

UNIVERSITY OF KWAZULU-NATAL

**Stakeholder perspectives on the employability of TVET civil
engineering graduates in South Africa.**

by

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Educational Leadership, Management and Policy, School of Education, College of
Humanities, University of KwaZulu-Natal**

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08 September: 2025

DECLARATION

I, Bubele Nogcantsi, declare that:

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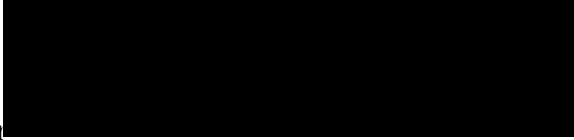
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SUPERVISOR'S STATEMENT

This thesis is submitted with my approval.

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Professor Dantew Teferra

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DEDICATION

Firstly, I would like to dedicate this study to my children Lulo Thandolwethu Nogcantsi, Langaletu Nogcantsi, and Lisolomzi Nogcantsi; I wish to encourage them to invest in education with a view to unlock their future and live a reasonable life ahead.

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ABSTRACT

The purpose of the study was to explore college stakeholders' perspectives on the employability of Technical and Vocational Education and Training (TVET) civil engineering graduates in South Africa. The study sought to understand how senior managers and employers perceive the employability of these graduates, the factors that shape these views, and the strategies they propose for strengthening labour-market outcomes. In line with the scope of the thesis, the study also aimed to develop a conceptual framework that explains how human capital, institutional structures and stakeholder relationships interact to influence employability. Although TVET colleges play a significant role in addressing national skills shortages, limited research has examined employability from the collective perspectives of multiple institutional stakeholders. A qualitative case study within the interpretive paradigm was used to explore these stakeholder perspectives across one TVET college, five municipalities and a civil engineering and construction company. Semi-structured interviews, focus groups and document reviews were used as the main methods of data generation, supported by relevant national and international literature to situate and deepen the analysis. Human Capital Theory, Institutional Theory and Stakeholder Theory were adopted to frame the study. The data were analysed thematically in alignment with the three research questions, enabling a comprehensive understanding of stakeholder perspectives and contributing to the development of the conceptual framework. Findings revealed that while TVET civil engineering graduates possess foundational practical skills suitable for entry into the labour market, their employability is constrained by several systemic challenges. These include high student attrition rates, limited formal recognition of TVET qualifications, curriculum gaps that narrow graduate capability to mainly physical work, and weak partnerships between colleges and relevant industries. The study also identified modest improvements in graduate employment and highlighted emerging entrepreneurial pathways. Stakeholders proposed strategies such as strengthening work-based collaborations between colleges and municipalities, reviewing the curriculum to widen its scope, incorporating current industry technologies and creating a centralised system to track graduate employment status. The study highlights the complex interplay of individual, institutional and relational factors influencing TVET graduate employability and integrates these insights into a conceptual framework that demonstrates how these dimensions collectively shape labour-market outcomes. The framework provides a new contribution to knowledge by synthesising human capital, institutional and stakeholder dynamics

into a holistic model that can guide practice and inform policy within the TVET sector. Key recommendations include revising the TVET civil engineering curriculum to incorporate industry-related literacies such as CAD/BIM and documentation, formalising college–industry partnerships through robust MoUs and structured placement agreements and establishing a district-level graduate tracking and transition system to strengthen alignment between training and labour market needs.

Keywords: Technical Vocational Education and Training (TVET) Colleges, Employability, South Africa, TVET Civil Engineering Graduates, Stakeholders, Municipality, Civil Engineering and Construction Company.

LIST OF ABBREVIATIONS

4IR	Fourth Industrial Revolution
AD	Assistant Director
BIM	Building Information Management
CAD	Computer Aided Design
CAPE	Caribbean Advanced Proficiency Examination
CAPS	Curriculum and Assessment Policy Statement
CBET	Competence-Based Education and Training
DHET	Department of Higher Education and Training
DPA	Deputy Principal Academic
EPWP	Expanded Public Works Programme
FET	Further Education and Training
GDP	Gross Domestic Product
HC theory	Human Capital theory
HDI	High Development Index
HR	Human Resource
HRM	Human Resource Manager
IDP	Integrated Development Plan
ILO	International Labour Organisations
IMF	International Monetary Fund Bank
ISAT	Internal Summative Assessment Test
IT	Institutional Theory
KZN	KwaZulu-Natal
MDG	Millennium Development Goals
MoU	Memorandum of Understanding
NATED or R191	National Accredited Technical Education Diploma
NC(V)	National Certificate (Vocational)
NPC	National Planning Commission
NPO	Non-Profit Organisation
NQF	National Qualification Framework
NSFAS	National Student Financial Aid Support

NYDA	National Youth Development Agency
OECD	Organisation for Economic Co-operation and Development
PLO	Project Liaison Officer
PSET	Post-School Education and Training
QCTO	Quality Council for Trades and Occupations
RET	Radical Economic Transformation
RSA	Republic of South Africa
SA	South Africa
SANRAL	South African National Roads Agency
SAQA	South African Qualifications Authority
SRC	Student Representative Council
ST	Stakeholder Theory
TVET	Technical and Vocational Education and Training
UKZN	University of Kwa-Zulu Natal
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organisation
VET	Vocational Education and Training
WBE	Work-Based Experience
WIL	Work-Integrated Learning

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CHAPTER ONE

INTRODUCTION AND BACKGROUND TO THE STUDY

1.1. Introduction

The levels of unemployment and poverty rates in South Africa (SA) have continued to remain high, even after the apartheid regime. In SA, the unemployment rate ranged between 32% and 32.9% in 2024, more than three decades after the country's democratic transition (Statistics South Africa [Stats SA], 2024), reflecting the persistence of structural socio-economic challenges. The shortage of a skilled workforce among youth and adults has been identified as one of the greatest reasons for the high unemployment rate in SA (Adams, 2019). However, the labour market in SA is struggling to create opportunities and is failing to counteract unemployment with relevant skills (Buthelezi, 2018; Mseleku, 2022). Consequently, Technical and Vocational Education and Training (TVET) colleges have been identified as key institutions to address this issue by providing employability skills to enhance the employment rate and reduce poverty (Adams, 2019; Jansen, 2020; Mabunda, 2020). Thus, the government initiatives should focus on cultivating employment-ready skills and fostering innovative entrepreneurs at a TVET college level in order to enhance employment and reduce the high rate of unemployment (DHET, 2013a; Lolwana, 2016).

In line with the foregoing, in 2007 50 TVET colleges were established by the Department of Higher Education and Training (DHET) in SA solely to provide employability skills (DHET, 2013a; Balkrishen, 2019). The college senior management, as key role players in producing TVET college graduates with employable skills, is responsible for choosing suitable programmes according to the different socio-economic needs of the community where the college is located (Mesuwini et al., 2020; Papier et al., 2016). Furthermore, programmes offered at TVET colleges are produced by UMALUSI (the Council for Quality Assurance in General and Further Education and Training), and the Quality Council for Trades and Occupations (QCTO) (Mgijima & Morobe, 2012). In addition, TVET colleges offer programmes in distinct categories, namely, the National Certificate: Vocational (NC(V)), the National Accredited Technical Education Diploma (NATED or R191), and occupational programmes (Mesuwini & Bomani, 2021). The programmes include engineering studies at all National Qualifications Framework (NQF) levels of programmes in the TVET sector (Mtshali & Ramaligela, 2022). Once an individual completes any of the above-

mentioned programmes, they become TVET college graduates of a particular programme and thereafter can seek employment in their profession (Papier, 2017).

In the existing literature relevant to the TVET sector and employability, in most cases the perspectives of college senior managers and local industries as employers are not addressed. Yet, the literature review indicates that they play a critical role in the implementation of employability of TVET college civil engineering graduates (Mesuwini & Bomani, 2021). The lack of research attention to the perspectives of relevant stakeholders at local level such as municipalities, local industries, and college senior management about the employment of TVET civil engineering graduates piqued my interest in studying this phenomenon. In this study I paid attention to the relevant senior college managers, municipality engineering managers and human resources (HR) managers with the intention of bringing their perspectives on employability of TVET civil engineering graduates to light.

This chapter provides a broad overview of the study's focus and rationale. I begin by discussing the introduction, background, problem statement, purpose of the study, motivation for the study, and significance of the study. I then address the research questions, research objectives, and context of the study, followed by the theoretical framework, research design and methodology, ethical considerations, and the study's limitations and delimitations. In addition, I provide definitions of the key concepts, the outline of chapters and end with the chapter summary.

1.2. Background

Several studies have been conducted on the employability of TVET college graduates in SA. Adams (2019) conducted a study on factors that influence the employability of TVET graduates, and Khairina et al.'s (2019) study looked at intensifying the employability rate of TVET college graduates. The study conducted by Okolie et al. (2020) examined how TVET teachers foster employability skills. Mabunda (2020) studied factors influencing the employability of National Certificate (Vocational) graduates of a rural TVET college in the Eastern Cape province, SA. Auta and Onwusuru (2022) conducted a study on TVET graduates' employability in the construction industry. The study conducted by Mesuwini and Bomani (2021) was on the employer perspectives on sustainable employability skills for TVET engineering graduates in KwaZulu-Natal, SA. Mseleku (2022) investigated the high rates of youth unemployment and unemployability in SA. The study conducted by Ndlovu and Van Wyk (2023) looked at college managers' views on the

employability of vocational engineering graduates, and Mtshali and Ramaligela (2022) examined employability skills for civil engineering.

These studies address numerous questions concerning TVET colleges and employability, for example, that TVET colleges were established to develop a skilled workforce with the aim of enhancing employability in their communities. The findings noted that TVET graduates, DHET, and industries are supposed to work together to ensure the employability of TVET graduates and that the programmes offered by TVET colleges are in line with what is required by industries for the labour market. However, the above-mentioned studies have not addressed the question of the municipalities and colleges' perspectives on the employability of TVET civil engineering graduates as they play a critical role in skills development and employability in their communities. Hence this study explored the perspectives of the college, municipality, and civil engineering industry managers on the employability of TVET civil engineering graduates.

Furthermore, Okolie et al. (2020) define employability skills as a set of skills, knowledge and attributes that enable an individual to gain, maintain and excel in employment. In addition, to enhance the employability of TVET college civil engineering graduates in SA, senior managers at colleges are encouraged to form strong partnerships with industries (Nkalane, 2018; Mesuwini & Bomani, 2021; Mtshali, 2021). Buthelezi (2018) adds that a strong partnership between TVET colleges and industries will not only help staff and students with work-integrated learning (WIL), but it will also enhance the employability of TVET graduates. According to Mtshali (2021), the factors that influence the employability of TVET college graduates in SA are not well documented. Some students who have graduated from TVET colleges are not captured in the college data. As a result, the whereabouts and employment status of these graduates is unknown. In the existing literature, scholars indicate that, on the one hand, TVET colleges lack adequate capacity to provide a skilled workforce for employment. On the other hand, the studies show that the government has been increasing the budget for colleges to improve their capacity for a skilled workforce to enhance employability (DHET, 2013a; DHET, 2020). To enhance the employability of TVET civil engineering graduates, it is important to understand the perspectives of stakeholders who are responsible for providing the programmes to address skills shortage and improve employment of TVET civil engineering graduates.

1.3. Purpose of the study

This study aimed to examine the underlying factors that shape the employability of TVET civil engineering graduates in South Africa, drawing on insights from college managers, municipal officials and industry representatives. It sought to understand how college managers, municipal officials, and industry representatives interpret graduate employability, the factors that shape these perspectives, and the strategies they propose for improving labour-market outcomes. In addition, the study aimed to develop a conceptual framework that integrates human, institutional, and stakeholder perspectives to explain how these factors collectively influence graduate employability.

Beyond identifying these factors, the study sought to generate an explanatory account of how human capital attributes, organisational norms, and stakeholder perspectives interact across micro, meso, and macro levels to shape employability outcomes. Rather than merely describing these influences, the study analysed the mechanisms through which they affect hiring practices, curriculum responsiveness, institutional decision making, and graduate transitions into the labour market. Through an integrated theoretical lens, the study aimed to illustrate the institutional processes and embedded policy logics that underpin employability outcomes for the TVET civil engineering graduates in South Africa.

TVET colleges are located within different municipalities across the country. The skills programmes offered at each TVET college are supposed to be in accordance with the socio-economic needs of the local communities and are aimed at enhancing employment within the local industries where the communities are situated (Mabunda, 2020). Ideally, TVET college senior management are not the only ones who are responsible for choosing programmes to offer in their TVET colleges; it should be done in consultation with municipalities, local industries, and other community stakeholders where the TVET college is located (Mesuwini & Bomani, 2021). The programmes offered at TVET colleges produce graduates in their institutions who are meant to be ready to offer labour in their nearby labour market industries. Students who graduate from TVET colleges expect to get employment, preferably in the local municipalities and/or industries where the college is located (Khambule, 2019).

1.4. Problem statement

Despite the strategic mandate of Technical and Vocational Education and Training (TVET) colleges to address South Africa's skills shortages and support national development priorities (Lolwana, 2016; Adams, 2019), the employability of TVET civil engineering graduates remains constrained. Several studies have shown that although TVET institutions are expected to supply industry-ready graduates, there is a persistent mismatch between the skills developed in colleges and the competencies demanded by the labour market (McGrath & Akoojee, 2009; Balkrishen & Mestry, 2016; Mtshali & Ramaligela, 2022).

Employers in South Africa frequently prioritise university-qualified candidates, while TVET qualifications are inconsistently recognised in recruitment processes and job advertisements (Papier, 2017; Sithole et al., 2022). In addition, research indicates that collaboration between TVET colleges and industry remains fragmented, informal, and weak, limiting opportunities for work-integrated learning and graduate transition into employment (McGrath & Akoojee, 2009; Buthelezi, 2018; Mtshali, 2021). These challenges reflect weak institutional coordination and misaligned stakeholder expectations between TVET colleges and labour-market actors, rather than isolated organisational failures.

As a result, a persistent structural gap exists between graduate training and labour-market expectations (Khambule, 2019; Mesuwini & Bomani, 2021). While numerous studies have examined employability from the perspectives of students or institutions (Adams, 2019; Okolie et al., 2020), there is limited research that integrates the perspectives of college managers, municipal employers, and industry partners at local level, despite their central role in shaping graduate employment pathways (Mesuwini & Bomani, 2021; Ndlovu & Van Wyk, 2023). This gap highlights the need for a conceptual framework that explains how structural, institutional, and relational factors interact to shape the employability of TVET civil engineering graduates.

The implications of this persistent misalignment are significant. When graduates remain unemployed despite obtaining recognised civil engineering qualifications, the return on public investment in the TVET sector is undermined and local infrastructure development capacity is weakened (Papier et al., 2016; Khambule, 2019). For graduates, prolonged unemployment reinforces social and economic vulnerability, limits career progression, and contributes to loss of motivation and skills erosion (Sithole et al., 2022). For municipalities and industries, shortages of

appropriately utilised TVET graduates reduce the availability of technically trained personnel required to support service delivery and construction projects (Buthelezi, 2018; Mtshali, 2021).

At a systemic level, weak stakeholder collaboration and inconsistent qualification recognition perpetuate inequality, deepen youth unemployment, and prevent the TVET sector from fulfilling its national development mandate (Balkrishen & Mestry, 2016; Lolwana, 2016).

Addressing this problem is directly aligned with both global and national development agendas. At global level, the study contributes to Sustainable Development Goal 4, which emphasises equitable access to quality technical and vocational education, and Sustainable Development Goal 8, which promotes productive employment for young people (ILO, 2019). Nationally, improving the employability of TVET civil engineering graduates supports the strategic objectives of South Africa's National Development Plan (NDP 2030), particularly its focus on expanding technical skills, strengthening the TVET sector, and improving youth employment outcomes (NPC, 2012; DHET, 2013a). By examining the systemic, institutional, and relational barriers that limit graduate employability, this study responds to urgent national priorities in skills development, infrastructure growth, and inclusive economic participation.

1.5. Research questions

To address these issues comprehensively, the study was guided by three research questions, The research questions for this study were:

- 1.5.1. What are the perspectives of college stakeholders on the employability of TVET college civil engineering graduates?
- 1.5.2. How and why do such perspectives manifest or prevail among the college stakeholders?
- 1.5.3. How can the college stakeholders effectively contribute towards enhancing the employability of TVET college civil engineering graduates?

1.6. Research objectives

The objectives of this study were to:

- 1.6.1. Understand the perspectives of college stakeholders on the employability of their civil engineering graduates.

1.6.2. Identify how and why such perspectives manifest or prevail among the college stakeholders.

1.6.3. Discern how the college stakeholders effectively contribute towards enhancing the employability of TVET college civil engineering graduates.

1.7. Motivation of the study

When I applied for this qualification, I was employed as a campus manager, a role I assumed in April 2019 after 14 years in the TVET sector. My experience included serving as Head of the Department of Engineering Studies, as a senior lecturer in the engineering department, and as a lecturer. Through these roles, I developed a sustained interest in the functioning of TVET colleges and their contribution to skills development.

For the purposes of this study, I focused on exploring the perspectives of college senior managers and employers as key stakeholders in shaping the employability of the TVET civil engineering graduates. My experience as a campus manager provided insight into the organisational and operational systems of TVET colleges, including enrolment planning, teaching and learning processes, quality assurance practices, and stakeholder engagement. This position enabled me to observe how institutional decisions and external relationships influence graduate outcomes.

Rather than positioning my role as exceptional, this study emerges from practical exposure to the everyday challenges of aligning training provision with labour-market expectations. My professional experience informed the research focus while maintaining a commitment to analytical distance and scholarly rigour.

I have engaged with other campus managers to exchange institutional practices and have participated in initiatives aimed at strengthening partnerships with industry, particularly at campus level. I have also attended Integrated Development Plan (IDP) forums hosted local municipalities and interacted with local industries regarding student placement and employment opportunities.

However, my experience has also exposed persistent challenges within the system. These include limited student placement opportunities for workplace-based learning relative to graduate output, constraints in developing adequately resourced practical workshops, difficulties in recruiting professionally qualified lecturers, infrastructure limitations, and reluctance among some industries

to employ TVET college graduates. These experiences shaped my interest in examining how college senior managers and employers understand and respond to the employability of TVET civil engineering graduates.

1.8. Context of the study

The term technical vocational education and training (TVET) or vocational education and training (VET) is used interchangeably by many countries such as the United States, United Kingdom, and India (UNESCO, 2012). Some countries only use VET, whilst others only use TVET. However, according to the United Nations Educational, Scientific and Cultural Organisation (UNESCO) (2012), these terms have the same meaning, although their use varies from one country to another. UNESCO (2012) reports that TVET is the suitable term for institutions that provide skills development and competence for employability. Hence, in the context of this study, the term “TVET” is used consistently as a vehicle to provide skills development and competence for the employability of TVET civil engineering graduates.

Globally, TVET is increasingly recognised as integral to education and workforce development strategies, with international organisations such as the G20, the organisation for economic co-operation and development (OECD), the international labour organisation (ILO), and UNESCO highlighting its importance (OECD, 2019; ILO, 2019). For instance, the G20 takes the view that TVET colleges are formed by countries under institutions of higher learning to ensure a sustainable increase of skills development and competence for employment (McGrath et al., 2020). This is the same view as the OECD, which believes that skills development will increase employment, thus stimulate the country's economy and reduce poverty. For the purposes of this study, TVET colleges are public institutions within the DHET, their aim being to provide skills development and competence to enhance the employment of South African youth and adults (DHET, 2013a).

In SA, TVET colleges were formally established through the Further Education and Training (FET) Act 98 of 1998, aiming to address socio-economic disparities by providing employable skills aligned with national socio-economic needs, enhancing employment in local communities, and reducing poverty (DHET, 2013a; DHET, 2019). These institutions are strategically located within local municipalities to enhance regional and local economic development through skills development (DHET, 2013b). This supports the National Development Plan's vision of facilitating job placements for 30,000 unemployed youth by 2030, positioning TVET colleges as crucial

vehicles for skills development and economic transformation within municipalities (DHET, 2013a).

TVET colleges provide theoretical and practical training in different fields of study and offer technical and vocational skills to citizens to help them cope with the ever-changing technology, the economy, and the social environment (DHET, 2013a). The college sector is thus used to integrate education and training to ensure that graduates are ready for the labour market (Khirotadin et al., 2019). The colleges serve dual purposes: providing industry-relevant practical skills across sectors such as engineering, construction, hospitality, and agriculture, while preparing students for labour market demands and promoting lifelong learning (Mesuwini et al., 2020). The TVET system promotes personal, social, and economic development by producing intermediate- to high-level skills for graduates, facilitating the transition from graduate to work and developing an autonomous lifelong learner (Nugraha & Komaro, 2018).

TVET programmes are categorised into full-time, part-time, and distance learning options, catering to diverse student backgrounds and needs, with full-time students generally funded by the National Student Financial Aid Support (NSFAS) if they meet certain criteria (Bosiu, 2024). South African TVET institutions primarily offer two qualification streams: NC(V) and NATED. The NC(V) includes both foundational subjects (e.g. English, Life Skills, and Mathematics) and vocational specialisations, aiming to equip students with industry-relevant skills (Mabunda, 2018; Mtshali & Ramaligela, 2022). NATED qualifications, or Report 191, span 36 months, combining theoretical modules and practical in-service training, which is essential for students to qualify for their diplomas (Buthelezi, 2018; Jansen, 2020).

In this study, the selected TVET college is located within a rural area in KwaZulu-Natal, South Africa. The college operates within the regulatory framework of the DHET and serves communities characterised by high youth unemployment and limited industrial diversification. Civil engineering programmes offered at the college are intended to respond to local infrastructure development needs and municipal service delivery demands. The surrounding municipalities and civil engineering firms represent the primary labour market destinations for graduates from this institution. Understanding the contextual realities of this localised TVET college—municipality—industry ecosystem is therefore essential to examining how stakeholder perspectives shape the employability trajectories of TVET civil engineering graduates.

1.9. Theoretical frameworks of the study

This study was framed by three complementary theoretical perspectives: Human Capital (HC) Theory, Institutional Theory (IT), and Stakeholder Theory (ST). These theories were selected to provide a structured lens through which the employability of TVET civil engineering graduates could be examined from the perspectives of college stakeholders.

Human Capital Theory (Becker, 1964) posits that education and training enhance individuals' productivity and increase their economic value in the labour market. The theory asserts that investment in knowledge and skills improves workers' employability and contributes to organisational and national economic development. In this study, HC Theory posits the analysis of how TVET colleges equip civil engineering students with technical and practical competencies intended to enhance their employability. It provided a basis for examining whether the education and training offered by TVET colleges translated into labour-market value from the perspective of employers and institutional stakeholders.

IT explains how organisational behaviour is shaped by formal structures, policies, norms, and broader socio-economic pressures (Cai & Mehari, 2015). The theory asserts that organisations operate within institutional environments that influence their decisions and practices. In this study, IT framed the examination of how TVET colleges, municipalities, and civil engineering companies were influenced by Department of Higher Education and Training (DHET) policies, regulatory frameworks, labour-market conditions, and socio-economic expectations. It enabled the study to analyse how external pressures and institutional mandates shaped stakeholder perspectives on graduate employability.

ST defines stakeholders as individuals or groups who can affect or are affected by the achievement of organisational objectives (Bosse et al., 2009). The theory asserts that effective collaboration among stakeholders enhances organisational outcomes. In this study, ST framed the relationships between college senior managers, municipal managers, and civil engineering company managers as interconnected actors within the employability ecosystem. It guided the analysis of how collaboration, expectations, and shared responsibilities influenced the employment pathways of TVET civil engineering graduates.

Collectively, these three theoretical perspectives informed the development of the study's conceptual framework. HC Theory illuminated the role of skills and competencies at the individual level; IT highlighted structural and policy influences at the organisational and systemic levels; and ST emphasised relational dynamics and collaboration across institutions. Their integration provided a multi-level explanatory lens through which the employability of TVET civil engineering graduates was analysed.

A detailed discussion of each theory, their key concepts, critiques, integration, and methodological alignment is presented in Chapter Three

1.10. Research design and methodology

I used a qualitative research design to undertake this study. For this reason, I studied individual participants in their natural settings—a TVET college, municipalities, and a civil engineering and construction company—to collect reliable and valid data. I wanted to identify how their present and past work experiences and services in their institutions are shaped by the context of their lives. The context of their lives is the social, economic, cultural, or physical context in which they live (Creswell, 2012).

A qualitative approach was selected because the study sought to generate an in-depth understanding of how college stakeholders interpret, construct and negotiate meanings around the employability of TVET civil engineering graduates. These forms of insights cannot be captured adequately through numerical patterns or survey-based measurements. While a mixed-methods design may have offered breadth, it would not have enabled the deep interpretive engagement required to uncover institutional norms, relational dynamics, legitimacy pressures, and stakeholder reasoning (Creswell, 2012). The qualitative approach therefore aligns with the interpretive paradigm guiding the study and allows for nuanced analysis of the complex human, institutional and contextual factors that shape employability outcomes.

A single case study research design and interpretive research paradigm was used as the most suitable research method to gain a deeper understanding of the perspectives of college stakeholders on the employability of TVET civil engineering graduates. My rationale for adopting single case study research was that it involves an in-depth examination of a single individual, group, organisation, or event to understand a particular phenomenon (Yin, 2009). The objective was to

investigate and capture the circumstances and conditions of an everyday common place situation. This single case study was represented by a TVET college, municipalities and a civil engineering and construction company as institutions.

In this study, the research design and research approach occupy related but distinct roles. The research design refers to the overall structural plan of the study – specifically the qualitative case study strategy that outlines how data were generated, organised and analysed. The research approach, by contrast, reflects the broader interpretive paradigm that informs how meaning is constructed from participants' experiences. Clarifying this distinction strengthens methodological coherence by showing that while the qualitative design provides the procedural structure for the study, the interpretive approach guides the analytical lens through which stakeholder perspectives were understood (Yin, 2009).

