

Date: ____ / ____ / 20_____

Appendix 5: Permission letter to conduct a study

DHET 004: APPENDIX 1: APPLICATION FORM FOR STUDENTS TO CONDUCT RESEARCH IN PUBLIC COLLEGES

FOR OFFICIAL USE

DECISION BY HEAD OF COLLEGE

Please tick relevant decision and provide conditions/reasons where applicable	
Decision	**Please tick relevant option below**
1 Application approved	✓
2 Application approved subject to certain conditions. *Specify conditions below*	
3 Application not approved. *Provide reasons for non-approval below*	

NAME OF COLLEGE	MAJUBA TVET COLLEGE
NAME AND SURNAME OF HEAD OF COLLEGE	SJ. MLOTSHWA .
SIGNATURE	███████
DATE	1/11/2018

MAJUBA TVET COLLEGE
CENTRAL OFFICE

0 1 NOV 2018

Appendix 6: Request letter to conduct a study

UNIVERSITY OF KWAZULU-NATAL

INYUVESI YAKWAZULU-NATALI

Dear Sir/Madam

SEEKING PERMISSION TO CONDUCT A MASTER'S RESEARCH AT YOUR COMPANY

I am Khanyisile Jane Msibi, studying towards a Masters' in Higher Education and Training Studies at the University of KwaZulu Natal, Edgewood campus. I'm writing to ask your permission to be allowed access to your esteemed organization. My research topic titled *"the involvement of stakeholders from industry in the implementation of the technical, vocational education and training (TVET) curriculum in South Africa"* is supervised by Dr Lester Brian Shawa of school of Education - Higher Education Studies. Dr Shawa can be reached on 031 260 2291 (0813556137), email: Shawa@ukzn.ac.za.

My study seek to explore the involvement of stakeholders from industry in the implementation of the TVET Curriculum in South Africa. Your organisation has been chosen to establish whether or not it participate in the curriculum implementation of TVET colleges, or whether it has any partnership with TVET colleges in placement of their students.

Your assistance to participate in the study for purposes of conducting the research is most appreciated. The confidentiality of information and anonymity of personnel will be strictly adhered to by the researcher. Please be assured that all information gained from the research will be treated with the utmost confidentiality.

Thank you for your assistance in this regard.

Yours faithfully

Appendix 7: Turn-It in Report

Dissertation

16%	15%	3%	%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

MATCH ALL SOURCES (ONLY SELECTED SOURCE PRINTED)

11%
★ hdl.handle.net
Internet Source

Exclude quotes	On	Exclude matches	< 10 words
Exclude bibliography	On		