Valid information gathered is based on the experiences and the lessons learned from these cases that are assumed to be informative about the experiences of the average institution (Yin, 2009). This case study design was descriptive and interpretive in nature. In a descriptive and interpretive case study, the researcher must analyse, interpret, and theorise data collected against the backdrop of a theoretical framework (Creswell, 2012). Data were collected in the form of semi-structured interviews, focus groups, and document review which involved a set of pre-designed open-ended questions. Questions and topics that needed to be covered were used as a guide during the semi-structured interviews and focus groups (Yin, 2009).

Purposeful sampling was used by a researcher primarily to obtain data and to become oriented with the subject of the study as well as to gain a comprehensive understanding of the context. It also enables the researcher to make specific choices about which people to include in the sample: participants who are easily accessible, thereby reducing travel costs, and participants who possess specific knowledge relevant to the research. Similarly, the purposeful sampling method allows the researcher to interview key individuals, thus facilitating the gathering of holistic data to answer the research questions (Yin, 2009).

A purposeful and convenient sample of participants who would best provide the desired information was selected. This sample consisted of three college senior managers from one TVET college, three municipality managers from each of five municipalities, and three managers from a civil engineering and construction company. Interviews for this group were conducted in the

participants' individual institutions. Fifteen separate interviews were conducted. Two separate focus groups were conducted to enable the participants to share their ideas. Creswell (2012) maintains that all participants should be encouraged to talk. Face-to-face interviews were conducted during the second term. Sixty minutes was given to all the participants, enabling them to respond to the interview questions and to air all their views.

Data collection involved gathering audio data through individual interviews and focus group discussions. Information gathered was audio-recorded and transcribed, reflecting the participants' responses. Permission to record was granted by the participants in writing. I also took notes to confirm the relevance of the data recorded. Data were reviewed to ensure accuracy. All audio data were transcribed and analysed into codes and themes, following thematic analysis procedures.

1.11. Ethical considerations

Ethical clearance was granted by the university of KwaZulu-Natal's humanities and social sciences research ethics committee on 02 December 2023. Gatekeeper permission letters addressed to the TVET college, municipalities, and civil engineering and construction company were then formulated and delivered by email; their addresses identified from their respective web pages. Responses were received from the TVET college, municipalities, and the civil engineering and construction company to participate in the study, and the institutions routed me to their respective relevant managers whom I would interview. Upon receipt of this confirmation, arrangements were made with the relevant managers either directly or via their personal assistants. The participating institutions were given the assurance via the gatekeeper permission letter that they would be able to withdraw at any time without incurring any penalties. The confidential information received during the interviews did not influence the data and analysis of this study. Participants were assured that recordings and transcripts would be securely stored in at least three separate venues. They were also assured that the transcripts, once finalised, would be made available to them to check their validity. These transcripts were mailed to participants to review, provide input, correct as necessary, and verify that what had been discussed remained accurate. The feedback received from some of the participants was addressed. While the names of the institutions were recorded, the identity of the interviewees remained anonymous; they were referred to as participants. This study has adhered to all research ethics guidelines as stipulated in the UKZN guideline documents.

1.12. Limitations of the study

This study has several limitations that should be acknowledged. Firstly, although a growing body of research exists on TVET globally and in Africa, relatively fewer empirical studies focus specifically on the South African TVET college sector (Balkrishen & Mestry, 2016; Lolwana, 2016; Adams, 2019; Mesuwini et al., 2020). This limited availability of locally grounded literature constrained the depth of South Africa-specific evidence in the literature review.

Secondly, the study was conducted during a period in which many TVET colleges were undergoing institutional restructuring in relation to staffing, governance arrangements, and post-provisioning norms (Buthelezi, 2018; DHET, 2019). These transitional conditions may have influenced institutional practices and participant responses.

Thirdly, time and financial constraints limited the geographic scope of the study and restricted data collection to a small number of sites.

Fourthly, the study was conducted at a single TVET college located in a rural context. Since labour-market conditions and institutional dynamics may differ in urban settings, the findings may not be fully representative of colleges located in metropolitan areas (Mabunda, 2020; Mtshali & Ramaligela, 2022).

Fifthly, a key limitation of this study is that the majority of participants occupied managerial or supervisory positions within TVET colleges, municipalities, and a civil engineering firm. This created what can be described as a “managerial gaze”, whereby findings are shaped by the interpretations, interests, and priorities of institutional actors who hold decision-making authority. This positioning reflects the institutional and stakeholder power dynamics discussed in this study (Bosse et al., 2009; Buthelezi, 2018; Mesuwini & Bomani, 2021; Ndlovu & Van Wyk, 2023).

Rather than treating this as a bias to be minimised, the study leveraged this standpoint analytically, as managerial perspectives provide insight into how institutional norms, organisational expectations, and policy pressures shape employability trajectories within the TVET system (Buthelezi, 2018; Mesuwini et al., 2020; Mesuwini & Bomani, 2021). Recognising this managerial gaze therefore strengthened the study by revealing how authority, institutional structures, and stakeholder relations influence employability outcomes for TVET civil engineering graduates.

1.13. Delimitations of the study

Creswell and Poth (2018) define delimitations as the limitations consciously set by the authors themselves. The delimitations are concerned with the definitions that researchers decide to set as the boundaries or limits of their work so that the study's aims and objectives do not become impossible to achieve. In this respect, it can be argued that delimitations are under the researcher's control (Creswell & Poth, 2018). Thus, delimitations are concerned with the study's theoretical background, objectives, research questions, variables under study, and study sample. The following delimitations applied to this study. This study was confined to exploring college stakeholders' perspectives on the employment of TVET civil engineering graduates. Data were collected from only three senior managers from the academic unit of the TVET college; two engineering managers and one HR manager from each of the five municipalities; and civil engineering manager, project manager and HR officer from the civil engineering and construction company. Data were not generated from the TVET college senior managers in the finance unit, corporate services unit, and registration unit or from all the municipality managers or all the civil engineering and construction company managers as these stakeholders were unlikely to provide relevant data.

1.14. Significance of the study

The role of college stakeholders is significant during this period of transformation, as they are central to providing TVET civil engineering graduates with the skills and employment opportunities required to reduce unemployment and poverty. The findings of this study present selected college stakeholders' perspectives on the employability of TVET civil engineering graduates.

The findings support Khambule's (2019) assertion that collaboration between TVET colleges and industry is instrumental in enhancing graduates' employability and reducing poverty and unemployment rates. TVET colleges are required to provide relevant skills development aligned with industry needs. This includes developing and updating curricula in accordance with labour market requirements. At the same time, industries play a critical role in creating employment opportunities for TVET graduates and recognising TVET qualifications in recruitment processes.

This study contributes to broader professional and policy discussions by informing decision-makers within the DHET, supervisors, communities, and other stakeholders about stakeholder perspectives on graduate employability. The findings provide insight for policymakers on curriculum development, institutional capacity building, and policy design aimed at strengthening employability outcomes for TVET civil engineering graduates.

Furthermore, the study contributes to ongoing debates on how TVET colleges and industries can strengthen partnerships to improve graduate employment opportunities. The findings highlight the importance of shared expectations, institutional coordination, and continuous curriculum responsiveness to technological and labour market changes. The study therefore provides practical and conceptual contributions toward improving collaboration and employability outcomes in the TVET civil engineering sector.

1.15. Definitions of the key concepts

Below I provide working definitions of key concepts applied in this study.

Technical Vocational Education and Training (TVET) refer to the vocational or occupational nature of programmes designed to prepare learners for a specific job, a few employment possibilities, or for self-employment. TVET colleges equip young people with the skills, knowledge, and attitudes needed by the labour market through delivering a relevant and demand-driven curriculum. These colleges serve young people who want to enrol for vocational programmes after Grade 9 or after finishing school with a Grade 12, as well as learners who want to complete their schooling (Mabunda, 2020).

The **National Vocational Certificate ((NC(V))** is a programme qualification that is offered at the TVET colleges. An NC(V) qualification, offered at levels 2, 3 and 4 on the National Qualifications Framework (NQF), is awarded to students who comply with the national policy requirements set out in the policy document, National Certificates (Vocational): Qualifications at Levels 2 to 4 on the National Qualifications Framework (NQF), as promulgated in Government Gazette No. 28677 of 29 March 2006 (RSA, 2006). The report on the national examinations (Khambule, 2019, p. 5) outlines that “the NC(V) programmes are intended to respond directly to the priority skills demands of the modern South Africa economy by exposing students to high skills and knowledge.”

The **National Accredited Training Education Diploma (NATED or R191)** programmes are offered at TVET colleges. These courses use both theoretical and practical teachings to give students the best career-based learning. The programmes are offered at levels N4–N6. At the end of N6, students are required to complete the 18 months’ work experience to be eligible for a national (N) diploma (Buthelezi, 2018).

The **South African Qualifications Authority (SAQA)** was established in terms of section 3 of the South African Qualifications' Authority Act of 1995 (Act No. 58 of 1995) and manage the registration of qualifications, including the NC(V) and/or R191 (Nkalane, 2018).

Umalusi validates the setting of standards and assessments as well as the management of the quality assurance process of the NC(V) qualification. The Umalusi Council for Quality Assurance in General and Further Education and Training was established in terms of the General and Further Education and Training Quality Assurance Act of 2001 (Act No. 58 of 2001) (Khambule, 2019).

The **Quality Council for Trades and Occupations (QCTO)** is a quality council established in 2010 in terms of the Skills Development Act (Act 97 of 1998) as amended in 2008. The QCTO also offers guidance to skills development providers and assessment centres who must be accredited by the QCTO to implement occupational qualifications (Nkalane, 2018).

The **National Qualifications Framework (NQF)** is a system that is used to determine which level of qualification or qualifications students have achieved. The higher the NQF level, the higher the qualification. The NQF is aimed at ensuring that each student gets the opportunity to enhance their personal development by moving from one NQF level to the next (Adams, 2019).

The **Curriculum** is the study of all educational phenomena. It may draw on any external discipline for methodological help but does not allow the methodology to determine inquiry (Nkwanyane et al., 2020). In the TVET context, the curriculum is defined as what is taught at the TVET college in each course or subject. The curriculum is referred to as an interactive system of instruction and learning with specific goals, contents, strategies, measurement, and resources. The desired outcome of the curriculum is the successful transfer and/or development of knowledge, skills, and attitudes (Ismail & Mohammed, 2015).

According to Khambule (2019), a relevant TVET curriculum should provide students with the opportunity to develop vocational skills in their chosen occupations (Nkwanyane et al., 2020). For

this reason, TVET colleges must ensure that the vocational curricula offered are relevant and respond to labour market requirements. To ensure that the TVET curriculum remains relevant with regard to the labour market changes, continuous renewal and constant involvement of the labour market in the redesign process is required (Affandi et al., 2024).

Employability refers to an individual's ability to gain and/or maintain employment (Adams, 2019).

Employment refers to an individual having a job (Affandi et al., 2024).

Employability skills are a set of skills that, when developed, make graduates more likely to gain employment in their chosen careers. There are three equally important types of employability skills, namely core skills, generic skills, and personal attributes (Okolie et al., 2020).

A **Municipality** is a basic unit within the governmental sphere responsible for the provision of basic services to its residents. Thus, a municipality plays a significant role in improving the quality of life of the inhabitants (Chauke, 2023).

A **Labour Market** refers to the supply of and demand for labour, for which employees provide the supply and employers provide the demand (Adams, 2019). In addition, a labour market is a place where workers and employees interact with each other. In a labour market, employers compete to hire the highly employable skilled workers, and the workers compete for the most satisfying jobs (Ndlovu & Van Wyk, 2023).

Leadership: Nzembe (2017) defines leadership as the process of influencing employees to get them to perform in such a way that organisational goals can be achieved. According to Bryman (2007), leadership can be defined as influencing people so that they come to share common goals, values, and attitudes, and work more effectively towards the achievement of the organisation's vision. Furthermore, leadership is not a person or a position; it is a complex moral relationship between people, based on trust, obligation, commitment, emotion, and a shared vision of the good that works towards the achievement of the organisation's objectives (Bush, 2008).

For this study, I perceived leadership as a process of influencing college stakeholders to stimulate the moral relationships, trust, obligation, attitudes, behaviours, and shared vision towards the enhancement of TVET civil engineering graduates. College stakeholders are not only expected to

encourage or inspire people but also to influence and develop a college culture which will enable a TVET college to achieve its organisational goals.

Management: The process of management consists of six basic functions; a manager uses these functions to achieve the organisation's goals and objectives of planning, organising, directing, coordinating, evaluating, and controlling (Bush, 2008). Buthelezi (2018) defines management as a process that involves the arrangement and deployment of systems that ensure the implementation of policies, a set of integrated practices to achieve goals. Similarly, Bush (2006) refers to management as maintenance of organisational arrangements to effectively achieve goals.

The college stakeholders in their institutions are required to apply management practices to plan and apply the strategies that can help their organisations achieve their goals. The strategies include employing qualified graduates in professional positions to ensure the delivery of high-quality work that is required. The college stakeholders also delegate, arrange, assess, and evaluate whether the staff's delegated duties have been achieved in order to enhance quality.

1.16. Structure of the thesis

Below I provide brief accounts of what each chapter entails:

1.16.1. Chapter One

This chapter provides an introduction and orientation to the study. The chapter covers the introduction, background, problem statement, purpose of the study, significance of the study, motivation of the study, context of the study, research questions of the study, and the structure of the thesis. Leadership and management are also defined in this chapter as the key concepts of the study.

1.16.2. Chapter Two

Chapter Two provides the review of the literature in both the international and South African TVET college context. This chapter reveals what literature is available about the TVET college graduates' employment. The conceptualisation of employability skills is undertaken. Moreover, this chapter explores how TVET college stakeholders' perspectives are understood and some of the college stakeholders' perspectives that impact the employability of TVET college civil engineering graduates in SA are explored.

1.16.3. Chapter Three

In Chapter Three, I provide the three theoretical frameworks that were applied in this study. Human capital theory, institutional theory, and stakeholder theory were amongst the theories identified and discussed in this study.

1.16.4. Chapter Four

In this chapter I provide an outline of the research design, research approach, methods, instruments, sample, and sampling procedures used in the research. The data analysis procedures and ethical considerations, as well as the limitations of the study are also discussed.

1.16.5. Chapter Five

Chapter Five provides a presentation and analysis of the findings obtained in this study. The chapter begins by profiling the college stakeholders who participated in the study. (All participants and institutions where the study was conducted were given pseudonyms to ensure anonymity.) Lastly, I provide the data presentation and analysis of Part One, which seeks to answer the first research question.

1.16.6. Chapter Six

This chapter provides the data presentation and analysis of Part Two. Part Two of the data analysis is presented in themes in a way that seeks to answer the second and third research questions of this study.

1.16.7. Chapter Seven

In Chapter Seven, I present the discussion of the study and seek to answer the key research questions of the study. This is presented sequentially according to the dimensions aligned with each research question.

1.16.8. Chapter Eight

This chapter provides a summary of the study, outlining the content of each preceding chapter. The conclusion is then presented, based on the findings of the study discussed in Chapters Five and Six, followed by the study's contributions to knowledge. Finally, the recommendations are presented.

1.17. Chapter summary

This chapter introduced the study and provided a background to the study. The introduction briefly explained the state of employability of TVET college graduates in SA and what is expected after students graduated. It also presented the background, motivations for the problem statement, and the study's research questions to provide a clear understanding of how, where, and why the study was conducted. The chapter also offered a structure of the thesis to guide the reader on what to expect in subsequent chapters. In the next chapter, I present the literature review on TVET colleges in a national and global context and discuss the employability of TVET civil engineering graduates.

CHAPTER TWO

LITERATURE REVIEW

2.1. Introduction

This chapter presents the literature review focusing on the employability of TVET civil engineering graduates. Firstly, a synopsis of TVET colleges and their role in South African higher education is provided. Secondly, the review examines the relationship between the employability of civil engineering college graduates and the South African labour market. Thirdly, the chapter discusses the leadership and management roles of the college stakeholders on the employment of TVET civil engineering graduates. Lastly, research gaps are identified, followed by a chapter summary.

The review of literature in research, according to Maree (2011), is aimed at facilitating theory development, the close areas where a surplus of research exists and to discover fresh areas where innovative input is required. Maree (2011) also defines the review of literature as the use of ideas in the literature to justify the approach to the topic, the selection of the method and a demonstration that the research will contribute something new to the body of knowledge. In line with the purpose of this study, which is to understand the stakeholders' perspectives on the employability of TVET civil engineering graduates, an overview of the stakeholders' perspectives on employability of TVET civil engineering graduates and reasons for the existence of the perspectives are presented in the review of literature.

In this study, I sought to address the following major research questions: *What are the perspectives of college stakeholders on the employability of TVET college civil engineering graduates? How and why do such perspectives manifest and prevail among the college stakeholders? How can the college stakeholders effectively contribute towards enhancing the employability of TVET college civil engineering graduates?* Furthermore, the empirical and conceptual literature reviewed in this chapter was sourced from books, journals, theses, conference proceedings, databases, and other relevant material. Cai and Mehari (2015) point out that there are two types of literature: conceptual literature, which refers to concepts and theories; and empirical literature, which discusses studies related to the variables of the current study. This chapter is organised around the themes of the research questions and key variables of the underlying research problem.

2.2. Identification of TVET colleges

Khivotdin et al. (2019) concur with Ndlovu and Van Wyk (2023) that education, skills, and knowledge have become causal factors of a person's and a nation's productivity in this century. It is now even meritorious for one to declare it an "age of human capital" in the sense that the primary causal factor of a country's standard of living is how well it succeeds in evolving and employing the skills, knowledge, health, and habits of its population (Tikly, 2013, p. 3). However, this human capital development is determined by the calibre of a nation's formal education; that is, the better and higher the quality of a nation's education, the higher is its human capital development (UNESCO, 2012). That is why international organisations such as the ILO, UNESCO, and the World Bank endorse the quality of education, with a particular emphasis on vocational education for economic and social development purposes. For instance, international organisations such as the ILO, UNESCO, and the World Bank emphasise the role of education and skills development in achieving sustainable economic and social development. This emphasis is reflected in the Sustainable Development Goals (SDGs) adopted by the United Nations in 2015. SDG 4 aims to "ensure inclusive and equitable quality education and promote lifelong learning opportunities for all," while SDG 8 promotes sustained, inclusive economic growth and productive employment (United Nations, 2015, p. 14). These goals underscore the importance of vocational education and training systems in developing relevant skills for employment and national development. Hence, UNESCO (2016) asserts that countries must establish institutions that provide education and training to strengthen human capital and stimulate economic and social development.

Several countries in this 21st century have embraced vocational education as an appropriate strategy for human capital development (Adams, 2019). A vocational school or vocational college is a post-secondary educational institution designed to provide vocational education or technical skills required to perform the tasks of a particular job, or which offer instruction and practical introductory experience in skilled trades such as mechanics, plumbing, carpentry, construction, businesses, and information technology (Hoai Le et al., 2022). Vocational education is part of higher education and training institutions that provide accredited training in job related and technical skills covering a few careers and industries (Khambule, 2019). In the context of UNESCO (2012), the vocational education offered by countries in 21st century is known as TVET institutions, which are responsible for providing vocational education and training to countries according to their socio-economic needs (UNESCO, 2012).

Economically, countries are classified as developed or developing based on their gross domestic product (GDP) and high development index (HDI) (David et al., 2018). For instance, a developed country is a sovereign state with a highly developed economy and advanced technological infrastructure in relation to those less industrialised states. Such countries have high per capita incomes based on GDP, a prominent level of industrialisation with advanced technologies, and a high HDI. They also feature a high of standard of living, higher life expectancy and the service sector dominates the economy. Examples of such countries include Australia, Germany, France, Canada, Italy, Japan, South Korea, Spain, the United Kingdom, and the United States of America (David et al., 2018).

A developing country is any country or state with a less developed industrial base, low HDI, and low GDP. Developing countries are those that have not yet achieved a significant level of industrialisation relative to their populations and have a low to medium standard of living and low-income levels (David et al., 2018). Examples include most African countries (apart from the Seychelles and SA), Albania, Brazil, Georgio, Vietnam, Romania, Moldova, and Ukraine. Although there is no universally agreed upon criterion for categorising developed or developing countries, international organisations like the World Bank, United Nations (UN), and International Monetary Fund (IMF) use the economic criterion in grouping countries (David et al., 2018).

In both developed and developing countries, there is consensus that TVET institutions are to provide vocational education and training employable skills to enhance employability (Buthelezi, 2018). According to Mseleku (2022), the high rate of youth unemployment is a global concern, which unfairly impacts developing countries due to poor-quality education systems, particularly the quality of vocational education, often resulting in a mismatch between vocational programmes and labour market needs. So, most countries have established TVET institutions to provide employability skills to the ever-changing technology and skills to their society with a view to enhancing employability in their countries (Kamaruzaman et al., 2023).

For this reason, this study aims to explore the perspectives of college stakeholders on the issue of employability of TVET college civil engineering graduates. The study examines how TVET civil engineering graduates' vocational education and training contributed to enhancing employability in SA. To undertake this discussion, below I present a review of literature on the identification of TVET colleges in the global context.

In line with the above, it is important to know the definition of the TVET system. According to UNESCO (2012, p. 14), TVET is a learning system in which both “soft” and “hard” skills have evolved within a “joined up”, integrated involvement and carriage framework that seeks to better societal lives, promote inclusion into the world of work and support community and individual agency. Similarly, Sithole et al. (2022) define TVET as that aspect of education that leads to acquisition of practical and applied skills as well as basic scientific knowledge. Furthermore, the second definition emphasises the acquisition of practical and applied skills which are associated with horizontal and everyday knowledge (Buthelezi, 2018; Nkwanyane et al., 2020). Therefore, according to the definitions, the TVET system is meant to focus on student knowledge building (what) and further the transfer of such knowledge to skills (how) for technical application and problem solving to enhance student competency and capabilities for participation in the economy. However, the two definitions have omitted the ‘why’ reflection, which addresses the individual needs and identity. The literature suggests that technical education development contributes to the identification and enhancement of students’ personal talents; thus, being in a better positioned to sustain their own family financially (Nkwanyane, 2023). Furthermore, the TVET college system is divided into occupational directed (for example apprenticeship training and learnerships) and vocational discipline (NC(V) and NATED streams) pathways (Mtshali, 2021). The role of the TVET college system in a developmental state is unquestionable (Sithole et al., 2022). However, the TVET mandate must be clearly stated in order to guide the enacted and attained curricula for relevance to both society and industry (Nkwanyane, 2023).

2.2.1. Identification of TVET colleges at global level

Based on the literature, most countries, both developing and developed countries have identified VET colleges for skills development amongst the youth and adults in education (Paryono, 2017; Mabunda, 2020; Mesuwini et al., 2020; Nkwanyane et al., 2020). For instance, Mesuwini et al. (2020) mention that developing countries like Bangladesh, Burkina Faso, Brazil, Uganda, Sri Lanka, Vietnam, South Sudan, Central Africa Republic, and Cuba have identified TVET colleges as a solution to provide young people with employable skills to gain better chances of employment in the labour market. According to Paryono (2017), TVET colleges are aimed at tackling the global challenge of the high unemployment rate in most countries. TVET colleges in the developing countries were established to provide skills development that enable the countries to enhance their economic growth and reduce poverty.

Similarly, developed countries like Germany, France, Italy, and Japan, have identified TVET colleges as institutions that provide young people with skills development to maintain to economic growth and reduce unemployment in their countries (Nkwanyane et al., 2020). According to UNESCO (2012), a government expects TVET colleges to provide skills development in accordance with the economic needs of their country. This view is supported by Sithole et al. (2022), who state that TVET colleges are designed to provide the skills development that enables the youth, and adults enter the job market with a view to uplifting their economic status.

The identification of TVET colleges as a solution to the problem of providing employable skills to address unemployment, poverty and socio-economic needs has been supported by different organisations like UNESCO, the OECD, the World Bank, the IMF, and ILO (Mesuwini et al., 2020). These organisations have provided needy countries with funds, and other mechanisms as support systems to ensure that they establish TVET colleges (Mesuwini et al., 2020), and many countries, including developing countries particularly in Africa, have benefitted from these organisations' support (UNESCO, 2012). Sithole et al. (2022) mention that UNESCO, on revisiting the global trends in TVET 2013, emphasised the prioritisation of TVET colleges in the production of the labour force to ensure economic growth through encouraging the employment of TVET graduates. In addition, the UNESCO (2016) report encourages TVET colleges industries to form a strong link to enhance employability in their countries.

The World Bank and IMF have provided loans to developing countries to improve capacity of TVET colleges to produce quality employability skills that are necessary for the labour market (Mesuwini et al., 2020). Mesuwini et al. (2020) also mention that OECD and ILO advocate for local and international policies that deliver quality education at TVET colleges and development of industries to employ college graduates.

However, in some countries such as the United Kingdom, Singapore, Ethiopia, and Ghana, parents prefer that their children study at universities instead of colleges (Nkwanyane et al., 2020); believing that, after graduating, their children are more likely to get employment than those who studied at TVET colleges (Sithole et al., 2022). Moreover, industries prefer to hire graduates from universities rather than TVET colleges, thus decreasing the appeal of TVET colleges to the public and potential employers (Paryono, 2017; Nkwanyane et al., 2020). Thus, in these countries, to

study at a TVET college is not an option because it limits opportunities for employment (Nkwanyane et al., 2020; Sithole et al., 2022).

Even though TVET colleges are not the first choice for higher education for most people, the enrolment rate for TVET colleges has been improving, as has the recognition of their graduates by industries (Mabunda, 2020; Sithole et al., 2022). This improvement can be attributed to how the curriculum has been set to align with the labour market, ensuring industry readiness for college graduates (Mabunda, 2020). For example, in countries such as Germany and Japan, TVET colleges work closely together with industries to produce graduates that are needed by the labour market in their countries. This is still hard for other countries as TVET colleges and the labour market are still not working together with TVET colleges to produce qualified labour force from TVET colleges regardless of the emphasis by their government (Nkwanyane et al., 2020).

To sum up, the TVET colleges have been established for one common global reason (Paryono, 2017; Sithole et al., 2022) to provide employability skills through vocational education and training for employment. As a result, TVET colleges have received support from different organisations to help them produce a skills workforce to enhance employability and address challenges that may hinder success to achieve their goals. Thus, UNESCO (2016) has reported an increase in employment and recognition of TVET college graduates over the years.

2.2.2. Identification of TVET colleges at South African level

The low rate of unemployment and other economic adversities in developing countries, including SA, has attracted the attention of stakeholders that include industries, government departments, and communities (Mgijima & Morobe, 2012) to work together to address the high unemployment rate. TVET colleges in South Africa have been identified as a vehicle to provide employable skills amongst youth and adults to enhance employability and reduce poverty (Balkrishen & Mestry, 2016; Lolwana, 2016; Buthelezi, 2018; Adams, 2019; Mesuwini et al., 2020; Mesuwini & Bomani, 2021). Mesuwini and Bomani (2021) note that the employability of graduates is of interest to policymakers, curriculum developers, employers, lecturers, researchers, and society in general.

There has been a transition in research into TVET colleges since they were identified. In the period of post-apartheid reconstruction (1994 to 2004), research focused on developing an understanding of the technical college sector and served to support the development of a new FET college landscape (Mgijima & Morobe, 2012). During the period of institutional reform (2004 to 2009),

research focused on various aspects of sectoral and institutional efficiency and on locating the colleges within SA's intermediate to higher level skill needs (Balkrishen & Mestry, 2016). In the third period, a period of a postsecondary landscape (2009 to the present), and against a backdrop of glaring and growing social inequities and increased poverty, the emphasis shifted to locating the FET colleges as one institution in a differentiated post-secondary education and training sector targeted at addressing youth unemployment and growing social disadvantage (Jansen, 2020).

The three phases exist as a heuristic device rather than as a historiography of clearly defined and distinct periods with marked transitions to each other (Balkrishen, 2019). Instead, aspects existing in one period are carried forth, albeit in a mutated form, into the next. The identified employable skills offered at the TVET colleges are classified as intermediate, high-level learning, and occupational directed skills programmes (Buthelezi, 2018). These skills development programmes are offered through NC(V), and NATED or R191 for intermediate and high-level learning skills (Balkrishen & Mestry, 2016). The NC(V) is offered to students who have no matric to become artisans at NQF Level 4, and R191 is for students with or without matric from Grade 9 to acquire a national N-diploma at NQF level 6 (Buthelezi, 2018). When students graduate from TVET colleges they are regarded as qualified professional artisans (Nkwanyane, 2023).

TVET colleges in SA were established in different eras. The first era is 1994 after the apartheid era. The second and last eras were post-1994 during the democratic government. Prior to the year 1994, SA, governed by an apartheid government had no TVET colleges it had an education system that had technical schools and technical colleges that were meant to provide high employable skills only to white racial groups to become artisans (Mouton et al., 2012). According to Mouton et al. (2012), 152 technical schools and technical colleges were meant to alleviate employable skills only to the white minority group whilst the black majority and other racial groups were excluded from benefitting from education and training for employment. Mouton et al. (2012) further mention that the skills development programmes were meant to ensure that only white racial groups received prominent level of employable skills, received employment in good positions in the labour market and enjoyed better salaries than any other racial groups. This education system was characterised not only by high inequality in education, but also by creating a shortage of labour force in the labour market due to the lack of employable skills to most of the South African population, particularly the non-white racial groups (Buthelezi, 2018).

Leading up to and post-1994, SA entered a new era of governance by a democratic government. In a democratic government, SA was perceived to have a higher rate of unemployment, inequality, and poverty (Mouton et al., 2012; Sheppard & Sheppard, 2012; Balkrishen & Mestry, 2016; Buthelezi, 2018; Nkalane, 2018; Mabunda, 2020; Mesuwini & Bomani, 2021). A shortage of skills for both youth and adults were amongst other things that were highlighted as a reason for the high unemployment rate and poverty in SA.

Thus, TVET colleges, which were known as FET in the national skills development strategy, were established as primary role players to provide employable skills that meet industry requirements as mandated by government, with a view to enhancing employability and eradicating poverty (Sheppard & Sheppard, 2012; Buthelezi, 2018). Subsequently, between the years 1998 and 2002, 152 technical schools and technical colleges were merged into 50 and transformed into FET colleges. The FET colleges' functions were managed and administered by the Department of Education (Balkrishen & Mestry, 2016). The merging and transitioning to TVET colleges presented challenges, one of which was that TVET colleges lacked the capacity to achieve employability skills goals (Mouton et al., 2012). According to Mouton et al. (2012) the challenges include, amongst others, the lack of qualified lecturers to teach in TVET college, lack of adequate infrastructure, lack of partnership with industries, and the outdated curriculum offered at TVET colleges.

In the year 1998 to the year 2006, NATED programmes were introduced in TVET colleges for both engineering and business studies (Mouton et al., 2012). According to Mouton et al. (2012) the NATED programmes were offered from NQF N1 to N6 plus 18 months of work integrated learning to get the NATED qualification which is known national N-diploma.

The requirements for admission to study at NATED was Grade 9, where a student would be admitted to N1, and study four subjects per level (Nkalane, 2018). Each level was a trimester for engineering studies and a semester for business studies (Nkalane, 2018). All NATED students were expected to complete N1-N6 plus 18 months of work-integrated learning (WIL) to qualify for a national N-diploma then become employable with TVET qualification (Khambule, 2019).

After the year 2002, the NATED programmes offered at TVET colleges were classified as programmes which were more focused on the theory rather than the practical aspects. This led to the phasing out of NATED programmes by 2007 (Buthelezi, 2018). Soon after, the NC(V)

programmes were introduced for engineering and business studies to fulfil employability skills needs for employment as required in the labour market (Mabunda, 2020). An NC(V) programme is a yearly programme per level from NQF Level 2 to NQF Level 4 that offers students both fundamental and vocational subjects per level (Balkrishen, 2019). According to Khambule (2019), an NC(V) student is required to complete seven subjects per level to progress to the next level.

In 2009 NATED was returned to be offered in TVET colleges (Mabunda, 2020). This was mandated by the DHET; one reason being the high influx of students that had passed matric and could not be admitted to universities (Buthelezi, 2018). After 2009, TVET colleges continued to offer both NC(V) and NATED programmes in business, engineering, and farming studies (Mabunda, 2020). All TVET colleges were encouraged to select programmes that were accredited by SAQA based on the needs of the skills required by the local community (Adams, 2019; Mabunda, 2020).

Nkalane (2018) mentions that since their introduction in 2002, TVET colleges have not been able to prioritise experiential learning as part of the qualification requirements. After the lack of experiential training for both NC(V) and NATED was identified, Adams (2019) notes that in 2012 the DHET introduced work-integrated learning for lecturers and work-based placement experience to support practical learning. Nkwanyane et al. (2020) echo similar sentiments who says that work-integrated learning and work-based placement experience were introduced by DHET for TVET colleges to assist their students to get work placement and lecturers get work-based experiential training whilst teaching, with a view to teaching relevant and current skills available in the labour market.

Since TVET colleges were established, there have been developments in the administration and management to ensure the delivery of employability skills goals are met (Adams, 2019; Mesuwini & Bomani, 2021). For instance, TVET colleges are required to develop and submit a five-year strategic plan—a framework that provides details on the goals to achieve the quality delivery of the employability skills (Adams, 2019)—for approval by the Minister of Higher Education. A strategic plan of a TVET college is a detailed document that shows how the colleges will ensure the achievement of providing employable skills goals in a five-year period (Buthelezi, 2018). After the strategic plan is approved by the minister, colleges start implementing their plans and put performance targets for each year of the five years (Adams, 2019). Every year, the DHET assesses

the college performance based on the annual performance target to check if colleges meet their targeted goals in the strategic plans (Buthelezi, 2018). In the strategic plans, TVET colleges have been showing a gradual increase in their performance on the delivery of the employability skills programmes in SA (Adams, 2019).

The TVET college discourse has long been dominated by the employability debate because the main aim of TVET colleges is to produce graduates that are workplace ready (Khambule, 2019). In 2016, in the PSET report, TVET colleges were identified as poorly performing institutions not meeting the DHET targets on producing employability skills as per their mandate (Badenhorst & Radile, 2018). Similarly, Buthelezi (2018) mentions that DHET targets were that each college is supposed to score at least 65% and/or above on their throughput, certification, and retention rates and that as no TVET college met these requirements they were identified as poorly performing. This indicates that TVET colleges have not been able to produce an adequate number of TVET graduates as required by the DHET. Amongst other reasons for deficient performance at TVET colleges, Badenhorst and Radile (2018) mention the following:

1. Inadequate DHET policies to articulate the leadership, management, and administration of TVET colleges
2. Lack of leadership and management capacity
3. Limited budget from DHET to TVET colleges to execute their mandate
4. Inadequate infrastructure and lack of resources for teaching and learning
5. High number of incompetent lecturers to teach in TVET colleges
6. Shortage of teaching staff
7. Lack of practical training of students
8. Shortage of industry partnerships to place students and lecturers for TVET practical training
9. Lack of student academic support services
10. Old curriculum delivery to students
11. High number of student attrition, absenteeism, and dropouts in TVET colleges.

Thus, White Paper PSET (DHET, 2016) developed a plan to enhance the performance of TVET colleges to strengthen the production of employability skills and enhance employment. The White Paper on PSET (DHET 2016) highlights that TVET colleges were established as institutions of

choice. These colleges tackle their challenges with a view to reach the adequate delivery of employability skills (Badenhorst & Radile, 2018; Mesuwini & Bomani, 2021; Sithole et al., 2022). According to Sithole et al. (2022), PSET identified key areas to improve the delivery of employability skills in the TVET sector as follows.

1. Strengthen the development of policies for TVET colleges.
2. Develop professional training programmes for management staff in all levels.
3. Strengthen partnership with industries to source and enhance employment of TVET college graduates.
4. Introduce a college infrastructural grant to improve the colleges' infrastructures.
5. DHET together with universities to introduce lecturer professional qualifications for TVET colleges.
6. Develop work-integrated learning programmes for TVET college lecturers.
7. Develop and strengthen student support services.
8. Increase NSFAS for students.
9. Develop students' policies on attendance.

Despite negative critiques on the performance of TVET colleges regarding student enrolment, some authors have reported an improvement (Nkalane 2018; Jansen, 2020; Mabunda, 2020; Mesuwini et al., 2020). For instance, the enrolment of students increased from 350 000 in 2016 to over 410 000 in 2019 (Mesuwini et al., 2020). According to DHET (2019), the increase in enrolment underscored the increasing importance of transferring employability skills required by industry. Mesuwini et al. (2020) state that the increasing enrolment in the TVET sector in SA showed the importance of TVET college education in the economy, especially in preparing graduates for employment.

Following the increase of the enrolment in TVET colleges, this study focuses more only on civil engineering programmes that are offered in colleges. Thus, the review of literature also specifically included civil engineering enrolments. According to Mabunda (2020), civil engineering and building construction are amongst engineering SAQA accredited programmes that are offered at TVET colleges. In TVET college programmes, civil engineering is offered in both NC(V) and NATED studies (Mtshali, 2021).

DHET has categorised employment skills for the labour market based on their scarcity, and civil engineering is categorised as one of the scarce employment skills offered at TVET colleges (Nkwanyane et al., 2020). Scarce employment skills are referred to as those occupational skills in which there is a scarcity of qualified and experienced people, currently or anticipated in the future. Either (i) such skilled people are not available or (ii) they are available but do not meet employment criteria (Mouton et al., 2012).

The DHET has put pressure on the colleges and communities to increase the number of people who are qualified artisans in civil engineering and building construction through TVET qualifications (Mtshali, 2021). Mesuwini et al. (2020) mention that after colleges had increased the number of civil engineering graduates as artisans, there had been an increase in the employment of artisans for civil engineering in South African industries. The increase in the appointment of civil engineering artisans has increased despite there being companies that do not recognise a TVET civil engineering qualification for employment in their companies (Mesuwini et al., 2020).

However, despite the increase in the employment of civil engineering artisans over the years, at the same time, there has been an increase in unemployment rates amongst TVET college civil engineering graduates. According to Mesuwini et al. (2020), this is because TVET colleges have been producing a significant number of TVET civil engineering graduates, whilst there is low rate of employment of TVET civil engineering graduates in SA. In Nkwanyane's (2023) study on TVET civil engineering, the findings indicate that the TVET civil engineering curriculum does not match with what is needed in the labour market and this leads to the low increase in employment of TVET civil engineering graduates. Thus, there is still a high rate of unemployment for TVET civil engineering graduates (Nkwanyane, 2023). As such, unemployed graduates become victims of psychological stress, which then highlights the need for the assessment of TVET colleges to better understand what can be done to improve employability of graduates and ensure industry readiness (Khambule, 2019; Nkwanyane et al., 2020; Mtshali, 2021).

Even though demographic changes, urbanisation, globalisation, technological innovation, the fourth industrial revolution (4IR), smart cities, and the macroeconomic crises at the beginning of the 21st century altered the knowledge and skills required for TVET civil engineering graduates to be absorbed by industry, education in civil engineering must be upgraded to meet the changes with a view to meeting the labour market requirements (Kintu et al., 2019; Mesuwini et al., 2020; Hoai

Le et al., 2022; Sithole et al., 2022; Kamaruzaman et al., 2023). For instance, Hoai Le et al. (2022) and Kamaruzaman et al. (2023) mention that TVET colleges and the civil engineering industry need to work in collaboration to upgrade and develop skills that are necessary in the job market, including the new skills identified by the 4IR. In their research, Kamaruzaman et al. (2023) find that 4IR has identified generic skill constructs for entry-level in civil engineering. According to Kamaruzaman et al. (2023), the 4IR generic skill constructs are: (i) communication skills; (ii) problem-solving skills; (iii) leadership skills; (iv) emotional intelligence skills; (v) creativity skills; (vi) critical thinking skills; (vii) adaptability skills; (viii) digital skills; and (ix) management skills.

Kintu et al. (2019) contend that recent challenges and occupations have been created which demanded new skills and competencies. The skills development programmes offered at TVET colleges are required to address the recent needs in civil engineering with a view to addressing the question of employability skills for labour market (Kintu et al., 2019). Thus, McGrath et al. (2020) maintain that TVET civil engineering graduates must be innovative and creative to be competitive in the current labour market.

The literature is rich filled with evidence that TVET civil engineering graduates' barriers to employment include technical skills mismatch and lack of the requisite soft skills (Sithole et al., 2022). The technical skills offered at TVET colleges in most cases are incredibly old and outdated, and do not meet the standard that is required in the labour market (Mtshali, 2021). Mtshali (2021) notes that the NATED curriculum for civil engineering graduates does not provide soft skills; thus, TVET civil engineering graduates lack the required soft skills needed in the labour market. As a result, graduates, lack the requisite skills and knowledge to seize employment opportunities in the industry.

Labour market industries also perceive TVET colleges as having aspects of the educational process involving general education, the study of technologies and sciences to attain knowledge, practical skills, and attitudes for employment in various sectors of economic and social life (UNESCO, 2012, cited in Kintu et al., 2019). Furthermore, Mtshali (2021) mentions that TVET education equips graduates with knowledge skills and competencies for sustainable employment, increased productivity, and improved quality of life.

In the South African context, DHET is responsible for TVET colleges and therefore should be responsible for presenting the TVET college mandate. However, as much as TVET colleges are

under the DHET mandate, the graduates of the TVET college system are expected to serve the labour market and society in general with employability skills and competences (Sithole et al., 2022). Thus, stakeholders outside the DHET are also significant units in deciding on the TVET college mandate content (Sithole et al., 2022). Therefore, this study seeks to present the perspectives of college stakeholders on the mandate of the TVET college system in SA with regard to the employability of TVET civil engineering graduates. The colleges stakeholders referred to in this study were college senior managers, who are part of the DHET, and municipalities and civil engineering and construction managers, who are not part of the DHET.

The Minister of Higher Education and Training, in his PSET 2013 report, indicated that NC(V) and NATED curricula are aimed to respond to priority skills demands of the democratic South African economy through exposing students to high skills and knowledge (Buthelezi, 2018). He further stated that the practical component of the NC(V) and NATED streams done by students in workplace settings gave students the chance to experience work situations during their period of study (Buthelezi, 2018). The minister further stated that NC(V) and NATED graduates should be ready to transition to higher educational institutions and, moreover, to obtain employment in their chosen trades.

Furthermore, the PSET director general (DG) posits that PSET is responsible for outcome five of the South African government 14 outcomes, which is to “produce skilled and capable workforce to support an inclusive growth path” (DHET, 2012, p. 7). Tikley (2013) alludes that the TVET college system is responsible for the human capabilities approach which is understood as instruments for developing multiple skills, attitudes, and competences. Again, capabilities are described in relation to framework, and can possibly “contribute to economic, social, political, environmental and cultural development” (Tikley, 2013, p. 4). Based on the aims of the qualification mentioned above, it is clear that the mandate of the TVET college system, according to the DHET, is to produce a proficient and skilful workforce to support inclusive economic expansion.

In addition, the TVET system is mandated to provide students with relevant skills knowledge, values, and attitudes to move to HE institutions. Similarly, the DHET minister emphasised the importance of students’ practical capabilities as a key area to enhance employment opportunities (Buthelezi, 2018). This implies that the TVET college system offers students opportunities for

self-development as part of preparation for participation in the economy. The TVET college system, if implemented effectively, may yield positive results. Thus, the best form of human empowerment is by ensuring that each citizen is educated and trained in technical and vocational skills to be able to produce goods and services for national development (Buthelezi, 2018; Sithole et al., 2022). Furthermore, UNESCO (2012) avers that education and proficiency creation results in less unemployment and more equity in employment. In addition, the economy turns out to be more fruitful, innovative, and economically viable through the presence of more a more skilled population (DHET, 2012).

Numerous studies reveal that in SA and elsewhere, TVET colleges face challenges that make it hard to deliver adequately on their mandate. The challenges include the high number of unqualified lecturers to teach at TVET colleges, lack of infrastructure for practical components, lack of industries willing to place students for their practical, and an outdated curriculum that does not meet the industry needs, which leads to TVET lecturers theorising the entire curriculum (Buthelezi, 2018; Adams, 2019; Mesuwini & Bomani, 2021). However, the goals of the South African government are to accelerate the improvement of the economy through radical economic transformation (RET) and further create social cohesion among its citizens (NPC, 2012).

2.2.3. Curriculum delivery at TVET colleges

Various scholars have distinct ways of defining the curriculum. McQuarrie et al. (2013) define a curriculum as an artefact or manuscript that incorporates facts about goals, objectives, content, teaching techniques, evaluation, assessment, and resources. Nkwanyane et al. (2020) explain that a curriculum can be expressed as either a plan for teaching or learning when viewed from the intended perspectives, or a plan of teaching when viewed from the enacted curriculum perspective. Furthermore, Mtshali (2021, p. 10) asserts that a curriculum is a “plan for teaching or learning”. Thus, in this study, a curriculum for TVET colleges is referred to as the teaching or learning plan that helps TVET college graduates to acquire skills and knowledge for employment through learning.

According to McQuarrie et al. (2013), a curriculum can be perceived from five levels: the supra level, macro level, mesa level, micro level, and nano level. For instance, the supra level is international; furthermore, examples may be educational and training instructions and resolutions from UNESCO to member states, common international framework of reference for TVET

colleges, climate change and United Nations resolutions for interventions and responsibilities of member states. The macro level is national. Examples are curriculum plans, national vision and strategic goals, curriculum frameworks, subject and assessment guidelines, national external assessment plans, monitoring and evaluation tools, and the NC(V) and NATED curriculum. The meso level takes place at TVET college level, for instance, syllabus scheduling across multi-campus, college programmes, college policies and college memoranda. The micro level occurs at campus classrooms and workshops, for example, textbooks and other instructional materials, software, and hardware resources for everyday use. Lastly, the nano-level which is individual and for lecturers and students informed by their individual habitual actions. From knowledge transmission efficiency perspectives, it is worth noting that throughput (the achieved curriculum) can only be equivalent to input (the intended curriculum) when there are no losses (caused by misinterpretation) in the practised curriculum.

Curriculum may be represented by three main layers (McQuarrie et al., 2013). The first layer, which belongs to curriculum developers, is the intended/planned/prescribed/official or formal curriculum. This layer presents a documented strategy, subject and assessment guidelines that are framed by educational vision with goal/s as well as the intentions of the teaching/learning curriculum (professional/factual documents presenting educational plans). The second layer belongs to lecturers, and is the implemented/enacted or practised curriculum, also known as curriculum in action (McQuarrie et al., 2013, p. 112) which is the interpretation of the intended curriculum as observed or “seen from the lecturers’ perspective and the actual process of teaching in operation” (McQuarrie et al., 2013, p. 118). The last layer, which belongs to students, is the attained/achieved or assessed curriculum, and presents the learning knowledge as seen by students representing individual identity and character; each student has their own personal interpretation of meanings (as evaluated through their accomplishment of learning results) (McQuarrie et al., 2013; Mtshali, 2021).

McQuarrie et al. (2013) contend that a structured and potentially effective curriculum consists of a well-defined curriculum framework. The framework embraces rationale, scope and parameters, targets and reasons of the subject areas, procedures for course design as well as guidelines for evaluation. However, the Curriculum and Assessment Policy Statement (CAPS) document regards purpose, aims and specific aims as key components to be added to the curriculum framework.

Furthermore, the subject guidelines and assessment guidelines (NC(V) and NATED) goals include the subject outcomes and learning outcomes as part of the curriculum framework but have excluded aims (long-term goals viewed from personal perspective) and objectives (short term goals viewed from the lecturers' perspective). Nevertheless, the objectives of the NC(V) and NATED studies are captured in the SAQA ID 50441 document. Additionally, international experiences from the Caribbean government, through the Caribbean Advanced Proficiency Examination (CAPE), reveals that there are five goals developed that the electronics technology syllabus is expected to adhere to and accomplish. In addition to that, the CAPE presents aims to be achieved (Sithole et al., 2022). For the same reason Mtshali (2021) contends that in Germany, competence-based education, and training (CBET)—which is a method for vocational education and training—focuses on competences (psychomotor), knowledge (cognitive) and attitudes (affective) as critical areas. In other words, the curriculum designers specify programme goals and objectives as a guide to lecturers and trainers. The governments of the Caribbean and Germany endeavour to align their programmes to set goals, objectives, and outcomes at macro and micro levels in order to give guidance to instructors, facilitators, and lecturers. However, the lack of constructive collaboration between the documented, the practised and the achieved curriculum results in a low throughput in SA (DHET, 2014), depriving students of employment opportunities. Moreover, DHET, employer stakeholders and parents registered concerns on the quality of teaching and learning (Mtshali, 2021).

Mesuwini et al. (2020) and Mtshali (2021) concur that key curriculum transformation drivers for TVET colleges are lecturers, community, government, and industrial stakeholders. Furthermore, Mtshali (2021, p. 19) asserts that South Africans need to find solutions to curriculum related challenges, “reflections on curriculum studies, curriculum development, curriculum intentions (documented), implemented or practiced and attained curriculum is essential”.

Nkwanyane et al. (2020) further mention that the practice of curriculum inquiry that focuses on either ‘how’ or ‘what’ at the expense of the other is improper. For instance, McQuarrie et al. (2013) maintain that the present fashion that elevates ‘how’ questions lead to disproportion and undermine good sense when talking about education. Proportion and good sense demand that attention is increasingly turned to ‘what’ questions, presenting compelling arguments for or against specific

curriculum content. Hence, it is important to understand curriculum in general because curriculum is used to deliver the vocational educational and training in this study.

The curriculum offered at TVET colleges is organised to provide vocational education and training that enable students to acquire employable skills after completing their qualification (Nkwanyane, 2023). The TVET college curriculum is offered through NC(V) and NATED studies according to the national qualification framework and standards set by SAQA at each programme per level (Mtshali, 2021). Therefore, the mandate for the curriculum for TVET colleges is to provide students with relevant employable skills and competences that help them to be ready for the labour market after they have completed their qualifications in their trades.

Mesuwini et al. (2020) state that the curriculum delivered at TVET colleges was designed by DHET. According to Mtshali (2021), the curriculum designed and implemented at the TVET colleges aimed to provide both theoretical and practical content in the programme offerings per course per level. Thus, students are required to perform both theoretical and practical knowledge content of the curriculum in order to fulfil their course requirements (Mesuwini, 2015). For employability skills, Mtshali (2021) mentions that the curriculum offered at the TVET colleges prepares students to be ready for the labour market because the curriculum is set to provide classroom knowledge and work-based placement training to complete the course in all TVET college programmes.

The literature in this section reveals that TVET colleges are a vehicle to transfer employable skills to youth and adults (Buthelezi, 2018; Sithole et al., 2022) through NC(V) and NATED programmes that serve as part of the TVET curriculum (McQuarrie et al., 2013; Mtshali, 2021). Thus, the TVET curriculum translates to employable skills. If the curriculum for colleges is correctly developed and implemented (Sithole et al., 2022), it may yield positive results to enhance employability of TVET graduates.

2.2.4. Conceptualisation of employability

Scholars have explored the concept of employability, showing supporting and competing views, as set out below (Raimi & Akhuemonkhan, 2014; Nugraha & Komaro, 2018; Okolie et al., 2020). They have categorised employability definitions into three perspectives: a socio-economic perspective, an individual perspective, and an organisational perspective. From a socio-economic perspective, Nugraha and Komaro (2018) define employability as the ability of a similar categories

of the labour force to gain and maintain employment. Two distinctive characteristics of employability can be identified from this definition. To gain employment means to obtain initial employment with some employability skills used as the measuring stick, while maintaining employment implies to be employed for life or continuous and/or extended periods of employment. When one maintains, it means one services, plans, fixes, supports, changes, improves, and/or increases employability. All these phrases briefly relate to doing something to change towards a more marketable set of skills.

Raimi and Akhuemonkhan (2014) describe and expand the employability definition as a condition that should match supply and demand in bringing about success of the organisation. Academic institutions are the suppliers who should market and sell their products (graduates) to the employers who require the employable graduates. According to Mesuwini and Bomani (2021), the TVET graduates have not proven their success in either of the two concepts: gaining and maintaining employment that would help them to contribute to the economy.

From an individual perspective, employability refers to adaptability (Raimi & Akhuemonkhan, 2014), mobility (Nugraha & Komaro, 2018), career development (Berntson et al., 2006), occupational expertise (Mabunda, 2018), and personal development and lifelong learning (Mabunda, 2018; Nugraha & Komaro, 2018; Okolie et al., 2020), which implies that individuals that fit this definition are already employed. Most of the concepts speak to the ability of individual workers to be flexible in performing extra duties, which may not necessarily be within their scope of work. In this study, employability is defined in relation to the functionalist perspective, as it involves employment institutions, academic institutions, and graduates (the NC(V) and NATED graduates).

Many scholars have tried to classify employability. For instance, Berntson et al. (2006) classify employability as someone's power to benefit from the first job, preserving employment, and moving between tasks within the same organisation. The individual may take a new job if he or she so wishes. In both the previous or new job, the worker will feel secure, be able to adapt to new conditions and situations and enjoy full job satisfaction (Okolie et al., 2020). Mesuwini and Bomani (2021, p. 37) explain that "employment and employability are not the same"; employability extends beyond gaining employment. Employability is more about developing qualities to help secure graduate employment within an accepted vocation (Okolie et al., 2020).

Employment is a by-product of this ability for the task (Okolie et al., 2020). Employability has been interpreted differently by many scholars, and therefore scholars find it difficult to reach a consensus on defining employability.

According to McQuaid and Lindsay (2005), employability refers to the qualities and competencies possessed by an individual which are required to meet the changing needs of employers and customers, thereby helping the individual to realise his or her aspirations and potential in the workplace. Employability means the development of skills and adaptable workforces in which all those capable of work are encouraged to develop the skills, knowledge, technology, and adaptability to enable them to enter and remain in employment throughout their working lives (Newman, 2019). Employability is the capability to move into and within labour markets and to realise potential through sustainable and accessible employment. For the individual, employability depends on the knowledge and skills they possess, their attitudes, the way personal attributes are presented in the labour market, and the environmental, social, and economic context within which work is sought (Gowsalya & Kumar, 2015). Newman (2019) states that employability is the relative capacity of an individual to achieve meaningful employment given the interaction of personal circumstances and the labour market.

Scholars believe that when individuals possess employable skills, they stand a chance to be employable and increase productivity in their occupation (McQuaid & Lindsay, 2005; Mabunda, 2018; Newman, 2019; Mseleku, 2022). According to Mabunda (2018) employable skills are referred to as employability skills. Nugraha and Komaro (2018) signal that while there are disparities in classifying employability, there is an extensive understanding of what qualities, characteristics, skills, and knowledge frame employability for all graduates. Employers expect graduates to have technical and discipline competencies from their degrees but need graduates also to display broader skills and qualities that include team-working, communication, leadership, critical thinking, problem solving and managerial abilities. Thus, for an individual to become employable, they need skills to preserve their job and to progress in the workplace. Hence, in this study college graduates are perceived to stand a chance to find employability because of the attainment of the employment qualities, skills, and knowledge through vocational education and training institutions.

2.2.5. TVET college contributes to human capital formation

TVET colleges were originally developed to provide individuals with employability skills (Balkrishen, 2019) to help individuals to get employment and/or be productive in the workplace (Mseleku, 2022). TVET colleges contribute to human capital by providing employability skills to help the nation to enhance employability.

Human resources are one of the main factors in contributing to the progress of a nation and state (Biputh, 2008). The quality of human resources will provide efficiency and productivity in a country, and it is particularly important to invest in human resources in the face of the dynamics of changing times that are growing (Becker, 1964). Non-physical investments such as human resources represent funds issued and the opportunity to earn income during the investment process (Chauke, 2023). Income earned during the investment process is a return on investment and is expected to contribute to a higher level of income to be able to achieve a higher level of consumption as well (Berntson et al., 2006). This investment is called human capital (Becker, 1964).

The term HC was coined 60 years ago when Gary Becker, a Nobel laureate in economics, wrote a book called *Human capital* (Becker, 1964). HC is an added value for the company every day, through motivation, commitment, competence, and the effectiveness of teamwork. Added value can be contributed by workers in the form of the development of competencies owned by the company, the transfer of knowledge from workers to the company and changes in management culture (Berntson et al., 2006). HC is everything about humans with all their capabilities, in order to create value for organisations to achieve their goals (Miles, 2011).

HC is a principal factor in an organisation because it can provide a major source of progress and development of the organisation (Berntson et al., 2006). HC investment is carried out as part of the planning of a company or institution in anticipation of global dynamics. Improving the quality of human resources can be done through the educational process as one of the conditions in increasing the productivity and expertise of workers (human resources) to fit the criteria that have been determined by the company (Vandenberghe, 1998), because that criterion will always increase as technology and science improve (Schultz, 1961). Education plays a significant role in helping improve human quality through the process and stages of learning and the formation of individual character, as well as developing competencies acquired through the learning process

(Berntson et al., 2006). Therefore, education and human (human capital) have a remarkably close relationship in helping the productivity of a nation through the expertise of resources owned by institutions or companies (Vandenberghe, 1998). HC is human resources that have competence in the form of knowledge, expertise, abilities, and skills that become capital for organisations in achieving goals. If the organisation makes HC a benchmark in hiring employees, the organisation will be able to have a competitive advantage (Berntson et al., 2006).

The HC process that is carried out within the organisation's education management system is designed and implemented to develop and sustain the high-performing human assets (Schultz, 1961). To ensure that this is achieved, HC in education must design measurement tools for every organisational management development system within educational institutions, especially those focused on human implementation. Thus, an organisation can ensure that the investment made by human resources related to knowledge, expertise, and behaviour will ultimately be able to add value to the employee, the employee in the organisation, and the success of the organisation (Berntson et al., 2006).

This study focuses on the case of specific training provided by TVET colleges (assuming that the case of general training could be done in a similar way) by analysing the way in which human capital's costs and returns could be introduced into an equation representing the present value of lifetime net earnings. The approach is hindered by the fact that the specification of the investment period was not straightforward and by the existence of imperfect knowledge of foregone earnings (Berntson et al., 2006). Thus, in this study, I support Becker (1964), who adopted in HC theory an approach that assumed the cost of an investment in HC as the earnings foregone and the rate of capitalisation as a weighted average of the rates of return on the individual investments. By doing this, one would not need to know the period of investment since this (and the costs and returns) could simultaneously be estimated from information on net earnings (Berntson et al., 2006).

This allowed Becker to explore the evolution of the incentive to invest in HC in different periods, notably the relation between lifespan and the rate of return (Becker, 1964). Becker's approach had the advantage of providing a unified explanation for an array of behaviours related to HC. Firstly, it helped to explain the longer periods of schooling demanded by younger generations because of different incentives (i.e. longer periods of life raised the profitability of those investments). Secondly, it clarified why individuals switching between activities, thus with a preference for more

general training and less specific training, had depressed their prospects in terms of earnings (the obvious candidate here being female labour). Thirdly, it suggested that the spread of education was largely induced by technological progress by raising the demand for skilled labour through the effect on the rate of return (as measured by wage differences and costs) (Becker, 1964). Finally, the lifetime perspective helped to place into perspective the difficulties in financing investments in HC and the risk of under-investment due to short-sighted behaviour by young people, which has been a long-time concern among economists (Becker, 1964). This issue of placing HC choices within a lifetime framework would be further developed by Becker in his attempts to reformulate consumer theory by adjusting it to encompass the allocation of time and goods within the household (Becker, 1964).

2.2.6. The role of TVET college in workforce development

The process in the formation of HC is remarkably interesting to analyse. For instance, in the organisation, the formation begins from the preparation of employee procurement, then selection, training, placement, development, compensation, to dismissal (Vandenberghe, 1998). These aspects are fundamental for every employee who joins an organisation that performs tasks, principles, and functions in order to achieve common organisational goals (Vandenberghe, 1998). Thus, education is an investment in HC in the form of time and cost and is seen as one of the most important forms of human capital investment, both for individuals and for organisations. The benefits obtained for the individual, in addition to knowledge, skills, and experience, will, over time, contribute to work productivity and performance. The concept of education as an investment has developed rapidly and countries increasingly believe that the development of the education sector is a key prerequisite for progress (Becker, 1964).

Based on the theories and concepts that have been discussed in this study, HC is a form of investment capital that is extremely useful and profitable for companies or institutions if managed properly especially in educational institutions that can be a reference in improving the quality of education (Berntson et al., 2006). HC management can be achieved through the educational process with the aim of serving administrative requirements and as capital to increase productivity and performance. Based on research that has been described previously, the theory of HC has an influence on the educational behaviour of South Africans (Berntson et al., 2006).

2.2.7. Stakeholders in the TVET college ecosystem

TVET colleges have become increasingly important in global education as governments and employers recognise the critical role of technical skills and competencies in driving economic growth and development (Cloete et al., 2012). However, managing and governing a TVET college can be complex and challenging, requiring leaders to navigate various stakeholder expectations and governance dilemmas. In the TVET sector, the governing body is known as the college council, as stipulated in the Continued Education and Training (CET) Act 16 of 2006 (as amended) (Republic of South Africa [RSA], 2006). The governance approach of TVET colleges should align with the principles recommended in DHET policies that drive TVET colleges, particularly the principle, which pertains to steering and setting a strategic direction (Adams, 2019).

In this section I focus on the governance benefits, challenges, and stakeholder engagement strategies that TVET colleges face (Adams, 2019; Mseleku, 2022; Nkwanyane, 2023). These challenges include power imbalances, limited resources, conflicting stakeholder interests, and a lack of awareness and understanding of governance processes among stakeholders. Overcoming these challenges requires proactive efforts to foster a culture of stakeholder engagement, provide adequate resources, enhance stakeholder capacity, and establish clear communication channels (Sithole et al., 2022; Nkwanyane, 2023).

According to Buthelezi (2018), a successful governance in TVET colleges requires a clear understanding of the roles and responsibilities of different actors and a commitment to ethical and transparent decision-making like it is done by other successful organisations such as universities and municipalities. Balkrishen (2019) suggests that stakeholders can participate in decision-making and other activities; however, stakeholders often work against each other and hinder collaboration creating challenges. Balkrishen highlights the importance of understanding the needs and interests of each stakeholder group, thus forming the basis for effective communication and transparency. Buthelezi (2018) and Balkrishen (2019) note that balancing the conflicting demands of stakeholders is a key challenge. It is, therefore, important that the governing body is aware of the risks the college faces and its role in mitigating them. The governing body plays a significant role in balancing the interests of all its stakeholders and must ensure that it is professionally managed. This enhances the college's reputation within its community and thus attract students

who appreciate attending the local TVET college as part of their educational development (Mbatha, 2023).

As mentioned earlier, effective governance is essential because it provides a framework for managing relationships between TVET colleges and their stakeholders, fostering collaboration, and aligning institutional goals with the broader societal context. However, there needs to be more research that explicitly explores effective governance systems in TVET colleges. Some empirical studies offer insights into related areas, such as stakeholder engagement in industry partnerships for work-integrated learning. However, a notable gap exists in understanding how stakeholders provide input that informs the governance structure and decision-making processes within TVET colleges.

2.2.8. Formal and informal institutional structures

Organisations want security and legitimacy (Cai & Mehari, 2015). The assumption is that they can be perceived as legitimate if they adopt the same prominent structure and ways of interacting as other organisations in the same field. Uncertainty and constraints are factors that encourage the organisation to learn from the more established organisations in the field, which gradually shape the structure, culture and inputs and develop similarity among these organisations (Khalil, 2021).

It has been suggested that organisational characteristics are shaped and reshaped in response to diverse environmental characteristics (Cai & Mehari, 2015). Organisations conform to their environmental characteristics to secure resources, political power, and institutional legitimacy. Thus, the concept of institutional isomorphism is a “useful tool for understanding the politics and ceremony that provide much modern organisational life” (Cai & Mehari, 2015, p. 15). Isomorphism mechanisms are a function of every organisation and environmental interaction. Scott (2004) argues that institutional forces shape work arrangements and organisational systems. There are three types of institutional isomorphism that are distinct: coercive (explicit rules and laws derived from the environment), normative (norms, values and expectations come from professional training and organisation members) and mimetic (the desire to look like other organisations to respond to uncertainty) (Haggis, 2008). This is in line with a social institution, which is defined as “cognitive, normative and regulative structures and activities that provide stability and meaning to social behaviour,” ranging from small scale to society-wide social interactions (Scott, 2004, p. 22).

Coercive isomorphism includes both formal and informal impositions from the larger environment on focal organisations intended to promote certain organisational behaviours. For instance, organisational behaviour comprises formal structures such as policies, rules, procedures, and decision-making competencies that are accepted as a proper element of the organisation (institutionalisation of structures). Government mandates in financing higher education institutions and community expectations are among the sources of coercive pressure. This kind of institutionalisation is forced by formal and informal pressures exerted by governments and other powerful organisations (Scott, 2004; Mandre et al., 2021).

The interactional process between TVET colleges and their environment is characterised by potency and responsiveness (Braunscheidel et al., 2011). While the environment imposes pressure in the form of legitimate power and expertise power, those who possess legitimate power use both formal and informal coercive mechanisms to influence TVET colleges. Thus, coercive isomorphism is a powerful pressure to limit the practices and actions of a given organisation and determine “how things are actually done and who practically does them” (Mandre et al., 2021, p. 6). Cai and Mehari (2015) indicate that government controls can take the form of regulating the curricula of educational institutions. Thus, state rules are considered homogenising forces within the framework of isomorphic principles.

Normative isomorphism is considered a cultural pressure influencing organisations without directly requiring conformity, similar to coercive isomorphism (Cai & Mehari, 2015). For instance, the kinds of experience that could be disseminated through training and the movement of professionals within an organisational field in the form of consultancy, employment and transfer have no binding requirement. Thus, while individuals move from one organisation to another, they can bring ideas and experiences with them (Khalil, 2021). This mechanism has the power to shape the policies, cultures, and work processes in a focal organisation. Likewise, changes in educational organisations are seen as a process of growing isomorphism brought into “conformity with norms and values institutionalised by the state and professions” (Khalil, 2021, p. 29). Thus, organisations can conform to the values, norms, and technical traditions that professionals either bring with them or gain through training (Mandre et al., 2021).

Cai and Mehari (2015) emphasise that mimetic and normative mechanisms involve managerial behaviours. This is because organisational leaders learn appropriate responses and adjust their

behaviour accordingly (Schultz, 1961). Mimetic isomorphism results from environmental uncertainty, the poor understanding of innovative technologies and ambiguous goals can challenge the function of TVET colleges. To cope with these kinds of situations, organisations mimic the policies, rules, procedures, and best practices of other organisations that is considered successful. Thus, to survive in some unpredictable world environments, organisations tend to emulate others that are sought to be more legitimate and successful (Cai & Mehari, 2015). This can be considered a mimetic isomorphism pressure that can be imposed from organisational fields. This means successful organisations use their expertise power to influence TVET colleges without any conformity requirements.

According to Mandre et al. (2021, p. 11), “much literature in TVET colleges emphasises the importance of the national context in shaping its institutional goals and organisational forms”. The reality in which different TVET colleges share several commonalities promotes the principles of institutional isomorphism as an influence from a common organisational field (Khalil, 2021). Generally, the notion of isomorphism serves as a mechanism that leads to increased conformity enforced by legal and political, cultural, and social pressures from organisational fields. These forces arise from working in the same environment, having a shared professional experience, as well as the influence of the state (Cai & Mehari, 2015). The principle of isomorphism, with special emphasis on legitimatisation, is helpful in explaining the diffusion of highly rationalised forms of management (Scott, 2004).

Thus, institutional analyses can help scholars to learn the connection between educational institutions such as TVET colleges and other institutions in society and how pressures shape and reshape their functions. Specific to this study, higher education researchers have been employing institutional isomorphism to identify and analyse patterns of TVET college responses to the pressure imposed by the external environment. For instance, the legitimacy of TVET colleges and their role has been challenged by the pressure imposed from their environment (political, economic, social, and technological). TVET colleges submit to this pressure to maintain their survival, which might result in homogenisation of institutions (Mandre et al, 2021).

2.2.9. Organisational legitimacy and change

Institutional theory represents a body of thought that identifies, emphasises, and explores the forces that constrain organisations from changing (Khalil, 2021). For the field of education, the outcome

is a greater understanding of why educational systems are so isomorphic (homogeneous) and commonly give the appearance of change without the reality of change (Scott, 2004). What is fundamentally missing in this discussion is that educational systems do change; even though it is perhaps not as often or dramatically as reform advocates would like to view it through sorting the possibilities, there appears to be at least two energising forces in the external environment of educational systems that can bring about organisational change: (a) environmental shifts, and (b) environmental regression (Cai & Mehari, 2015).

Environmental shifts occur when one or more of the many organisations in an educational system's organisational field modifies some aspect of an expectation or requirement placed on the education institution, such as a new court decision or a state-mandated change in testing procedures (Cai & Mehari, 2015). Although new environmental expectations or requirements such as these are important, they generally align with an incremental approach and the changes the educational system makes are also gradual, such as introducing a 'culture-free' metric or requiring algebra for all students. Braunscheidel et al. (2011) identified five strategies an organisation can use to accommodate environmental shifts that require attention. Continuing with the example of introducing a high-stakes test, the education institutions can acquiesce (do what is expected), avoid (delay and hope it goes away), compromise (give a modified version), refuse (attack the test as ideologically tainted or culturally biased), or manipulate (teach to the test or just heat) (Mandre et al., 2021). Even a casual reading of newspapers reveals that all these strategies are flourishing in countries' education systems.

The second type of force for change, environmental regression, happens when, metaphorically speaking, the apple falls too far from the tree. That is, when the activities of an organisation are so far beyond the accepted norms of the institution that its legitimacy in the institution is questioned, and environmental pressures are exerted to initiate the changes needed to bring it in line with the accepted standards (Cai & Mehari, 2015). In short, pressures to conform by organisations in an educational system's environment result in changes in the direction of organisational homogenisation. Education institutions are pressured to look like other education institutions. Cai and Mehari (2015) addressed this form of change by identifying two classifications of organisations with divergent institutional fits. Those organisations that have a low fit with institutional norms and perform below institutional norms, those, are at significant risk of being

selected out. Those perform inadequately and lack legitimacy” (Khalil, 2021). Cai and Mehari (2015) at the other extreme are the renegades, or organisations that either by choice or chance use unorthodox or nonstandard means to perform above the institutional range of performance. The guardians of institutional norms (e.g., legislatures, courts, accreditation agencies) have at least two change-related options. They may use coercive means to force compliance with institutional standards, or they may legitimise the renegades and free other similar organisations to mimic their activities (Mandre et al., 2021).

2.3. Employability of TVET civil engineering graduates

This section specifically analyses the employability of TVET civil engineering graduates starting first with the civil engineering curriculum offered at TVET colleges, secondly with TVET civil engineering graduates, thirdly with the perceptions of TVET college management staff on the employability of graduates; fourthly, challenges pertaining to the employability of civil engineering graduates and, lastly, strategies in place to mitigate challenges pertaining to the employability of civil engineering graduates.

However, before I discuss the literature on the employability of TVET civil engineering graduates, I briefly provide a description of the term civil engineering. Civil engineering is defined as the profession in which a knowledge of the mathematical and physical sciences gained by study, experience, and practice is applied with judgment to develop ways to utilise, economically, the materials and forces of nature for the progressive well-being of humanity in creating, improving and protecting the environment, in providing facilities for community living, industry and transportation, and in providing structures for the use of humanity (Mesuwini, 2015). Mtshali (2021) describes civil engineering as an art of directing the great sources of power in nature for the use and convenience of people as means of production and of human traffic in states, both external and internal trade, as applied in the construction of roads, bridges, aqueducts, canals, dams, buildings, and docks for internal intercourse and exchange, and in the construction application of machinery and in the drainage of cities and towns.

The civil engineering profession has different branches which include construction and management (civil engineering and building construction), geotechnical engineering, structural engineering, transport engineering, and water engineering (Mesuwini et al., 2020). These branches are trained in different institutions of higher learning—colleges and universities (Mtshali, 2021).

However, civil engineering and building construction profession branch as a focus of this study is offered at TVET colleges (Mtshali, 2021).

Scholars like Mesuwini et al. (2020) and Mtshali and Ramaligela (2022) argue that the civil engineering profession's technology needs to change from time to time as technology is evolving. The civil engineering profession needs to upgrade its technology for design, building construction, and material use as technology and natural resources change (Mesuwini et al., 2020). So, the civil engineering and building construction training needs to keep up with time in order to make their trained civil engineering professionals have relevant and updated training in field of civil engineering. Hence, TVET colleges propose curriculum change in order to meet industry needs (Mtshali, 2021).

As mentioned in the previous section, civil engineering training is offered in higher institutions of learning which include TVET colleges, universities of technology, and universities (Mesuwini, 2015). Civil engineering offered at TVET colleges is aimed at students acquiring a NC(V) civil engineering level 4 certificate and a national N-diploma in the civil engineering and building construction branch of civil engineering (Mtshali, 2021).

2.3.1. Curriculum for civil engineering in TVET colleges

As mentioned in section 2.2.3. of this study, the curriculum is delivered into two different streams in TVET colleges: NC(V) and NATED or R191 studies (Mesuwini, 2015; Mesuwini et al., 2020; Mtshali, 2021; Mtshali & Ramaligela, 2022). The NC(V) curriculum prepares students to acquire an NQF level 4 senior certificate qualification that enables an NC(V) graduate to qualify for employment in an artisan position in the labour market (Mesuwini, 2015). The curriculum delivered at TVET colleges for the NATED programme enables a NATED graduate to acquire a national NATED diploma (national N-Diploma) to qualify for employment in artisan positions and higher (Mesuwini et al., 2020). Therefore, both NC(V) and NATED programmes are aimed at providing a curriculum that helps the civil engineering graduates learn the civil engineering and building construction branch of civil engineering (Mesuwini & Bomani, 2021). Thus, both NC(V) and NATED civil engineering graduates become ready for employment in the civil engineering and building construction trades as artisans (Mtshali, 2021).

The curriculum for NC(V) civil engineering in TVET colleges is designed to prepare the students for soft skills, content, and practical skills for employment (Nkwanyane, 2023). Students are

expected to do their practical work through internal summative assessment tests (ISAT), assessments of knowledge, and go through the workplace to complete their studies (Adams, 2019). The NATED students' curriculum is designed to prepare students to acquire the theoretical knowledge in class before doing an in-service training through industries to prepare them to complete their diploma (Mtshali & Ramaligela, 2022). For both NC(V) and NATED civil engineering programmes, the curriculum offered enables graduates to acquire skills for employment (Mtshali & Ramaligela, 2022).

2.3.2. TVET civil engineering graduates

As mentioned in section 2.3.1. of this study, TVET civil engineering graduates are offered two programmes—NC(V) and NATED (R191)—that are currently presented at TVET colleges (Mesuwini et al., 2020; Nkwanyane et al., 2020; Mesuwini & Bomani, 2021; Mtshali, 2021). Once students complete their NC(V) NQF L4 and/or NATED (R191) N6 plus 18 months of in-service training in the programme of choice, they are awarded a civil engineering qualification and are regarded as qualified artisans (Mesuwini et al., 2020). Both TVET civil engineering programmes fall under the South African Qualifications Authority (SAQA) (Mesuwini & Bomani, 2021).

SAQA, established in terms of Section 3 of the SAQA Act of 1995 (Act No. 58 of 1995), manages the registration of qualifications, including the NC(V) and NATED qualifications in civil engineering (Mesuwini & Bomani, 2021). Civil engineering qualifications are aligned with the National Qualifications Framework (NQF), as promulgated in Government Gazette No. 28677 of 29 March 2006 (Mtshali, 2021). SAQA provides the framework for graduation in civil engineering programmes (Mesuwini & Bomani, 2021). According to Mesuwini and Bomani (2021), graduates for NC(V) civil engineering must have met all the requirements as prescribed by the NQF authority and SAQA.

A qualification at Level 2, 3 and 4 on the NQF is awarded to students who comply with the national policy requirements set out in the policy document, National Certificate (Vocational) that: An NC(V) qualification starts at Level 2 with Grade 9, and mathematics as the entry requirements (Buthelezi, 2018). To be awarded the NC(V) level 4 qualification as a graduate, students are required to have completed 21 subjects offered in NC(V) (Mtshali & Ramaligela, 2022). Each level is one year, and students have to complete seven subjects per level. In accordance with Mesuwini and Bomani (2021), below shows a list of compulsory subjects and subjects offered per

level that must be completed before obtaining an NC(V) qualification as a civil engineering graduate.

Three of the seven subjects are known as fundamental subjects, and the last four subjects are known as vocational subjects. In vocational subjects, three are compulsory and one is optional.

At NC(V) level 2 and level 3:

1. For fundamental subjects

- i Mathematics
- ii English 1st language
- iii Life orientation

2. Vocational subjects

- i Construction planning...
- ii Plant and equipment
- iii Materials

3. Optional Vocational Subject/s

- i Masonry
- ii Carpentry and roof work
- iii Plumbing

All students are supposed to do a maximum of seven subjects per level.

At NC(V) level 4:

1. Fundamental subjects...

- i Mathematics
- ii English 1st language
- iii Life orientation

2. Vocational subjects...

- i Construction planning
- ii Supervision
- iii Materials

3. Optional vocational subject/s

- i Masonry
- ii Carpentry and roof work
- iii Plumbing

To graduate with a NATED civil engineering qualification, a student must meet all the requirements as prescribed by the NQF and SAQA. According to SAQA's requirements, a student is awarded a national N-diploma if they comply with the national policy requirements set out in the policy document (Mesuwini & Bomani, 2021).

The policy outlines the requirements for NATED which are as follows: NATED administration and registration guidelines, as well as the NQF. Mesuwini and Bomani (2021) state that there are two types of entries for R191 qualifications. The first entry point starts at N1 with Grade 9, and mathematics as the entry requirements. The second one starts at N4 with either/or NC(V) L4 civil engineering, or matric with mathematics and physical science or technical subjects, or N3 in civil engineering. All qualifications from N1 to N6 are outlined in the NQF and promulgated in the Government Gazette No. 28677 of 29 March 2006 (Mtshali, 2021). Thus, on one hand, students who have started in N1 are required to complete 24 subjects offered in R191 to be awarded a full N6 certificate. On the other hand, students who have started in N4 are required to complete 12 subjects offered in R191 to be awarded a full N6 certificate (Mesuwini et al., 2020). Once students complete N6, they undertake in-service training in civil engineering industries for 18 months as practical training (Mtshali, 2021). After the completion of both N6 and in-service training, a student is awarded a national N-diploma in civil engineering at NQF L6 (Mtshali, 2021).

Each level is of three months' duration and students are required to complete four subjects per level. In accordance with Mesuwini et al. (2020), below is a list of compulsory subjects and subjects offered per level that must be completed before obtaining a R191 qualification as a civil engineering graduate.

1. N1, and N2:

- i Mathematics
- ii Building drawing
- iii Building science
- iv Bricklaying and plastering, or plumbing theory, or carpentry and roofing theory

2. At N3:
 - i Mathematics
 - ii Building drawing
 - iii Building science
 - iv Building and civil technology
3. At N4, N5, and N6:
 - i Building administration
 - ii Building and structural construction
 - iii Building and structural surveying
 - iv Quantity surveying
 - v Mathematics (optional)

NATED N1 to N6 civil engineering qualification was designed to provide theoretical learning for students (Mesuwini et al., 2020). Once students complete their N6 then they do in-service training for practical learning to prepare them for the workplace and complete their qualification (Mtshali, 2021). However, in NC(V) civil engineering, the qualification is designed to provide both the theory and practice. The practical component of the study could be offered in a real workplace environment or in a simulated workplace environment (Mabunda, 2018). It provides students with an opportunity to experience work situations during the period of study (Nkalane, 2018).

According to PSET 2013 on TVET college graduates, students who have graduated with NC(V) L4 civil engineering qualifications are ready for employment in civil engineering institutions and they can also further their studies with either TVET colleges to do national N-diploma in civil engineering or further their studies in universities to study civil engineering (Mtshali, 2021). Students who have graduated with R191 for a national N-diploma in civil engineering are also ready for employment (Khambule, 2019). They may also further their studies in civil engineering with universities of their choice (Mesuwini et al., 2020). Furthermore, national N-diploma civil engineering graduates are regarded as having more employable skills than NC(V) L4 civil engineering graduates.

This observation from the literature reveals that individuals graduate in two programmes—NC(V) and NATED. In the NC(V) programme, individuals graduate with an NC(V) L4 qualification, whilst in the NATED programme, individuals graduate with a national N-diploma qualification

which is at NQF Level 6. Both NC(V) and NATED civil engineering graduates become qualified in the civil engineering and building construction branch of civil engineering as artisans (Mesuwini, 2015; Mesuwini et al., 2020; Mtshali, 2021).

2.3.3. Perspectives of TVET colleges on employability

Studies show that changes effected at TVET colleges to improve the employability skills produced at TVET colleges (Mesuwini, 2015; Nkwanyane et al., 2020; Mtshali, 2021). TVET colleges claim that their graduates are ready for employment in the labour market. For instance, Mesuwini et al. (2020) mention that TVET civil engineering graduates possess the minimum requirements as artisans for the labour market in both NC(V) and NATED programme offerings. This is supported by Buthelezi (2018), who mentions that when a student graduates with a civil engineering qualification from a TVET college, they possess theoretical and practical training which are part of skills, knowledge, and attitudes for employment in civil engineering industries. As a result, TVET graduates qualify to enter the labour market (Buthelezi, 2018). Furthermore, Mtshali (2021) mentions that some of the work that graduates are required to do during their time of employment is the same work they do during their practical training of their study period. Mtshali (2021) believes the theoretical and practical education and training received by students at TVET colleges make them qualified to enter the job market as artisans.

However, TVET colleges note the change of technology in industries that is affecting their curriculum delivery in preparing their students for employability (Buthelezi, 2018). According to Mtshali (2021), TVET colleges are working with the DHET to upgrade their curriculum delivery with the speed necessary to keep pace with industry changes to maintain relevant in terms of employability skills.

Based on the skillsets and layout of the civil engineering curriculum at TVET colleges, there is an expectation that the employment rate of graduates and their recognition should be higher (Chauke, 2023). Furthermore, the skillsets have been identified as necessary in the civil engineering industry and labour market. The skillsets and layout for civil engineering courses expect students to do in-service training and internship programmes to gain workplace experience. Students will thus gain more advantages for job opportunities in the labour market (Chauke, 2023). As a result, Chauke (2023) believes that industries are supposed to create employment for the graduates who have done in-service training or internships in their institutions.

For some reason, other industries do not recruit civil engineering graduates from the TVET sector (Mtshali, 2021; Chauke, 2023). According to Chauke (2023), when recruiting for their organisations, institutions like municipalities do not even consider the graduates who have completed their internships in their institutions. Mtshali (2021) questions the point of institutions like municipalities giving someone work experience only for them to return home at end of in-service training or internship without employment. Chauke (2023) mentions that one of the reasons that TVET civil engineering are not recruited as artisans is that the job advert for civil engineering in the municipality does not mention TVET civil engineering qualifications. This makes it impossible for the recruitment officials to recruit TVET civil engineering graduates (Chauke, 2023).

In addition, it is suggested that municipalities create a plan to keep interns as permanent employees at the end of their internship programmes (Chauke, 2023). Furthermore, in a study by Chauke (2023), they considered that the plan to employ the graduates who trained at the institution may be difficult, but there should be some documented attempts to try to do this.

Correspondingly, David et al. (2018) express the need for the municipalities to partner with other entities in the private sector and civil society sector to support the creation of jobs. The municipalities, together with other entities like private sector companies and non-profit organisations (NPOs), must document a plan for interns (Chauke, 2023). Institutions must work in collaboration and create good programmes that can create jobs in their communities for graduates who have successfully qualified (Chauke, 2023).

Khambule (2019) notes that college management focuses on the delivery of the curriculum in classroom rather than through in-service training, internships, and employment of their graduates. According to Khambule (2019), TVET colleges are supposed to assist and document plans for students to get practical training work and employment for their students. Similarly, Mtshali (2021) states that only TVET colleges who work in partnership with industries will be able to arrange the employment of their civil engineering graduates in industries. However, the college management is perceived to have an understanding that they have completed their work after students have graduated from their institutions (Khambule, 2019).

For the scholars, TVET civil engineering graduates qualify to enter the labour market due to the structure of programmes that TVET colleges offer, which help graduates to gain both theory and

workplace experience during their study period (Mtshali, 2021; Chauke, 2023). In line with that, Mtshali (2021) believes that TVET civil engineering graduates are ready for the labour market. However, TVET civil engineering graduates must be trained with recent and up-to-date civil engineering technology (Mtshali, 2021).

2.3.4. Challenges pertaining to employability.

The research reveals that there are numerous challenges that affect TVET colleges (Balkrishen & Mestry, 2016; Buthelezi, 2018; Khambule, 2019; Mesuwini et al., 2020; Okolie et al., 2020), and some of these challenges impact the delivery of a quality curriculum and employability of TVET graduates. Below the study presents the challenges that impact the quality of delivery of the curriculum and then presents the literature on challenges that impact the employability of TVET civil engineering graduates.

According to Mesuwini et al. (2020), the challenges that impact the delivery of the TVET college curriculum include the administration of TVET colleges, inadequate infrastructure for the delivery of teaching and learning, lack of qualified lecturers to deliver quality of teaching and learning, lack of adequate industries to provide work-integrated learning for both lecturers and students, and an outdated curriculum that does not meet the industry needs.

The challenges that impact the employability of TVET civil engineering graduates that the research has records in this study are a lack of industries or companies to hire TVET civil engineering graduates (Mabunda, 2018). Some of the companies that are supposed to hire college graduates indicated that the graduates do not meet their industry needs (Mesuwini & Bomani, 2021). In addition, Mtshali (2021) notes that TVET civil engineering graduates compete with university graduates for artisan employment in civil engineering and it is more likely that industries hire university than TVET civil engineering students. This may be because TVET civil engineering graduates are not well equipped with other skills including interviews and designs.

As mentioned in the previous section, scholars note that TVET civil engineering graduates qualify to enter the labour market as artisans, but that TVET civil engineering graduates experience numerous challenges when it comes to their employability (Mabunda, 2018; Mesuwini et al., 2020; Mtshali, 2021). The challenges include lack of adequate opportunities, having competition with university civil engineering graduates for employment, and lack of adequate infrastructure for practical training. Thus, Mesuwini et al. (2020) and Mtshali (2021) believe that TVET colleges

and industries need to address challenges pertaining to employability of TVET civil engineering graduates.

2.3.5. Strategies to mitigate challenges to employability

Several strategies to deal with challenges that impact the employability of college graduates are suggested by various authors (Buthelezi, 2018; Mabunda, 2018; Mesuwini et al., 2020; Mesuwini & Bomani, 2021; Mtshali, 2021). The study by Nkalane (2018) encourages TVET colleges to strengthen their partnership with industries with a view to enhancing graduates' employment chances. The government puts plans and strategies in place for TVET colleges to develop partnerships with industries in order to improve their performance on the placement and employment of their graduates (DHET, 2016). Thus, the following strategies are aimed at tackling the challenges that hinder the employability of TVET civil engineering graduates.

Regarding the infrastructure, Mesuwini and Bomani (2021) mention that government, in its PSET 2016 report, states that DHET has allocated college infrastructure grants across 50 colleges in SA to improve infrastructure. Improving the infrastructure will assist colleges to improve the quality of the delivery of the TVET civil engineering curriculum. Since it was introduced, the college infrastructure grant has helped colleges to improve their infrastructure; however, research has shown that this grant is not sufficient (Mesuwini et al., 2020).

Mesuwini and Bomani (2021) mention that the curriculum for TVET colleges is under review. The new curriculum in-terms of programmes offered at TVET colleges for all engineering studies is being upgraded and will be fully implemented by 2027 (Mesuwini et al., 2020). This new curriculum is a direct response to the industry needs in the labour market (Mesuwini et al., 2020).

The DHET has developed a professional qualification for lecturers in TVET colleges and is known as the Advanced Diploma in Professional Technical Vocational Education and Training (Mtshali, 2021). According to Mtshali (2021) the professional qualification for TVET lecturers is offered at certain universities in SA – not all universities offer this qualification. According to Mtshali (2021) universities that offer Advanced Diploma in Professional Technical Vocational Education and training is offered at university of KwaZulu-Natal, and Nelson Mandela university as amongst others.

For scholars, there are strategies that the DHET and labour markets employ to eliminate the challenges that impact the employability of TVET civil engineering graduates (Mesuwini et al., 2020; Mesuwini & Bomani, 2021; Mtshali, 2021). The strategies include the partnerships between colleges and industries, professional development of lecturers, and upgraded curriculum to meet the industry needs.

2.4. Perspectives of South African labour market/or industries on employability

For this study, the review of literature in this section focuses on the municipalities and civil engineering and construction industries which work under the municipalities. The term ‘labour market’ and ‘industries’ are at times used interchangeably. Again, for the purpose of this study both terms refer to the institutions for employment/employer or labour market industries. Furthermore, in this study industries or labour market or employer are referred to as municipalities and/or civil engineering construction companies who are responsible for employing TVET civil engineering graduates.

A municipality is a town or a district that has local government (David et al., 2018). According to Ndhlovu et al. (2014), the Constitution of SA provides three categories of municipalities which are: Metropolitan municipality, District municipality, and Local municipality.

Ndhlovu et al. (2014) further mentions that all municipalities, as government organisations, are mandated by the Constitution of SA to provide basic services to their communities. Amongst other basic services that are provided by the municipalities are clean and safe water, electricity, health services, building and maintaining municipal roads, traffic management control, collection and removal of refuse, sewage disposal services, provision of public transport, and provision of municipal parks and recreation (Ndhlovu et al., 2014).

Thus, municipalities play an important role in improving the quality of life of the inhabitants. Local government is a vital layer of government with a physical layout that enables a closer interaction between the government and its people. Since the inception of post-apartheid regime, the government organisations have been evolving including local government but also the local government sphere has been plagued with various challenges that threaten development within communities (Chauke, 2023). However, municipalities are regulated by the Constitution of SA, Municipal Finance Management Act, Municipal Systems Act, Municipal Structures Act, and Intergovernmental Relations Act, amongst others, to provide governance. Furthermore,

municipalities are also empowered to pass their own legislation, in the form of by-laws, for a particular subject area (David et al., 2018).

Chauke (2023) mentions that the importance of the local government sphere is addressed by section 152 of the SA Constitution, which highlights the objectives of the sphere of local government. These are the objectives which municipalities should aim to uphold in providing efficient delivery of services to the local communities within their area. According to section 152(1) of the Constitution (RSA, 1996), the local sphere of government, through municipalities, has the responsibility to provide a government that is democratic and accountable. Therefore, the responsibilities that a local government sphere need to provide include the following.

1. Deliver services to communities in ways that ensure sustainability.
2. Stimulate socio-economic development.
3. Establish an environment that promotes health and safety.
4. Encourage community participation in local government affairs.

The review of literature in this section focuses on the municipalities, civil engineering and building construction company, and TVET college to examine how their stakeholders perceive employability of TVET civil engineering graduates. For instance, municipalities, as local government, perceive high unemployment as a concern for its people (David et al., 2018). A high unemployment rate makes the municipalities struggle to stimulate socio-economic development as the people in their communities' struggle with poverty and unemployment. A study conducted by Chauke (2023), at local government, identifies the increasing unemployment rate in their communities. The high unemployment rate, according to Chauke (2023), affects all members of the community, including those who have qualifications and those who have no qualifications. Thus, the above claims apply to both ungraduated and graduated members of the community who are not in employment. According to Ndhlovu et al. (2014), the analysis of unemployment in SA identifies the shortage of a skilled workforce as a reason for the high unemployment of its people. As a result, municipalities are required to devise strategies to address the issue of high unemployment in their communities as part of stimulating socio-economic growth (Ndhlovu et al., 2014; Chauke, 2023).

Some local governments have issued bursaries for their youth to further their studies in institutions of higher learning, including TVET colleges, particularly for scarce skills (Chauke, 2023). Thus,

students who have received bursaries are supported by the municipalities through their study period (Chauke, 2023). Additionally, the community members who are unable to further their studies in institutions of higher learning are encouraged to upgrade their qualifications through learnerships, and apprenticeships to acquire a specific skill for employment and/or self-employment. Municipalities have a rich environment in which to expose graduates for employment in the workplace (Mtshali, 2021). Similarly, Chauke (2023) mentions that the municipalities work with other industries and companies who are rendering services to support the employment of their community members. Furthermore, municipalities work with the National Youth Development Agency (NYDA) as part of trying to assist the community to boost employment (Chauke, 2023). Chauke (2023) believes one of the reasons the municipality wants to work with other industries is to enhance employability in their community.

The review of literature suggests that TVET graduates must go through an internship experience programme to be considered valuable by potential employers and HR staff members in their institutions (Mtshali, 2021). Similarly, if graduate interns demonstrate competency when working in the internship programme, they could be offered permanent posts (Chauke, 2023). For the municipalities, TVET civil engineering graduates need to go through internship programmes and in the internship programme they need to show their competences in order for them to stand a chance of employment in their industries.

The review of literature discovered that there is currently no existing policy for partnership and linkage between municipalities and TVET colleges (Mtshali, 2021; Chauke, 2023). The study conducted by Mtshali (2021) finds that there is no policy that guides TVET graduate internships, other experiential learning programmes, or employment to TVET graduates offered by the municipalities. According to Mtshali (2021), there is no policy that guide their partnerships and employment of TVET college graduates. If there are partnerships between the colleges and municipalities, in most cases, it comes as verbal agreement.

The literature review of this study reveals that there is a mismatch between skills provided to TVET graduates and those that are required by employers in the job market (Khambule, 2019; Mtshali, 2021; Chauke, 2023). TVET programme offerings are not needed in the labour market; TVET programme offerings are outdated, and municipalities are hiring TVET graduates not according to their specialisation in terms of the TVET qualification (Mtshali, 2021). Some of the

graduates are hired as general workers and some in other fields of specialisation because their qualifications do not match the skills that are needed by the municipality (Chauke, 2023). Thus, the skills mismatch problem is also identified as one of the reasons for TVET graduate unemployment by the municipalities (Mtshali, 2021; Chauke, 2023).

In addition, the review of literature also finds numerous challenges encountered by the TVET graduates (Mesuwini, 2015; Khambule, 2019; Mesuwini et al., 2020; Mtshali, 2021), some of which are a lack of work placement experience, poor understanding of theoretical knowledge, and a lack of soft skills. Thus, TVET graduates are struggling to get jobs in other institutions. Khambule (2019) adds that industries have complained that students who are doing in-service training in most cases do not show the necessary competencies for employment. Mtshali (2021) mentions that TVET graduates lack soft skills-such as communication and computer skills. According to Khambule (2019) some of students quit the in-service training before 18 months are completed.

The lack of opportunities for employment for TVET graduates in municipalities, seems to indicate the municipalities do not care what happens to graduates after their internship (Chauke, 2023). Furthermore, Chauke (2023) mentions that it is sad reality because most interns when they leave the municipalities, struggle to get jobs or other opportunities to sustain themselves, despite possessing a vast knowledge of the municipalities where they completed their experiential learning. Some findings in the literature claims that graduate do not understand the purpose of the internship if they return home without employment (Mtshali, 2021).

Scholars maintain that municipalities are concerned about the high rate of unemployment in their communities and that they work with other industries to address the high unemployment rate (Mtshali, 202; Mseleku, 2022; Chauke, 2023). However, the municipalities and their stakeholders do not hire TVET civil engineering graduates because they feel that there is a mismatch in terms of qualification offered and industry needs. Although municipalities offer internships and in-service training to TVET graduates, when it comes to employing TVET civil engineering as artisans, they do not appoint them. Mseleku (2022) explains that graduates complain that municipalities give them experiential learning, but when there are job opportunities they are not considered. From the point of view of the municipalities, the literature reveals that the

municipalities do not hire TVET civil engineering graduates due to their lack of adequate knowledge for the job (Mtshali, 2021; Mseleku, 2022; Chauke, 2023).

2.5. Leadership and management roles of the college stakeholders on employment

‘Leadership’ and ‘management’ are seen as two distinct terms but sometimes are used interchangeably (Jansen, 2020). However, in this study, I use ‘leadership’ and ‘management’ interchangeably.

There are many definitions of management. According to Ibrahim (2017), management consists of five primary functions which a manager uses to achieve the goals and objectives of an organisation. These functions are planning, organisation, directing, coordination, evaluation, and controlling. Bush and Coleman (2000) define management as a process involving the arrangement and deployment of systems that ensure policies are implemented along with a set of integrated practices to achieve educational goals. In line with this view, Nhlapho (2017)—who writes from the context of TVET colleges—refers to management as the maintenance of TVET college organisational arrangements to achieve college goals effectively.

Management can therefore be seen as a process by which people as a human resource are engaged in planning, arranging, controlling, cooperation, directing, policy development, execution, coordination and delegation in a systematic way so as to lead, organise, guide and direct institutions to meet educational goals (Bush, 2008; Nhlapho, 2017; Nkalane, 2018). In a TVET college context, college stakeholders are responsible for executing management and leadership activities daily in their institutions to ensure that the employability of TVET civil engineering graduates takes place effectively (Balkrishen & Mestry, 2016). According to Buthelezi (2018), college senior managers are required to manage their colleges by managing small groups of internal and external stakeholders, which comprise students, employers, employees, parents, lecturers, and other stakeholders as they try to manipulate complex dilemmas concerning value of student placement and employment after graduation. This assists college senior managers in their college to achieve the organisational goals. College stakeholders are required to set and implement strategies that can enable the employment of TVET college graduates as set out in the PSET 2013 (Buthelezi, 2018).

Scholars define leadership in different but linked ways; some scholars say it is a process of influencing others, while others argue that it is goal setting, visioning, and motivating (Bush, 2008,

Harrison et al., 2010, & Nhlapho, 2017). According to Nieman and Bennet (2006), leadership may be defined as the process of influencing employees to get them to perform so that organisational objectives can be achieved. In line with this notion, Harrison et al. (2010) defines leadership as influencing people to come to share common goals, values, and attitudes and work more effectively towards achieving the organisation's vision. In the context of TVET colleges, leadership needs to be understood as an activity that, if applied effectively, can lead, direct, and influence a TVET college to achieve instructional goals (Nhlapho, 2017). Bryman (2007, p. 89) asserts that "in educational institutions the importance of leadership is as crucial as in any organisation for better performance and achievement of goals."

Jansen (2020) cites the importance of leadership in technical and vocational education, claiming that without proper leadership in TVET programmes, the goal to prepare people to be self-reliant would not be possible. Therefore, to realise the TVET college goals, TVET colleges are expected to be both efficient and effective ensuring high levels of student achievement leading to employment. TVET colleges need to see to it that the employment of TVET college graduates is taking place. TVET colleges in the South African context have become particularly crucial for responding to the jobs and skills crisis which dominates the popular press headlines (Mgijima & Morobe, 2012). According to Jansen (2004), TVET colleges were developed by the DHET to provide youth and adults with short-term and long-term skills programmes that will improve their employability or enable them to create small businesses.

Thus, TVET colleges are expected to play a decisive role in providing relevant vocational skills to achieve these goals (Balkrishen, 2019). SA has many youth citizens who are not in education and training programmes or jobs; yet there is a shortage of skills. All this has provided the necessary impetus for TVET colleges to become a significant element in the overall response to development (Nzembe, 2017). TVET colleges are set to address the skills gap, and this takes place on campuses. According to Burch (2007), it is vital that institutional theory be implemented to examine whether the attitudes, behaviours, relationships, trust, and belief are being built to ensure that all college stakeholders work in collaboration to achieve the employability of TVET civil engineering graduates.

TVET colleges are big educational institutions, and they are hierarchically structured in terms of leadership (Robertson & Frick, 2018). At the apex there is the DHET directorate responsible for

all TVET colleges in SA. Below this level is a regional directorate responsible for TVET colleges' functioning and leadership in different provinces. Below this level is the rectorate at each college which is responsible for the functioning and leadership of the entire TVET college, including all its campuses. At the bottom is campus management which is led by the rectorate responsible for the functioning and implementation of their TVET colleges' strategic outcomes.

However, the sector has undergone reform and restructuring programmes in recent years (Mgijima & Morobe, 2012). The merger caused restructuring and reform in 2002, policy amendments in 2005, and the Further Education and Training Act of 2006 in 2012 to strengthen the sector to qualify and match its mandate (Nhlapho, 2017). Plans for restructuring the TVET colleges were employed by DHET to respond to their needs. The most critical pillars of higher education transformation are institutional and sectoral governance, management, and leadership transformation (Nkalane, 2018). Moreover, the latest policy breakthrough in the form of a White Paper on Post-School Education (DHET, 2013b) provides essential insight into TVET colleges' envisaged role in the national education and training space; it views the proper management and governance of all the TVET colleges as a core task in tackling the structural inequalities in our education system as a whole (Nzembe, 2017).

The restructuring and reform process was also expected to increase efficiencies, responsiveness, and equity across the country. However, as an educational institution, a TVET college sector must apply educational management to achieve this process (Buthelezi, 2018). Without adequate, efficient, dedicated, and motivated leadership, the colleges will not provide the quality education and training that many South African young people require (Badenhorst & Radile, 2018). As the first attempt by the newly formed post-school education Ministry, the TVET college programmes represent the quest for an expanded, integrated and effective system while ensuring that changes to earlier legislation are implemented, including migrating colleges from provincial authorities and ensuring that effective governance and administration systems are put in place in what is referred to as a turnaround strategy (Buthelezi, 2018).

2.6. Gaps identified in the existing literature

Although numerous studies have examined TVET graduate employability in South Africa and globally, the existing literature reveals several significant gaps. Firstly, most studies focus on generic employability outcomes without examining how institutional norms, local labour-market

structures and stakeholder relationships jointly influence the employability of TVET civil engineering graduates. Secondly, limited research captures the perspectives of multiple stakeholders—such as college senior managers, municipal engineering officials, and industry managers—despite their central role in shaping graduate pathways into employment. Thirdly, there is a lack of empirical work that analyses employability within specific local contexts, particularly in rural municipalities where employment patterns, recognition of qualifications and institutional support differ from urban settings. Finally, few studies integrate human capital theory, institutional theory, and stakeholder theory in a single framework to explain how individual capacity, institutional pressures and stakeholder dynamics intersect to shape employability. This study addresses these conceptual, contextual, and empirical gaps by adopting a multi-stakeholder, theoretically integrated and context-specific analysis of TVET civil engineering graduate employability.

A review of the literature shows several notable gaps that justify the need for this study. Conceptually, although employability has been explored in relation to higher education, there is limited analysis of how stakeholders collectively shape the employability of TVET civil engineering graduates. Empirically, most studies have focused on national policy, employers, or colleges in isolation, with very little research examining the perspectives of municipalities, despite their role as major public-sector employers (Adams, 2019; Mesuwini & Bomani, 2021)

Methodologically, few studies have adopted a qualitative case study approach that brings together multiple stakeholders—college managers, municipal officials, and industry actors—to provide a holistic understanding of employability dynamics. These gaps indicate limited research on how municipalities and local industries engage with TVET colleges to influence employment opportunities for civil engineering graduates, and how college–municipality partnerships could be strengthened to improve graduate outcomes. In addition to these gaps, the literature reviewed in sections 2.2, 2.3, 2.4, and 2.5 of this chapter (Buthelezi, 2018; Mesuwini et al., 2020; Mabunda, 2020) reveals limited integration of theoretical perspectives that can collectively explain employability within the TVET civil engineering context. While human capital theory, institutional theory and stakeholder theory have each been applied independently in related studies, research that brings these lenses together—to examine how individual competencies, institutional structures and stakeholder relationships interact to shape graduate employability—is weak. No

study has been found that synthesises these dimensions into a conceptual framework specifically for TVET civil engineering graduates in South Africa. This theoretical and conceptual gap further justifies the need for the present study and motivates the development of an integrated framework to better understand employability dynamics (Adams, 2019; Mesuwini & Bomani, 2021).

2.7. Chapter summary

This chapter has provided the literature related to the study. The role of TVET colleges and municipalities for influencing the employability of TVET civil engineering graduates has been discussed in the literature. The identification of TVET colleges was discussed at both the global and local levels. The establishment of TVET colleges has been examined through the years of its restructuring and reform from the year 2002. The literature highlighted how the TVET colleges in South Africa evolved over the years.

The literature has shown that TVET colleges were established to provide employable skills for employment or/ self-employment in both the developed and developing countries. The literature reviewed in this chapter found that civil engineering was among other programmes offered at TVET colleges for employable skills and that TVET civil engineering graduates meet the employment requirements as artisans. Conversely, the literature also revealed that there were challenges that pertain to the employment of TVET civil engineering graduates and some studies proposed strategies aimed at mitigating these challenges. The strategies to mitigate the challenges pertaining to the employability of TVET civil engineering graduates were also discussed.

I further discussed the leadership and management roles of TVET college stakeholders, and gaps that prevail in the previous research regarding the perspectives that were identified and presented in this study. The next chapter presents the theoretical frameworks that underpin this study.

CHAPTER THREE

THEORETICAL FRAMEWORK

3.1. Introduction

In the previous chapter, I presented the literature review of the study. I discussed, amongst other things, the TVET colleges in SA and at a global level, how TVET colleges contribute to human capital formation, employability of TVET civil engineering graduates, and gaps in the existing literature.

In this chapter, I provide a review of literature on how scholars describe the theoretical framework as a concept, how the theories are relevant to this study, how the theoretical frameworks are applied in other studies, and I also provide a thorough discussion on how the theoretical frameworks of this study were applied.

To develop this chapter, I begin by providing an overview of the theoretical framework approach, rationale for selected theories and how it is applied in research. This is followed by a discussion of the theoretical frameworks that were applied in this study. Followed by conceptual framework for the study, I then discuss the theoretical frameworks for this study. Lastly, I provide a chapter summary.

3.2. An overview of a theoretical approach

Scholars define a theoretical framework in distinct but linked ways. For instance, Maree (2011) defines the theoretical framework by first explaining how research is written. According to Maree (2011), research writing entails the development of thoughts and generation of questions that the researcher seeks to answer through the findings of their research. Maree (2011) adds that most researchers are guided by existing thoughts or beliefs already developed by other researchers. Mandre et al. (2021) state that the thoughts and beliefs are further developed into theories and are grouped together to frame the premise on which the research is grounded or built; this is what is known as a theoretical framework.

Therefore, a theoretical framework is a foundation for the parameters or boundaries of a study through which researchers can seek answers to the topical questions they have developed on broad subjects (Haggis, 2008). Additionally, a theoretical framework can also be seen as a collection of

interrelated concepts that guide research, determining what things to measure and what statistical relationships to look for in the research (Burch, 2007).

Cai and Mehari (2015) assert that a theoretical framework provides and describes assumptions, concepts, and forms of explanations. Scott (2004) also points out that a theoretical framework covers the theories, concepts and issues which surround a research topic. According to Scott (2004), a theoretical framework helps the researcher make connections among variables and see the broader significance of findings as well as giving directions to important questions and suggesting ways for a researcher to make sense of data. Without a theoretical framework, Mandre et al. (2021) explain that it is difficult to maintain focus during a literature search to determine what should be included in a literature review. In addition, there are different theories that are applied in research and that depend on what the research seeks to achieve (Maree, 2011). Concisely and in general, a theory provides “an interpretation or clarification for why certain things happen, or they can be a model for how things happen” (Cai & Mehari, 2015, p. 18).

For this study, I present the theoretical frameworks that were applied to frame my understanding based on the research that already exists against the beliefs of the participants’ findings from the current data. The assumptions and concepts of the existing research of theories helped me to understand why and how certain perspectives exist in order to answer the research questions of the study. Thus, the current data was analysed based on literature review, assumptions, and concepts applied in the theories that helped me arrive at particular conclusion in answering the research questions.

In line with the foregoing, and for this study that examines the perspectives of stakeholders on the employability skills of TVET college civil engineering graduates in SA, three theoretical frameworks were applied, namely, human capital theory, stakeholder theory and institutional theory. Below I present the definitions of each theory and how they were applied to this study.

3.3. Human capital theory

Human capital (HC) theory in this section examines five different components that form the theoretical foundation for understanding TVET education and employability: core concepts and principles, application to TVET education, investment in skills development, returns on HC in technical education, and critiques and limitations.

3.3.1. Human capital theory and its relevance to this study

HC theory has evolved significantly through various scholarly interpretations, each emphasising distinct characteristics of the concept. Becker (1964) conceptualises HC as a collection of knowledge, creativity, and features that individuals utilise to perform their jobs effectively. This understanding aligns with Armstrong and Hamilton's (2013) description of HC as the economically valuable skills, knowledge, and capabilities possessed by individuals. The OECD broadens this definition, describing HC as the skills, competencies, abilities, and knowledge that enhance personal, social, and economic well-being (Berntson et al., 2006).

The core characteristics of HC theory encompass education level, returns on investment, health and well-being, experience, cognitive abilities, skills, and training (Schultz, 1961; Becker, 1964; Berntson et al., 2006; Vandenberghe, 1998). Vandenberghe (1998) emphasises that HC is an investment in knowledge and skills. Berntson et al. (2006) highlight its role in providing nations with competitive advantages, leading to economic growth, and enhanced societal well-being.

Berntson et al. (2006) distinguish between two forms of HC. Firstly, general HC, which they describe as knowledge obtained through education and training applicable across various contexts. Secondly, specific HC which comprises specialised skills and knowledge required for effective functioning within particular organisations. In the context of this study, HC was applied explicitly to TVET civil engineering graduates who acquire employable skills through TVET colleges. The focus aligned with the specific HC form of education and training, as these graduates obtain qualifications through specialised technical education.

A significant aspect of HC theory is its emphasis on education as an economic enabler, identifying labour as a crucial factor of production (Becker, 1964). The theory mainly focuses on attributes gained through education and experience that enhance workers' value in the labour market (Schultz, 1961). Education and training form the foundational elements of HC in society, with Vandenberghe (1998) characterising education as a national investment.

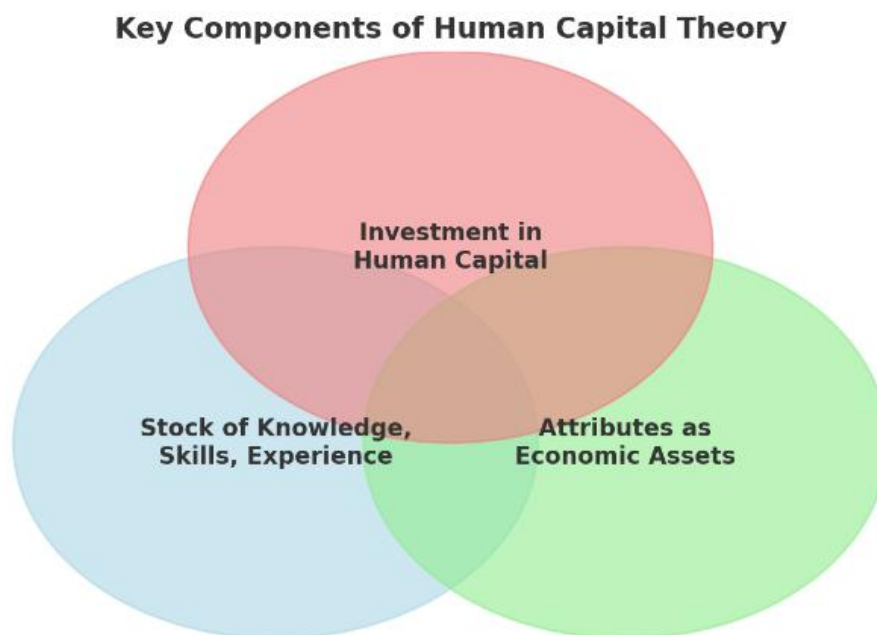
The application of HC theory in this study was particularly relevant for examining the perspectives of college stakeholders on TVET civil engineering graduates' employability. The theory aligned with specific HC formation, as civil engineering programmes at TVET colleges provide specialised engineering education, training, and skills development (Nkwanyane, 2023).

The HC theory framework enabled an understanding of how skills, knowledge, attitudes, and work experience acquired through civil engineering programmes at TVET colleges contribute to graduate employability (Becker, 1964). TVET colleges' education and training equip civil engineering graduates with specific competencies and productivity capabilities (Buthelezi, 2018). This specialised training enables graduates to either secure employment or create self-employment opportunities in the civil engineering sector (Sithole et al., 2022).

3.3.2. *Concepts of human capital theory*

HC theory comprises three key components: (1) the stock of knowledge, skills, experience, and other valuable attributes that contribute to a person's economic productivity; (2) the recognition that these attributes function as assets that generate returns through increased earnings and productivity; and (3) the emphasis on investment in HC—through education, training, healthcare, and continuous development—as a crucial factor for both individual and economic growth. These components will be further discussed in the following sections.

Figure 3.1



3.3.2.1. Stock of knowledge, skills, experience, and other valuable attributes

HC theory posits that investment in education and training enhances productivity and economic growth (Becker, 1964). Therefore, TVET institutions serve as key drivers in the development of HC by fostering knowledge acquisition, skill development, and experiential learning. The stock of knowledge, skills, experience, and other valuable attributes is a fundamental resource that contributes to individual employability, institutional effectiveness, and national economic development. In the context of TVET, this stock plays a crucial role in bridging the gap between education and industry by equipping students with competencies that are directly applicable to the labour market (Mbatha, 2023).

Knowledge in TVET extends beyond theoretical understanding to include applied, technical, and sector-specific expertise. Unlike traditional academic education, which often emphasises abstract and theoretical learning, TVET focuses on knowledge that is directly transferable to industry. For example, a student in a mechanical engineering programme at a TVET college not only learns the principles of engineering but also gains hands-on experience with machinery and tools. This applied knowledge is essential for industries that require workers with a sturdy foundation in practical problem-solving and technological adaptability (McGrath et al., 2020). Similarly, in the field of civil engineering, TVET graduates require both theoretical understanding and practical skills in construction, structural analysis, and material testing to be employable in the industry.

Skills development is at the heart of TVET, encompassing both hard and soft skills. Hard skills include technical proficiencies such as welding, electrical installation, and computer programming, which are necessary for specific trades and professions. These skills are typically developed through structured curricula that combine classroom instruction with practical training. On the other hand, soft skills—such as communication, teamwork, adaptability, and critical thinking—are increasingly recognised as essential for workplace success (UNESCO, 2012). In many cases, employers in the TVET sector prioritise candidates who not only possess technical expertise but also demonstrate strong interpersonal and problem-solving abilities, as these attributes enhance workplace productivity and innovation.

Experience is another critical component of human capital in the TVET sector. Work-integrated learning, apprenticeships, and internships provide students with opportunities to apply their knowledge and skills in real-world settings. These experiential learning approaches help bridge

the disconnect between education and employment by allowing students to gain first-hand industry experience before graduation (Mitchell et al., 2016). Moreover, industry exposure enables students to understand workplace dynamics, develop professional networks, and enhance their employability. Research indicates that TVET graduates with practical experience are more likely to secure employment than those who have only classroom-based training (Powell & McGrath, 2019).

In addition to knowledge, skills, and experience, other valuable attributes—such as creativity, resilience, and adaptability—contribute significantly to success in the TVET sector. The rapid evolution of industries due to technological advancements, globalisation, and changing labour market demands necessitates a workforce that is not only technically competent but also flexible and innovative. For instance, the rise of digitalisation and automation in various industries requires TVET graduates to continuously upskill and reskill to remain relevant (Powell & McGrath, 2019). Institutions must therefore integrate lifelong learning principles into their curricula to ensure that graduates can adapt to emerging challenges and opportunities.

Despite the critical role of TVET in developing HC, several challenges hinder its effectiveness. Inadequate funding, outdated curricula, and limited industry partnerships often result in skills mismatches, where graduates are unable to meet the demands of employers (UNESCO, 2012). Addressing these issues requires a collaborative approach involving policymakers, educators, industry stakeholders, and learners. Strengthening industry linkages, modernising training facilities, and enhancing teacher professional development are essential strategies for improving the quality and relevance of TVET programmes.

The above discussion aligns with the objectives of this study, which sought to explore college stakeholders' perspectives on the employability of TVET civil engineering graduates. By understanding these perspectives and using HC theory, the study was able to identify how and why such views prevail among college stakeholders, shedding light on the underlying institutional, economic, and industry-related factors influencing their stance. Furthermore, the research was able to examine how stakeholders, including senior college management in the academic unit, municipalities, and industry representatives, can effectively contribute to improving the employability of graduates. These insights were crucial for strengthening TVET policies, refining

curriculum design, and fostering partnerships that bridge the gap between education and industry, ultimately enhancing graduate readiness for the labour market.

3.3.2.2. Investment in education and training

HC theory posits that investments in education, training, and skills development enhance individuals' productivity and earning potential (Becker, 1964). Vandenberghe (1998) emphasises that both individuals and industries investing in skills development through education, training, and experience can increase productivity and efficiency in the labour market, particularly in response to evolving technological demands.

Schultz (1961) identifies multiple pathways for HC accumulation, including education, training, migration, and health. This multifaceted approach enables employees to acquire knowledge, skills, and abilities through various channels. Industries invest in HC viewing it as an asset, anticipating future returns on their investment (Schultz, 1961). This perspective marks a shift from the traditional view of human resources as merely a cost to be minimised.

In the context of specific HC, Becker (1964) distinguishes it from general training, noting that specific skills investments often lead to lower employee turnover rates; shared cost arrangements between industries and workers; mutual benefits for both employers and employees; and enhanced contractual relationships. For TVET education specifically, colleges and civil engineering industries investing in skills development contribute to graduate employability and workplace productivity. This investment in specific HC, particularly in artisan skills development, enables TVET civil engineering graduates to secure employment or pursue entrepreneurial opportunities.

3.3.2.3. Returns through increased earnings and productivity

The returns on HC investment in technical education manifest through various channels, particularly in the context of TVET colleges, which provide specialised technical education aimed at enhancing graduates' employability and workplace productivity in the civil engineering sector (Mesuwini & Bomani, 2021). In examining the perspectives of college stakeholders regarding TVET civil engineering graduates' employability, it was significant to note that vocationally trained individuals demonstrate increased employability prospects and potential for better remuneration in their specific fields, as highlighted by Vandenberghe (1998) in his analysis of HC returns. This understanding was further strengthened by recent research conducted by Nkwanyane

(2023), which reveals that TVET civil engineering graduates become particularly competitive candidates for artisan positions due to their specialised skills and competencies acquired through technical education.

The relationship between HC and industry outcomes in the context of TVET civil engineering education operates through several interconnected mechanisms, including the enhancement of labour quality through comprehensive development of knowledge, skills, and competencies as theorised by Becker (1964), alongside the achievement of higher qualification levels specifically designed to meet construction industry needs (Vandenberghe, 1998). Furthermore, this relationship extends to broader economic impacts through the development of an educated workforce that contributes positively to economic growth (Berntson et al., 2006), while simultaneously fostering the development of flexible, adaptable, and skilled workers who can effectively respond to the evolving demands of the civil engineering industry.

The analysis of returns on HC investment in TVET civil engineering education revealed multiple interconnected perspectives that were relevant to this study: industry-sponsored specific training programmes have been shown to reduce layoff rates within civil engineering firms, while worker-financed specific training leads to lower quit rates among technical professionals. These outcomes were complemented by organisational benefits, including enhanced productivity and reduced turnover in technical positions, as well as individual benefits for TVET graduates, such as improved career advancement opportunities and increased earning potential within the civil engineering sector.

The concept of HC demonstrates a particularly strong correlation with employability in the TVET civil engineering context, manifesting through several key pathways: the development of specialised skills and competencies acquired through practical experience and technical training programmes, the cultivation of intangible assets that prove crucial for industry performance and innovation, sustained individual investment in education and competence development throughout one's career, and the accumulation of relevant work experience, demonstrated job performance, and organisational tenure within the civil engineering field. These elements collectively contributed to the overall employability outcomes that this study sought to examine through the perspectives of college stakeholders.

3.3.3. Critiques and limitations

Despite its significant contributions since its modern inception in the 1960s (Schultz, 1961; Becker, 1964), HC theory faces several important critiques that this study acknowledges and addresses through its comprehensive research design and theoretical framework integration.

The theoretical limitations of HC theory include the oversimplification of the complex relationship between education and work, particularly in technical fields like civil engineering (Vandenberghe, 1998). The theory's assumption of linear pathways between education and productivity fails to capture the nuanced nature of skills development in TVET education (Berntson et al., 2006), while its limited explanation of how education augments productivity and insufficient attention to social background factors presents challenges in understanding graduate employability comprehensively (Schultz, 1961). This study addressed these limitations by incorporating stakeholder and institutional theories alongside HC theory, thereby providing a more holistic framework for examining TVET civil engineering graduates' employability.

Significant methodological concerns arise in the application of HC theory, including the challenges in measuring intangible aspects of HC and the difficulty in isolating education's specific effects on productivity in technical fields (Becker, 1964). The complex relationship between training and earnings, coupled with oversimplified assumptions about labour market dynamics, particularly affects our understanding of TVET graduates' employment outcomes (Vandenberghe, 1998). This study mitigated these concerns by employing a qualitative research approach that captured the rich perspectives of multiple college stakeholders, allowing for a more nuanced understanding of how TVET education contributes to graduate employability.

The practical considerations in applying HC theory reveal its tendency to focus primarily on education and training while potentially overlooking other crucial factors affecting employability (Berntson et al., 2006). The theory's assumption that economic growth depends solely on HC development (Schultz, 1961) and its limited consideration of social and structural factors presents challenges in applying the theory across different contexts, particularly in the TVET sector (Vandenberghe, 1998). This study addressed these practical limitations by examining the perspectives of various stakeholders, including industry partners, educators, and administrators, thereby incorporating multiple viewpoints on the factors affecting TVET civil engineering graduates' employability.

These criticisms highlight the need for a more nuanced understanding of the relationship between education, skills development, and employment outcomes in the TVET sector (Becker, 1964; Berntson et al., 2006). While HC theory provides valuable insights into the role of education and training in economic development, this study strengthened its theoretical foundation by integrating it with stakeholder and institutional theories. This study's integrated theoretical framework enabled a more comprehensive understanding of employability and workforce development in the context of TVET civil engineering education (Vandenberghe, 1998; Berntson et al., 2006). The study specifically addressed these limitations by examining the perspectives of college stakeholders on TVET civil engineering graduates' employability, considering not only the human capital aspects but also the institutional and stakeholder dimensions that influence employment outcomes (Schultz, 1961; Becker, 1964).

3.4. Stakeholder theory

Building upon HC theory's focus on skills development and educational investment, stakeholder theory (ST) provided a complementary framework for understanding how various actors influence and contribute to TVET education outcomes. ST had been used in various contexts, including governance and sustainability. Since then, it has become more widely accepted, relevant, and used to manage business and research practices and examine situations in higher education (Freeman, 2010). This section examines stakeholder theory through its fundamental concepts, stakeholder identification and analysis, power relations and influences, network dynamics in TVET, and challenges in stakeholder management.

3.4.1. Stakeholder theory and its relevance to this study

The applicability of ST to this study lies in its ability to illuminate how the employability of TVET civil engineering graduates is shaped by the interactions, expectations and decisions of multiple actors within the training and employment ecosystem. TVET colleges do not operate in isolation; their programme choices, curriculum delivery and graduate preparation practices are strongly influenced by local municipalities, construction companies, community stakeholders, and regulatory bodies. ST therefore provides a suitable lens for examining how these actors prioritise different interests, negotiate influence and contribute—directly or indirectly—to graduate employability. This is particularly relevant in a context where alignment between training provision and labour-market expectations is critical for employment outcomes.

This study employed ST as its theoretical framework to examine the complex relationships and perspectives surrounding TVET civil engineering graduate employability. ST, first prominently introduced by Freeman (1984), provides a comprehensive framework for understanding how organisations interact with and manage relationships among various groups that have a stake in the organisation's operations and outcomes. In the context of TVET colleges, these stakeholders included college management, local municipalities, industries, communities, and graduates themselves.

The application of ST was particularly appropriate for this study for several fundamental reasons. First, the theory recognises that organisations operate within a network of interconnected relationships and must balance diverse interests to achieve optimal outcomes (Freeman, 2010). This directly aligned with how TVET colleges must coordinate with multiple stakeholders to design and deliver programmes that meet local socio-economic needs while ensuring graduate employability (Mabunda, 2020).

Furthermore, ST emphasises the importance of collaborative decision-making and shared responsibility among different stakeholder groups (Donaldson & Preston, 1995). This theoretical lens was particularly relevant given that TVET college programme selection involves consultation with municipalities, local industries, and community stakeholders (Mesuwini & Bomani, 2021). The theory helped to analyse how these various groups participate in and influence organisational decisions that ultimately affect graduate employment outcomes.

ST also provided a framework for understanding power dynamics and responsibility distribution among distinct groups (Mitchell et al., 2016). In the TVET context, this helped examine how different stakeholders—from college management to local industries—share responsibility for and influence graduate employability. This aspect of the theory was particularly relevant as the study aimed to understand not only stakeholder perspectives but also how these stakeholders can actively enhance graduate employment opportunities.

The theory's emphasis on long-term relationship management (Powell & McGrath, 2019) aligned with the study's focus on creating sustainable employment pathways between TVET colleges and local industries. This theoretical perspective helped to examine how colleges can build and maintain effective relationships with industry partners to ensure consistent employment opportunities for their graduates.

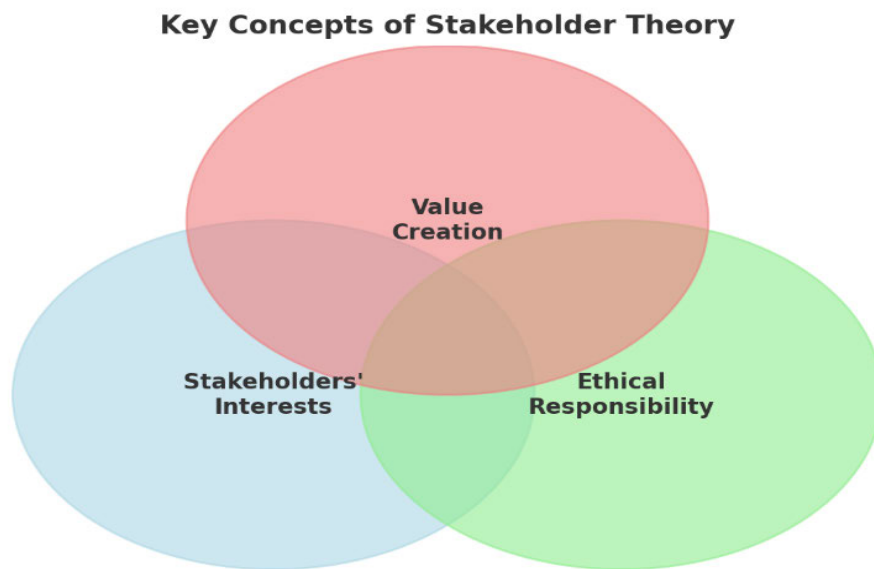
Additionally, ST focus on value creation through stakeholder relationships (Harrison et al., 2010) provided a useful lens for analysing how TVET colleges can optimise their programme offerings and graduate preparation to create value for all stakeholders involved. This included value for graduates in terms of employment opportunities, for industries in terms of skilled workforce availability, and for communities in terms of economic development.

By applying ST to this research, I could better understand the complex web of relationships, responsibilities, and interests that influence TVET graduate employability. This theoretical framework guided the study's investigation of stakeholder perspectives and their potential role in enhancing graduate employment outcomes in the civil engineering field.

3.4.2. Fundamental concepts of stakeholder theory

ST has evolved through heterogenic theoretical developments, comprehensively summarised in Donaldson and Preston's seminal education institution work (Freeman & Evan, 1990). Freeman (1984, p. 25) defines stakeholders as "any group or individual who can affect or is affected by achieving the organisation's objectives". This definition has been further refined to distinguish between primary stakeholders, who have a direct stake in the organisation's activities, and secondary stakeholders, who have an indirect stake (Freeman & Evan, 1990). External and internal stakeholders in the context of TVET education, stakeholders can be categorised into four primary groups: providers, users of products, users of outputs, and employees of the sector (Freeman, 2010). Within TVET colleges, these stakeholders included management, employees, suppliers, the local community, and customers, all represented through various governance structures. The theory emphasised that relationships between organisations and stakeholders are based on moral commitments rather than merely profit optimisation (Miles, 2011).

Figure 3.2



The theory encompasses three distinct but interrelated approaches: descriptive, instrumental, and normative. The descriptive approach aims to understand how stakeholders interact and represent their interests, viewing organisations as constellations of both competitive and cooperative interests (Freeman & Evan, 1990). The instrumental approach examines the connections between stakeholder management practices and the achievement of organisational goals, while the normative approach focuses on identifying moral and philosophical guidelines for organisational management (Freeman, 1984).

The normative core of ST addresses fundamental questions about organisational responsibilities toward stakeholders and the rationale for considering interests beyond those of shareholders (Freeman, 1984).

3.4.2.1. Stakeholder interest and analysis in TVET context

The stakeholder theory emphasises the necessity of enterprises considering the demands and interests of stakeholders, including consumers, suppliers, the community, and shareholders. It was later elaborated upon and refined by the work of researchers like Freeman, Evan, and Miles (Miles,

2011). The theory examines stakeholder interests based on numerous factors including power, legitimacy, resource dependency, and mutual recognition of roles in graduate employability (Miles, 2011). These stakeholders are perceived to have an interest in the employability of TVET civil engineering graduates' studies.

In addition, Miles (2011) claims that the interest (claim, stake, risk etc.) may be based on power, legitimacy or urgency, proximity or frequency of contact, derived from resource dependency of invested resources, ownership or fiduciary duty, sacrifice made or recognition that the stakeholder has something to lose. However, it may also be based on concern, beneficence, a duty of care, obligation, responsibility, and fairness, because the stakeholder interest is held to have intrinsic value as determined by managerial values of organisational culture. This study examined the college stakeholders' interest on bases of legitimacy or power or resource dependency of invested resources or recognition on each other's roles on the TVET civil engineering graduates' employability. The college stakeholders from the college were also evaluated to see if they produce a workforce that can be employed by the industries. Similarly, the industries were assessed to determine their interest in employing TVET civil engineering graduates.

Bosse et al. (2009) define ST as a theory of dissimilar categories that include promoting understanding and managing stakeholder needs, wants, and demands, and thus representing a holistic and responsible framework that goes beyond the focus of shareholders in decision-making processes (Mbatha, 2023). This, in turn enables organisations to be strategic, maximise their value creation, and safeguard their long-term success and sustainability.

ST has been used in several nations to study the stakeholder roles in TVET institutions (Freeman, 2010). The stakeholder theory proposes that organisations are accountable to shareholders and other stakeholders (Miles, 2011). Thus, TVET colleges' management is accountable to the stakeholders to ensure full functionality of their organisation and make it achieve its organisational goals.

3.4.2.2. Value creation

Value creation is a central concept in ST, emphasising that businesses and institutions must generate benefits not only for shareholders but for all stakeholders, including employees, customers, suppliers, and the broader community (Freeman, 1984; Bosse et al., 2009). In the

context of TVET, value creation referred to the ability of educational institutions to produce skilled graduates who could contribute effectively to the labour market. This involves aligning curricula with industry demands, fostering partnerships with employers, and ensuring that students gain both the technical and soft skills necessary for employability (Harrison et al., 2010). By creating value for students, employers, and society, TVET institutions fulfil their broader social and economic responsibilities, demonstrating that education is not merely a personal investment but a collective asset that benefits multiple stakeholders.

In relation to this study, value creation was particularly relevant in examining how TVET colleges contribute to the employability of civil engineering graduates. Employers expect graduates to possess industry-relevant skills, while students seek education that enhances their career prospects. The role of college stakeholders—such as lecturers, administrators, industry partners, and policymakers—is crucial in ensuring that TVET institutions effectively meet these expectations. When stakeholders collaborate to improve curriculum relevance, provide workplace-based learning opportunities, and facilitate job placements, they collectively create value for graduates by enhancing their employment prospects (Donaldson & Preston, 1995). Without such efforts, TVET graduates may face skills mismatches, reduce their employability and weakening the value that education is intended to provide.

Furthermore, value creation extends beyond immediate employment outcomes to the long-term sustainability of the TVET sector. A formidable reputation for producing competent graduates can attract more students to enrol, encourage industry collaboration, and secure government or private sector investment in TVET programmes (Mitchell et al., 2016). This cycle of value creation ensures that TVET institutions remain responsive to labour market needs and continue to serve as engines of economic development. Therefore, this study explored how college stakeholders perceive and contribute to value creation in enhancing the employability of civil engineering graduates, aligning with the research objectives of understanding stakeholder perspectives, identifying influencing factors, and evaluating their contributions to employability.

3.4.2.3. Ethical responsibility

ST, as articulated by Freeman (1984), emphasises that organisations do not operate in isolation but rather within a network of interdependent stakeholders whose interests must be considered to achieve long-term sustainability and legitimacy. Ethical responsibility, a core component of

stakeholder theory, underscores the obligation of institutions to balance power dynamics and distribute influence equitably among stakeholders (Freeman & Evan, 1990). Within the TVET sector, this requires that governance structures actively engage all relevant stakeholders, including employers, industry representatives, policymakers, and students, to ensure that institutional policies and educational programmes remain responsive to labour market demands and societal expectations. Ethical responsibility in stakeholder management is, therefore, fundamental in fostering accountability and ensuring that TVET institutions fulfil their mandate of producing employable graduates who possess both technical expertise and industry-relevant skills.

The college council serves as the highest decision-making body within TVET institutions, entrusted with a threefold responsibility: providing strategic direction, formulating, and adopting policies, and monitoring institutional performance. To ensure best governance practices, the council must implement a stakeholder engagement plan that is consistently reported at council meetings (Freeman, 2010). Additionally, its duties include developing a college statute, formulating a language policy, ensuring accreditation compliance, and adopting a student support service policy in collaboration with key stakeholders such as the SRC and the academic board (DHET, 2012). These responsibilities highlight the ethical duty of the council to act in the interests of multiple stakeholders, ensuring that decision-making processes are inclusive, transparent, and aligned with the needs of students, educators, industry partners, and society at large.

In relation to this study, ethical responsibility within ST was critical in examining how TVET college stakeholders influence the employability of civil engineering graduates. TVET colleges are accountable not only to students but also to industry partners and society, requiring them to align curricula, training approaches, and institutional policies with the evolving demands of the labour market. The extent to which governance structures facilitate meaningful stakeholder participation directly affects graduates' job readiness and career prospects. This study employed stakeholder theory as a framework to explore how power-sharing mechanisms, stakeholder engagement, and governance decisions shape efforts to enhance the employability of civil engineering graduates in TVET institutions. By assessing how various stakeholders fulfil their ethical responsibilities, this research aimed to uncover the effectiveness of stakeholder-driven strategies in improving graduate outcomes.

3.4.3. *Challenges in stakeholder management*

Stakeholder management within TVET colleges presents significant challenges, particularly concerning governance structures, power dynamics, and stakeholder engagement. Freeman (1984) argues that organisations are composed of individuals who bear responsibilities, rather than the organisation itself holding direct obligations. From this perspective, an organisation's primary function is to engage in a profit-generating activities TVET colleges within established legal and ethical boundaries. This raises concerns regarding the extent to which stakeholder interests are effectively integrated into institutional decision-making processes. Additionally, Freeman (1984) critiques the broad definition of stakeholders within ST, asserting that its practical implementation is difficult due to managerial time constraints and the complexities involved in addressing diverse stakeholder expectations.

A major challenge in stakeholder management lies in the uneven distribution of power among stakeholder groups, where certain actors hold disproportionate influence over institutional decisions (Freeman, 1984; Mbatha, 2023). This is particularly evident in high-risk situations where leadership is constrained by urgent demands, external pressures, and limited access to relevant information (Freeman & Evan, 1990). The degree to which stakeholders can influence institutional policies is determined largely by leadership perspectives and the prioritisation of conflicting interests (Freeman, 1984). Furthermore, the ambiguity within ST regarding conflict resolution mechanisms complicates governance efforts, as it assumes that stakeholder interests can be balanced through mutually beneficial decision-making (Freeman, 1984). However, in practice, institutional governance is often shaped by immediate economic considerations rather than an idealised model of stakeholder inclusivity.

Governance challenges in TVET colleges further exacerbate stakeholder management complexities. Mbatha (2023) highlights significant gaps between the intended role of governance structures and the practical realities of their implementation. Compliance challenges, including structural limitations and regulatory requirements, pose substantial barriers to effective governance. Additionally, the lack of continuity in council terms creates governance vacuums, leading to financial and operational difficulties. These governance gaps contribute to weakened stakeholder engagement, as decision-making becomes fragmented and lacks long-term strategic coherence. Freeman (2010) notes that the extent to which institutions consider social and

environmental objectives depends largely on how stakeholders perceive their influence over governance structures. Within TVET institutions, economic considerations often dominate strategic decision-making, with stakeholder engagement serving as a secondary consideration rather than a central governance principle (Freeman & Evan, 1990).

To mitigate these challenges, Mbatha (2023) recommends several key interventions. Establishing systematic handover processes between council terms is crucial to ensure continuity in governance, knowledge retention, and effective stakeholder engagement. Additionally, fostering clear communication channels and ensuring meaningful stakeholder participation in governance discussions can enhance transparency and accountability. Proper oversight during transition periods is also essential to prevent governance vacuums and minimise the risks associated with leadership discontinuity. By integrating these strategies, TVET colleges can improve stakeholder relations, strengthen governance structures, and enhance the employability of their graduates (Mbatha, 2023).

This study applied ST to critically assess how governance structures, stakeholder engagement, and institutional decision-making influence the employability of TVET civil engineering graduates. By examining governance challenges and stakeholder power dynamics, this research sought to understand the extent to which stakeholder participation contributes to policy formulation and curriculum alignment with labour market demands. Addressing governance gaps and enhancing stakeholder collaboration was instrumental in creating a more effective and sustainable TVET system.

3.5. Institutional theory

Lastly, I discuss institutional theory (IT) in this section as a last theoretical framework that was applied in this study. The principles and concepts, institutional pressures and responses, organisational legitimacy, institutional change in TVET colleges, and institutional constraints are amongst other things that are discussed in these IT sections.

3.5.1. *Institutional theory and relevance to this study*

Cai and Mehari (2015) define IT as a theoretical framework for social (organisations) phenomena in institutions, which views the social world as being significantly comprised of institutions. According to Burch (2007), IT is defined as a process by which structures, including schemes,

rules, norms, and routines, becomes established as authoritative for social behaviour. IT studies organisational forms and explains why forms are similar within an organisational field. In this way, it does that through understanding organisations and management practices as the product rather than economic pressures (Burch, 2007; Mandre et al., 2021).

This study employed IT as its theoretical framework to examine how TVET colleges operate within and respond to their institutional environment in relation to graduate employability. IT, developed through seminal works by Meyer and Rowan (1977) and DiMaggio and Powell (1983), provides a robust framework for understanding how organisational structures, practices, and behaviours are shaped by broader social, cultural, and regulatory contexts rather than purely by rational efficiency concerns.

The application of IT was particularly relevant for this study for several fundamental reasons. First, TVET colleges operate within a complex institutional environment comprising regulatory frameworks, social expectations, and established practices that influence their programme offerings and operational decisions. As noted by Mabunda (2020), TVET colleges must align their skills programmes with local socio-economic needs, demonstrating how these institutions respond to both formal and informal institutional pressures in their environment.

Furthermore, IT provided a framework for understanding how TVET colleges navigate institutional complexity—the presence of multiple, sometimes competing institutional demands (Greenwood et al., 2011). This was particularly relevant as colleges must balance various stakeholder expectations: industry demands for specific skills, community needs for employment opportunities, and regulatory requirements for educational standards.

The theory also helped explain the persistence of certain practices and potential resistance to change in TVET institutions. Through the concept of institutional logics (Thornton & Ocasio, 2008), we would better understand how deeply embedded beliefs and practices influence programme delivery and stakeholder relationships. This understanding was crucial when examining why certain approaches to graduate employability persist despite potential inefficiencies.

Additionally, institutional theory's recent (20 years ago) developments in understanding institutional work (Lawrence & Suddaby, 2006) provided insights into how TVET colleges and

their stakeholders actively work to create, maintain, or disrupt institutional arrangements affecting graduate employability. This perspective was particularly valuable for examining how colleges can enhance their graduates' employment prospects while working within established institutional frameworks.

By applying IT to this research, we would better understand how institutional forces shape TVET colleges' approaches to graduate employability, their relationships with stakeholders, and their capacity for institutional change. This theoretical framework guided the study's investigation of not only stakeholder perspectives but also the institutional context that shapes these perspectives and influences graduate employment outcomes in the civil engineering field.

The IT framework was particularly apt for this study as it helped explain both the constraints and opportunities TVET colleges face in their efforts to enhance graduate employability. It provided a theoretical lens through which to examine how these institutions could work within their institutional environment while also potentially transforming it to better serve their graduates' employment needs.

3.5.2. Key concepts of institutional theory and their application to TVET graduate employability

Five key concepts of IT are discussed in this section, namely, institutional isomorphism, organisational legitimacy, institutional logistics and complexity, institutional work, and field-level dynamics. These key concepts are discussed in relation to how they were applied in this study.

3.5.2.1. Institutional isomorphism

Institutional isomorphism, a fundamental concept introduced by DiMaggio and Powell (1983), explains how organisations within the same field tend to become increasingly similar over time. In the context of TVET colleges, this manifested through three distinct mechanisms: coercive isomorphism, mimetic isomorphism, and normative isomorphism. Coercive isomorphism emerges through regulatory pressures and government mandates that shape how colleges structure their programmes and engage with stakeholders. Mimetic isomorphism occurs as colleges respond to uncertainty by modelling themselves after successful institutions, particularly in addressing graduate employability challenges. Normative isomorphism develops through professional standards and industry expectations that influence civil engineering programme content and

delivery. These isomorphic pressures helped explain why TVET colleges adopt similar approaches to stakeholder consultation and programme development (Mesuwini & Bomani, 2021).

3.5.2.2. Organisational legitimacy

Legitimacy, as conceptualised by Suchman (1995), represents organisations' pursuit of social acceptance and credibility through conformity to institutional expectations. For TVET colleges, legitimacy is crucial as they have to demonstrate their value and relevance to multiple stakeholders. This concept was particularly relevant to understanding how colleges align their programmes with local industry needs and maintain credibility with employers through graduate competency. The consultation processes with municipalities and community stakeholders, as highlighted by Mabunda (2020) and Mesuwini and Bomani (2021), can be understood as legitimacy-seeking behaviours that help colleges maintain their social license to operate.

3.5.2.3. Institutional logics and complexity

Institutional logics, as theorised by Thornton and Ocasio (2008), comprise the cultural beliefs, rules, and practices that shape organisational behaviour. In TVET education, multiple institutional logics coexist and sometimes compete. These include educational logics focused on academic standards, industry logics emphasising practical skills, and community logics prioritising local development. This multiplicity creates institutional complexity, where colleges have to navigate competing demands from different stakeholders. Understanding these logics helped explain the underlying assumptions about what makes graduates employable and how different stakeholders' values influence programme design and implementation.

3.5.2.4. Institutional work

The concept of institutional work, developed by Lawrence and Suddaby (2006), focuses on the purposive actions of organisations and individuals to create, maintain, or disrupt institutional arrangements. This framework was particularly relevant for examining how TVET colleges actively work to establish new practices for enhancing employability. It helped analyse how colleges and industry partners collaborate to create new institutional arrangements that better serve graduate employment needs. The concept also illuminated stakeholders' efforts to influence programme design and delivery, showing how institutional change occurs through deliberate action.

3.5.2.5. Field-level dynamics

Field-level dynamics examine the relationships and interactions between organisations operating within the same institutional field. In the TVET context, this includes the complex networks between colleges, local industries, municipalities, and community stakeholders. These relationships significantly influence graduate employment outcomes and programme effectiveness (Lawrence & Suddaby, 2006). Understanding field-level dynamics helped explain how different stakeholders coordinate their efforts to enhance graduate employability and how institutional changes spread across the TVET sector.

These five key concepts of IT provided a robust framework for analysing how TVET colleges operate within their institutional environment to enhance graduate employability (Scott, 2004; Cai & Mehari, 2015). By examining isomorphic pressures, legitimacy-seeking behaviours, competing institutional logics, institutional work, and field-level dynamics, we can better understand the challenges and opportunities in improving civil engineering graduates' employment outcomes. This theoretical framework guided both the research design and analysis, helping to uncover the institutional factors that influence TVET colleges' effectiveness in preparing graduates for employment.

3.5.3. Critique of institutional theory in TVET sector

IT provides a valuable framework for understanding the structural and regulatory constraints that shape organisational behaviour. However, it has been widely critiqued for its deterministic nature, which often downplays the role of individual agency and the potential for meaningful change. In the context of TVET governance, IT suggests that educational leaders and administrators operate within rigid frameworks that limit innovation and adaptability (Mandre et al., 2021). While this perspective helps explain the persistence of governance challenges, it risks oversimplifying the complexities of decision-making in dynamic educational environments.

One key criticism of IT is its tendency to assume that organisations, including TVET colleges, primarily conform to established norms for legitimacy rather than effectiveness (Scott, 2004). This conformity can lead to superficial reforms where institutions adopt policies and practices that signal compliance rather than drive substantive improvements. For example, TVET colleges may introduce new governance frameworks or curriculum adjustments to align with policy directives,

yet these changes may have little real impact on the employability of graduates. As Khalil (2021) argues, the pursuit of institutional legitimacy can sometimes result in cyclical, symbolic changes rather than transformative reforms that address core issues.

Moreover, IT has been criticised for being overly broad, treating all external pressures as institutional forces while overlooking other influential factors, such as economic trends, political agendas, and local industry needs (Burch, 2007). This perspective can obscure the role of agency in shaping governance outcomes. Cai and Mehari (2015) argue that while institutional norms influence decision-making, individual leaders, policymakers, and stakeholders still possess the capacity to challenge outdated structures and implement reforms that better align with labour market demands. However, IT does not adequately account for these instances of strategic agency, making it a somewhat restrictive lens for analysing governance dynamics in TVET institutions.

Another challenge with IT is its failure to account for cultural diversity and contextual differences across organisations (Braunscheidel et al., 2011). Governance structures and stakeholder relationships in TVET colleges are not merely dictated by institutional constraints but are also shaped by socio-cultural, economic, and historical contexts. IT often assumes homogeneity in organisational responses to external pressures, yet in reality, TVET institutions operate within diverse environments that demand context-specific strategies.

Despite these criticisms, IT remained useful for understanding the persistence of governance challenges in TVET colleges. However, its limitations highlighted the need for a more nuanced approach—one that integrates perspectives on agency, context, and industry dynamics. By critically assessing institutional constraints while acknowledging opportunities for stakeholder-driven change, this study sought to provide a more balanced understanding of how governance structures impact the employability of TVET civil engineering graduates.

3.6. Conceptual framework for the study

This conceptual framework constitutes the central analytical outcome of the study. It synthesises HC Theory, IT and ST into a single explanatory structure that demonstrates how the employability of TVET civil engineering graduates is shaped through interacting levels of influence (Becker, 1964; Scott, 2004; Bosse et al., 2009; Cai & Mehari, 2015). At the micro level, employability is driven by the skills, knowledge, attitudes and adaptability developed through TVET programmes

(Becker, 1964). At the meso level, institutional structures, curriculum practices, governance systems and work-integrated learning arrangements condition how these skills are developed and recognised (Scott, 2004; Cai & Mehari, 2015; Mesuwini et al., 2020). At the macro level, stakeholder relationships, labour-market expectations, employer preferences and policy priorities determine how graduates are absorbed into employment (Bosse et al., 2009; Buthelezi, 2018; Mesuwini & Bomani, 2021). Rather than treating these influences in isolation, the framework shows how they operate together to produce the employability patterns observed in this study (Nkalane, 2018; Jansen, 2020; Mtshali, 2021). By combining these perspectives, the conceptual framework illustrates how curriculum delivery, workplace exposure, institutional legitimacy, labour-market requirements and stakeholder relationships collectively influence graduate employability in the South African context. This framework guided the analysis and interpretation of the findings by providing a structured lens through which the dynamics of TVET employability could be understood.

3.7. Integration of the three theoretical perspectives

The integration of HC theory, ST, and IT was essential for this study, as it aimed to explore the perspectives of TVET college stakeholders on the employability of civil engineering graduates. These theories were selected based on their relevance to the study's objectives, providing a comprehensive framework to understand how education, stakeholder engagement, and institutional factors influence graduate employability.

Again, the integration of these theoretical frameworks is consistent with the policy orientation of the SDGs, particularly SDG 4 and SDG 8, as they collectively emphasise the relationship between education, institutional responsiveness, stakeholder collaboration, and labour market outcomes (United Nations, 2015).

HC theory underscores the importance of education, training, and skill development in enhancing employability and economic productivity (Becker, 1964). In the context of TVET colleges, this means equipping civil engineering graduates with industry-relevant competencies to secure employment and contribute meaningfully to the workforce. However, achieving this requires collaboration with key stakeholders, including employers, industry representatives, and policymakers, to align training programmes with labour market demands. This study integrates human capital, stakeholder, and institutional theories by showing how skills

development (HC), stakeholder relationships and expectations (ST), and institutional pressures and norms (IT) collectively shape graduate employability. This integration clarifies the mechanisms through which stakeholder perspectives are formed and how institutional contexts influence both training and employment outcomes.

ST emphasises the role of stakeholders who influence or are affected by an organisation's success (Freeman & Evan, 1990). In TVET education, this includes employers, government agencies, and students, whose expectations shape curriculum design, training quality, and employment outcomes. Engaging stakeholders effectively ensures that graduates acquire the necessary skills and qualifications to meet industry requirements, enhancing their employability and economic contributions.

IT highlighted how organisations conform to external pressures, such as policies, regulations, and industry standards, to maintain legitimacy and ensure survival (Cai & Mehari, 2015). TVET colleges operate within the framework set by the DHET, which dictates policies and quality assurance measures. Additionally, industries exert influence by setting employment criteria that colleges must consider in their training programmes. Institutional pressures, such as accreditation requirements and funding conditions, further shape how TVET colleges structure their programmes to produce competitive graduates.

The integration of these three theories provided a holistic approach to understanding the employability of TVET civil engineering graduates. HC theory framed the role of education and training, ST highlighted the importance of industry and institutional collaboration, and IT contextualised the regulatory and external pressures influencing TVET colleges. Together, these theories complemented each other in analysing how TVET institutions navigate challenges and opportunities to enhance graduate employability.

Taken together, these three theoretical lenses operate as a unified explanatory mechanism rather than parallel stand-alone perspectives. HC theory clarifies the rational expectation that skills acquisition should improve employment prospects for TVET civil engineering graduates. IT explains why this expectation frequently breaks down in practice: employers rely heavily on legitimacy cues, perceived risk, and institutional norms when making hiring decisions, often overriding the value of acquired skills. ST further illuminates how these legitimacy norms and perspectives are produced, reinforced, and contested by actors with unequal level of influence –

such as municipality, contractors, college managers. When read as a dynamic system, the three theories interact to explain why graduates who possess' foundational competencies may still struggle to access employment. This integrated mechanism strengthens the analytical framework of the study by showing how individual capacity, institutional pressures, and stakeholder power relations combine to shape employability outcomes (Buthelezi, 2018; Adams, 2019; Mabunda, 2020; Mesuwini & Bomani, 2021)

3.8. Methodological alignment with theoretical framework

The integration of HC theory, IT, and ST in this study necessitated a methodological approach that could effectively capture the complex interplay between skills development, institutional dynamics, and stakeholder perspectives. A qualitative research design, specifically employing a case study approach, aligned well with these theoretical frameworks for several reasons below.

HC theory's emphasis on skills development and economic value of education requires methods that could deeply explore how TVET colleges develop HC through their civil engineering programmes. Semi-structured interviews with college senior managers and employers from the municipalities and civil engineering construction company can reveal the nuanced ways in which specific skills and competencies translate into employment outcomes. This approach allowed for detailed examination of how HC is developed, valued, and utilised within the local economic context (Schultz, 1961; Becker, 1993).

Institutional theory's focus on organisational structures, practices, and environmental pressures demands methods that could uncover both formal and informal institutional arrangements. Document analysis of college policies, programme curricula, and industry requirements helped reveal institutional patterns and isomorphic tendencies. Interviews with college management and industry stakeholders could illuminate how institutional pressures shape programme offerings and employment practices. Focus group discussions could expose the underlying institutional logics that influence stakeholder decisions and actions (DiMaggio & Powell, 1983; Scott, 2008).

ST's emphasis on multiple perspectives and relationships requires methods that can capture diverse viewpoints and interactions. The use of multiple data collection methods—interviews, focus groups, and document analysis—allowed for triangulation of stakeholder perspectives. This approach helped to understand how different stakeholders influence TVET education and

employment outcomes. Case study methodology is particularly well-suited to ST as it enables in-depth examination of relationships and power dynamics among various stakeholders (Freeman et al., 2010).

The combination of these three theories necessitated a rich, descriptive approach to data collection and analysis. Thematic analysis, informed by these theoretical frameworks, could help identify patterns that reflect HC development, institutional influences, and stakeholder interactions. This methodological alignment ensured that the research captured both the breadth of stakeholder perspectives and the depth of institutional and HC considerations in TVET graduate employability.

3.9. Chapter summary

The chapter has provided the theoretical frameworks that were used for this study. Theoretical framework definitions and the application methods on how the theories were used in research were discussed. HC theory, IT, and ST were identified as a relevant theoretical framework of this study. The application methods in which these theories were applied in this study was discussed. The next chapter presents the research design and methodology that were carried out in the development of this study.

CHAPTER FOUR

RESEARCH DESIGN AND METHODOLOGY

4.1. Introduction

In the previous chapter, I presented the theoretical framework for this study, detailing the conceptualisation of the theoretical framework, list of theoretical frameworks along with a thorough presentation on how the three theories which are namely, HC theory, ST, and IT were applied in this study.

Chapter Four provides an overview of the research design and methodology used in the study. To develop this chapter, where the study explores the perspectives of college stakeholders on the employability of TVET civil engineering graduates I begin by presenting the research paradigm, design, methods, and sites of this study. Secondly, ethical issues, and trustworthiness are discussed. Lastly, I present a summary of the chapter.

4.2. Research paradigm

A paradigm has been used in different meanings and context by scholars, and this leads to confusion (Guba & Lincoln, 1989; Creswell, 2007; Wahyuni, 2012). For instance, some scholars use a qualitative versus quantitative research as a paradigm (Creswell, 2007; Wahyuni, 2012); whereas some scholars use a paradigm as a particular understanding or worldview (Guba & Lincoln, 1989; Creswell, 2007; Maree, 2011). In this study, I used Wahyuni's (2012) understanding of a paradigm which defines paradigms as worldviews, a fundamental set of beliefs that guide action. Similarly, Creswell (2007) states that a research paradigm stands for a particular worldview that defines, for the scholars who hold this view, what is acceptable to research and how this should be done.

In research there are different approaches of paradigms used; this includes, among others, positivism, post-positivism, interpretivism and critical paradigm (Maree, 2011). I now briefly describe how each paradigm approach is understood in research and then present the paradigm in which this study is found. A positivist research paradigm is understood as a paradigm that depends on measurement and reason, that knowledge is revealed from neutral and measurable (quantifiable) observation of action or reaction (Creswell, 2007). A positivist paradigm believes that there is only

one truth that research is based purely on facts, and the world is considered to be an external reality with a specific goal (Cresswell, 2007).

Wahyuni (2012) describes a post-positivist paradigm as a paradigm that is developed from the positivist paradigm. According to Wahyuni (2012), a post-positivist paradigm is concerned with the subjectivity of reality and moves away from the purely objective adopted by a logical positivist. A post-positivist paradigm accepts that there are multi-realities of the worldviews. In the post-positivist paradigm, research depends on the observations about the world and is based on the people's beliefs. It recognises that observations are constructed from fallible beliefs and that reality is socially constructed (Creswell, 2007).

An interpretivist research paradigm is understood as a research paradigm that enables a researcher to discover the truth through the views of participants, their background, and experiences about phenomena (Creswell, 2007). Guba and Lincoln (1989) perceive the interpretivist paradigm and qualitative methods as linked because they both focus on exploring the experiences, understandings, and beliefs of participants to discover the reality.

In an interpretivist research paradigm, there are multiple realities about the phenomena. The research paradigm for this study was an interpretivist research paradigm. This paradigm believes that the researcher and the studied phenomenon are interactively linked, and this interactive relationship intends to understand the real world in the first-person (subjective experience) (Guba & Lincoln, 1989). The aim of interpretive research is not to generalise in the context of gaining value-free knowledge and truth but to try to understand individual interpretations of the social phenomena in which they interact. An interpretive method requires that social phenomena be understood "through the eyes of researchers rather than participants" (Cohen et al., 2011, p. 13).

A critical research paradigm is understood as a way of viewing the world and a framework from which to understand the human experience. This paradigm in social research is concerned about power, inequality, and social change (Wahyuni, 2012).

Every paradigm is based upon its own ontological and epistemological assumptions (Guba & Lincoln, 1989; Wahyuni, 2012). In relation to the ontology assumption, according to Creswell (2005), ontology is defined as the study of being and ontological assumptions are concerned with

what constitutes reality, in other words, what is reality. Researchers need to take a position regarding their perspectives of how things really are and how things really work (Creswell, 2012).

Two main pillars of ontology are used in research: realism and relativism (Maree, 2011). In realism, the world is real and science proceeds by examining and seeing it. This pillar believes that there is one truth, and it can be revealed through experiments. Realism can only be used in a positivist research paradigm (Maree, 2011). For an interpretivist research paradigm study, I had position relativism as an ontological pillar of this study. Relativism is the view that reality is subjective and differs from person to person (Guba & Lincoln, 1989). In relativism, there are many truths, and the facts depend on the viewpoints of the observer (Maree, 2011). In this study, the participants presented their different views as realities.

In relation to an epistemology assumption, epistemology is concerned with the nature and forms of knowledge (Cohen et al., 2011). This study concentrated on subjective realities between the researcher and selected college senior managers, civil engineering managers, HR managers or practitioners, and project managers who were participants. The participants constructed meanings through their consciousness of the world around them. Epistemological assumptions are concerned with how knowledge can be created, acquired and communicated; in other words, what it means to know (Guba & Lincoln, 1989). Since all assumptions are conjecture, the philosophical underpinnings of each paradigm can never be empirically proven or disproven (Creswell, 2007). Different paradigms inherently contain differing ontological and epistemological views; therefore, they have different assumptions of reality and knowledge which underpin their research approach as mentioned in this study (Cohen et al., 2011).

Apart from this, an interpretive epistemology is one of subjectivism which is based on real-world phenomena (Cohen et al., 2011). The world does not exist independently of our knowledge of it (Creswell, 2007). This means that things are constructed through the interaction of people between consciousness and the world.

This study aimed to understand college senior managers' and employers' perspectives on the employability of their college civil engineering graduates. To this end, I engaged with different college senior managers—as the deputy principal academic (DPA), the assistant director (ADs) curriculum, and assistant director partnership, linkage, and placement from a TVET college side. In the municipalities, I engaged with human resource managers (HRMs), executive managers in

engineering and infrastructure, and engineering managers from the municipalities to generate multiple realities regarding the perspectives on the employability of their TVET college engineering graduates. In the civil engineering construction company, I engaged with the project manager, civil engineer, and HR officer to generate more multiple realities regarding their perspectives. I have relied on the subjective perspectives of the participating college senior managers, HRMs, engineering municipal managers, and civil engineering construction company managers as they have first-hand information.

Researcher positionality and insider bias: As a researcher working within the TVET college sector, I acknowledged the potential for insider bias. My professional role may have influenced how I interpreted participants' perspectives and how participants responded to me during interviews. To minimise this bias, I maintained reflexive awareness by keeping reflective field notes, critically questioning my assumptions after each interview, and documenting how my positionality may have shaped data interpretation throughout data generation and analysis, used multiple data sources for triangulation, including semi-structured interviews with college managers, municipal officials, civil engineering representatives, as well as institutional documents such as curriculum records, policy guidelines, and partnership agreements, and ensured that interpretations were grounded in participants' actual statements rather than my own assumptions.

4.3. Research design

The research design is a logical structure of the research, and there are different research designs, including qualitative, quantitative, and mixed methods research designs (Maree, 2011). To understand stakeholders' perspectives on the employability of TVET college civil engineering graduates, I adopted the qualitative research design.

According to Creswell (2007), the qualitative research design aims to understand, describe and sometimes explain social phenomena from the inside using numerous ways. Similarly, Guba and Lincoln (1989) define qualitative design as an attempt to describe and interpret some human phenomena, often in the words of selected individuals (the participants). Creswell (2005) describes qualitative research design as a systematic subjective approach used to describe life experiences and give them meaning.

The qualitative research design was adopted in this study to enable me to answer the research questions by asking college senior managers, human resource managers, engineering municipal

managers and civil engineering construction company managers about their knowledge gained from experience.

In accordance with Anderson (2007), who argues that qualitative research focuses more on words rather than on quantification, collection and analysis of data, the college senior managers, civil engineering senior managers or technicians, project managers, and HR managers who participated in this study were given an opportunity to describe and explain their real perspectives on the employability of TVET civil engineering graduates. According to Anderson (2007), a qualitative research strategy may focus on the inductivist, constructivist and interpretivist feature to do their research, but some researchers do not always rely on all these features. In this study, I focused on all three features of qualitative research.

I started with the inductivist feature; inductivist is defined as an approach of the relationship between theory and research in which the former is generated out of the latter (Anderson, 2007). In this study, I got my research findings primarily from the analysis of the data that were generated through semi-structured interviews, focus groups and document review. The data were examined in relation to the reviewed literature to conceptualise and identify issues that led me to the findings and conclusions of this study.

Then followed the constructivist feature. Constructivism is defined as an ontological position that declares that a social phenomenon and their meanings are continually being achieved by social actors (Anderson, 2007). Through this understanding as a researcher, I used the views and perspectives of the college senior managers, municipality civil engineers' managers, project managers, and HR managers to construct my understanding about the employability of TVET civil engineering graduates. The insights and understanding of these views, perspectives and issues were constructed through the interaction between me as a researcher and the individuals who participated at each site: college senior managers, municipality civil engineering managers, project managers, and HR managers.

The college senior managers presented their views and perspectives of their daily work of preparing TVET civil engineering graduates for employment. Then, the municipality civil engineering managers, HR managers, together with civil engineering construction company managers, project managers, and recruitment officers as employers presented their views and perspectives on the employability of TVET civil engineering graduates. I then considered their

presentations as a researcher and constructed my analysis and interpretation. The position of constructivist enabled me to have a deeper understanding of how both college senior managers from the colleges, municipality managers and HR managers from municipalities, and project managers, civil engineering managers, and HR officers in the civil engineering company perceive the employability of TVET civil engineering graduates.

Lastly followed the interpretivist feature. This feature is defined as a natural approach to data collection such as interviews and observations. The secondary data collection may come from the document review (Creswell, 2007). In interpretivist approach, the findings of the research come out at the end research where the researcher has collected, analysed, and interpreted the generated data (Anderson, 2007). In this feature, I presented the findings based on multi-realities that were generated through semi-structured interviews, focus groups and document review on individual participants. The generated data were analysed and interpreted through the exploration of the perspectives of college senior managers, municipality civil engineering managers, project managers, and HR managers from each site to find their understanding of employability of TVET civil engineering graduates.

In this research, I have applied all these three features to explore the perspectives of participating stakeholders on the employability of TVET civil engineering graduates.

4.4. Research methodology

A research methodology provides a summary of how the study was carried out (Wahyuni, 2012). Creswell (2007) states that a research methodology shapes the nature of empirical enquiry. Again, research methodology provides a rationale for choosing certain methods and leaving others, and it is influenced by philosophical underpinnings (Anderson, 2007). There are different research methodologies in research such as namely case studies, ethnographic research, life histories, participatory research, surveys, experimental research, and correlational studies, among others. In this study, I discuss a case studies methodology that is applied in research. Yin (2009) divides a case study into two parts: in one part, a case study is defined as an empirical inquiry that investigates a contemporary phenomenon, and the boundaries between phenomena. On the other part, a case study is defined as a methodology that copes with the technically distinctive and relies on multiple sources of evidence.

This methodology studies an issue explored through one or more cases within a bounded system, that is, a setting or a context (Yin, 2009). Many case studies focus on a specific case (selected individuals) to generate insight into the case (Wahyuni, 2012). A case study methodology is a qualitative approach in which the investigator explores a case or cases over time through detailed, in-depth data collection involving multiple sources of information, for example, observations, interviews, audio-visual material, documents and reports, and a case description (Maree, 2011).

Furthermore, a case study is described as a decision about what is to be studied, and it explores in detail how complex a particular problem is (Creswell, 2007). Wahyuni (2012) concurs with the latter statement when he states that a case study focuses on what is to be studied and develops a broader inside knowledge of a particular case or multiple cases.

The review of literature has shown different qualitative research studies that were successfully conducted to gain an in-depth understanding of a particular phenomenon. For instance, Nkalane (2018) conducted a case study on “Inclusive assessment practices in vocational education”. A case study was conducted by Mabunda (2020) on “Factors that influence the employability of national certificate (Vocational) graduates”. Khambule (2019) conducted a case study on “Labour market perceptions of students at a technical and vocational education and training (TVET) college in Grahamstown, South Africa”. All these case studies have proven that a case study for this study is relevant when the researcher wants to explore a particular phenomenon (Cresswell, 2007).

In this study that sought to explore the perspectives of college stakeholders on the employability of TVET civil engineering graduates, I used case study methodology. The college senior managers from the selected TVET college, municipality civil engineering managers and HR managers from the selected municipalities, and project managers, civil engineers, and HR practitioners from the selected civil engineering and construction company were a focal point as they were the sources of data.

I employed a case study to explore the complex question of how college stakeholders perceive the employability of TVET civil engineering graduates. This was done to more than one TVET college managers as the management of TVET college, to more than one municipality civil managers, HR managers, civil engineers from both municipality and civil engineering construction company with the aim to constitute few cases. The exploration of the perspectives of college stakeholders to constitute cases was taken place to 21 participants through the interview processes.

4.5. Research population and sampling

In this section, I present, firstly, the definition of population and sampling in research. Secondly, I present the population and sampling methods, and, lastly, I discuss the population and sampling methods that were applied to this study.

The population in research is defined as the entire group that the study draws the conclusions about. In other words, the population is used as means of the total number of people, groups, or organisations that the study includes (Creswell, 2007). In this study, the population was a TVET college, municipalities, and a civil engineering construction company. Each participant represented their groups as their institutions. The study constituted seven groups of organisations, namely, one TVET college, one district municipality, four local municipalities, and one civil engineering and construction company.

A sample refers to as a group of specific individuals that are used to generate data. This means sampling is actual individual list from which the sample is drawn from the data (Anderson, 2007). The sampling for this study involved selected college senior managers, municipality civil engineering managers, project managers, civil engineers, and HR managers or HR practitioners. The specific individual represented their individual organisation.

Research sampling methods are divided into different methods such as random, purposive, stratified, and convenience sampling methods. Furthermore, the sampling methods are classified into two criteria which are random sampling (unbiased sampling criteria) and non-random sampling criteria (biased sampling methods). Biased sampling criteria use purposive, stratified, and convenient sampling methods, whereas non-biased sampling methods use random sampling criteria, where all members of the population stand an equal chance of being selected as part of the study (Anderson, 2007; Creswell, 2007; Wahyuni, 2012). For Cresswell (2007) biased sampling methods are used for distinct reasons in research which include among others the desire to explore perspectives of a specific group, and it is less time consuming. This is supported by Wahyuni (2012) view who mention that biased sampling methods is convenient and help a researcher to select the participants who are relevant for the study and it may be less time consuming when compared to non-biased sampling method.

In this study, I used the purposive and convenient sampling methods. These are sampling techniques that qualitative researchers use to recruit participants who can provide in-depth and

detailed information about the phenomenon under investigation (Creswell, 2012). According to Etikan et al. (2016), convenience sampling is a method of sampling applied by a researcher to collect data from individuals who are conveniently available to participate in a study. This sampling technique involves acquiring participants wherever a researcher can find them. The purposive sampling is defined by Babbie and Mouton (2001, p. 20) as a “type of non-probability sample” in which a researcher selects the unit for the study based on their judgement about which participants will be the most useful to represent the study. Etikan et al. (2016) maintain that purposive sampling involves the selection of research participants that are proficient and well-informed about the research problem.

In this study participants were selected based on non-random criteria; not every individual had a chance to be included (Wahyuni, 2012). Not everyone participated in this study, the participants were handpicked in order to serve the purpose of this study that explored the stakeholders’ perspectives on the employability of TVET civil engineering graduates. Again, the selection of purposive and convenience methods was also guided by the fact that these TVET colleges are close to the researcher's location.

Therefore, I involved college senior managers, human resource managers, engineering municipal managers, and civil engineering construction company managers from the municipalities and the company because the study aimed to understand their perspectives. College senior managers were selected based on their positions in the TVET colleges: three senior managers were hand-picked for their relevance in the study—one deputy principal, academics; one assistant director, curriculum; and one assistant directors, partnership, linkage, and placement. Five human resource managers, and ten engineering municipal managers which are five civil engineering managers and five executive managers for infrastructure and planning were selected as employers, three per the selected municipality. Three civil engineering construction company members were selected as employers—one project manager, one civil engineer and one HR officer—as they were working as managers in the civil engineering construction works that take place in the district municipality. This made a total of 21 participants for the study.

4.6. Location of the study

This study took place within a district municipality, situated in the province of KwaZulu-Natal (KZN) in SA. Within this district, there were four local municipalities that collectively served as

significant employers. These local municipalities were distributed across rural and semi-urban areas. Notably, the district was home to one of the largest TVET colleges in the province, a pivotal institution for the education and training of a substantial portion of graduates. This study also took place at civil engineering construction company—one of the biggest civil engineering construction companies in SA. At the time, this company was conducting a five-year contract for a civil engineering construction project within the district municipality where this study was taking place and was employing more civil engineers than other civil engineering construction companies in the district.

The rationale for selecting these specific four local municipalities and one district municipality was two-fold and intricately linked to my proximity and employment. These municipalities were chosen due to their geographical proximity to my residence and place of work.

Moreover, they held particular significance in this study as they were hosts to the TVET college, where many graduates receive their training and employment. The decision to focus on these municipalities as employers was underscored by the fact that TVET colleges are integral components of these municipalities. The programme alignment was pivotal since the programmes offered by TVET colleges are inherently tailored to address the specific employment requirements of the nearby municipalities.

4.7. Data generation method

This section discusses the key definitions and concepts of data generation methods and the types of data generation methods. Furthermore, the specific data generation methods applied in this study are evaluated.

Data generation methods in research are defined as the methods applied to collect the data for research to answer the specific research questions (Cohen et al., 2011; Maree, 2011; Wahyuni, 2012). They are applied in line with their specific paradigm that is being applied in the research study (Wahyuni, 2012). Data generation and collection are some of the most important stages in a study and are sometimes used interchangeably. The quality of research, both quantitative and qualitative, is determined by the quality and completeness of the data generated or collected by the researcher (Maree, 2011). There are fundamental differences between quantitative and qualitative research regarding data generation methods (Creswell, 2012). These differences are based on the purposes of each type of research where quantitative research uses numerical and statistical

analyses that aim to test or confirm theories and hypotheses, while qualitative research aims to explain the deeper meanings of concepts (Etikan et al. 2016).

Some scholars use data collection methods, while some use data generation methods, that is, depending on whether the study is meant to be qualitative or quantitative (Buthelezi, 2018; Nkalane, 2018; Adams, 2019). Based on the nature of this study, data generation methods were used. Types of data generation include, but are not limited to, questionnaires, interviews, focus groups, observation, testing, artefact analysis (where the artefact may be graphic data such as photographs or drawings, or documents such as policies or textbooks), and secondary data.

I generated the qualitative data through face-to-face interviews, with permission from the management of the selected TVET college, municipalities, and civil engineering construction company. The face-to-face interviews were a direct communication with the participants in accordance with the prepared questions (Wahyuni, 2012). There are three types of interviews, namely: structured, semi-structured, and unstructured interviews.

In this study, I used three types of data generation: the semi-structured interviews, focus group, and document review. The first data generation method was the semi-structured interviews. A semi-structured interview is a verbal interchange where one person, the interviewer, attempts to elicit information from another person by asking questions (Guba & Lincoln, 1989). This method is useful for investigating complex behaviours, opinions, and emotions and for collecting a diversity of experiences (Maree, 2011).

Therefore, in this study, I interviewed college managers, HR managers, engineering municipal managers, and civil engineering construction company managers to elicit information about their perspectives. This process took place through face-to-face meetings.

Fifteen participants were interviewed through the semi-structured interviews to generate the data. Each interview meeting was scheduled for an hour. However, some of the meetings took less than an hour due to the lack of information to elicit from the participants pertaining to the research questions from the interviews. The interviews were audio-recorded, and handwritten notes were taken as a means of keeping detailed records of the interviewees and their opinions.

The second data generation method used was focus group interviews. This method was not planned to be part of the methods I used to generate data for this study. Semi-structured interviews and

document review were the only data generation methods that were initially employed to generate data for this study. However, after interacting with the participants and learning about the municipality participants' other commitments, I realised it was not possible to conduct semi-structured interviews for other two municipalities. For this reason, the focus group interview data generation method was used.

Focus group interviews are group interviews with three to twelve people who share similar characteristics or common interests (Maree, 2011). A researcher guides the group based on a predetermined set of topics (Wahyuni, 2012). In addition, Creswell (2007) explains that the research in focus group creates an environment that encourages participants to share their perceptions and points of view. Furthermore, focus groups are a qualitative data collection method, meaning that the data is descriptive and cannot be measured numerically. Focus groups, like other qualitative methods, are useful in providing interpretations of data collected through quantitative methods which are numeric and measurable.

I formed two groups with three participants in each group. For this reason, the two municipalities that had a problem with meeting the participants individually afforded me one session for the interviews. Each municipality had three participants; I therefore grouped the three participants in each municipality to form a focus group. The members in each group represented their work portfolios. For instance, each group was represented by the executive manager for infrastructure and construction engineering, the civil engineering manager, and the HR manager to share their perspectives about the employability of TVET civil engineering graduates in their institutions. While conducting the focus group interviews the relationship between participants was noted where it was observed that participants were open to sharing good and ethical information amongst each other.

The table below shows the groups of the participants with their portfolios who were interviewed in the focus groups:

Table 4.1*Profile of focus group participants*

Pseudonym of the municipality	Focus group	Participant pseudonym	Portfolio
Tilo District Municipality	1	Mr Zesh	Executive Manager: Infrastructure and Planning
		Ms Zods	HR Manager
		Mr Caleb	Manager: Civil Engineering and Planning
Pele Local Municipality	2	Mrs Vala	Executive Manager: Infrastructure and Planning
		Mr Gum	Manager: Civil Engineering and Planning
		Mr Mih	HR Manager

Focus group meetings were scheduled for an hour to an hour and thirty minutes to allow ample time for participants to engage to their fullest capacity. As such, all participants during the interview presented their views freely. To reiterate, during the meeting, audio-recordings and notes were taken.

In addition to the semi-structured interview and focus group interview, the document review was used as a supplementary data generation method - with the understanding of Creswell (2012) who view that information and insights from documents can be valuable additions to a knowledge base. Wahyuni (2012), add that documents can be analysed to verify findings or corroborate evidence from other sources. Therefore, I requested the college senior managers, HR managers, engineering municipal managers, and civil engineering and construction company managers to provide the following documents: policy on employment, policy on curriculum qualifications, data on employment of their graduates and policy on industry partnership and linkages with industries.

The above-mentioned documents were used to provide knowledge on what and how college senior managers perceive employment of their civil engineering graduates. I had an opportunity to

understand issues, particularly those relating to teaching and learning, that they deal with as they experience their role players as college senior managers.

4.8. Data analysis

There are different data analysis approaches which are applied depending on whether qualitative, quantitative, or mixed-methods research design has been used (Maree, 2011). The data analysis methods are content, discourse, thematic, narrative, and grounded analyses approaches (Anderson, 2007).

With regard to qualitative data analysis, there are three flow streams that are drawn to analyse the data. According to Bowen (2009), the flow streams are data reduction, data display, and conclusion drawing. Below, I discuss all three flow streams of qualitative data analysis in accordance with Creswell (2012).

Data reduction is the process of selecting, focusing, simplifying, abstracting, and transforming the data that appear in written-up field notes or transcriptions. In fact, data reduction happens throughout the process of research. Even before data are recorded, the researcher decides what detail of data will be collected and collects data within the boundaries of a conceptual framework or the research question. Since qualitative data can consist of hundreds of pages of text, the researcher needs to find ways to reduce all these pages so that it becomes easier to make sense of them. Data reduction involves organising and sorting data into codes or categories and then looking for patterns or relationships between these categories (Creswell, 2012).

Data display is an organised, compressed assembly of information that permits the researcher to draw conclusions and take actions. The most frequent display for qualitative data is extended text. This might consist of verbatim quotes from interviews, short vignettes or narratives from ethnographic research or life histories. Alternatively, data can be displayed as matrices, graphs, charts, maps, or networks (Creswell, 2012).

Conclusion drawing and verification is the third stream of analysis activity. Researchers start to draw conclusions from the start of data collection. They note patterns and explanations. However, these conclusions should only be finalised once the analysis is complete (Creswell, 2012).

These three flow streams of activity are interwoven, and researchers would be involved in each activity in a cyclical way throughout a research study to analyse the data. I have used all three

streams of a qualitative data analysis method in this study. After the semi-structured interviews, focus group, and document review, I started with the data reduction, then data display, and, lastly, conclusion drawing based on the transcribed and document-reviewed data to answer the research questions.

Qualitative data analysis is the process of making sense of research participants' views and opinions of the situation, corresponding patterns, themes, categories, and regular similarities (Anderson, 2007). This is the process of systematically searching and arranging the interview transcripts, observation notes, or other non-textual materials that the researcher has accumulated to increase the understanding of the phenomenon (Wahyuni, 2012).

In this study, a thematic data analysis approach was applied. Thematic analysis is a method for systematically identifying, organising, and offering insight into patterns of meaning across a data set (Bowen, 2009). The patterns of meaning that each senior college manager, HR manager, engineering municipal manager, and civil engineering manager supplied has provided information that helped the study to find important trends to answer the research questions.

The process of analysing involved coding or categorising the data. It necessitated making sense of massive amounts of data by reducing the volume of raw information by identifying significant patterns, drawing meaning from data, and subsequently building a logical chain of evidence (Creswell, 2012).

I used a voice recorder to record all interview sessions. Following this, I listened to individual interview voice records and transcribed voice notes into text to prepare for analysis. I then read the transcripts and documents and applied coding to identify themes emerging from the data. Furthermore, I developed the themes for analysing the data by drawing on the research questions and key issues identified in the literature review. The organising data stage entailed breaking data into manageable units that could be easily coded.

Therefore, I developed steps to collect the data (Macmillan & Schumacher, 2014): (1) I wrote the research questions and sub-questions; (2) I wrote the interview guide; (3) I noted themes and concepts utilised by other researchers; (4) I utilised the knowledge and experiences as a researcher; (5) I collected data. The process of analysing involved coding or categorising the data. This involved scrutinising segments of data and giving codes.

Maree (2011) describes and categorises data coding by putting together codes and making sense of data. It involved making sense of massive amounts of data by reducing the volume of raw information through identifying significant patterns, drawing meaning from data, and subsequently building a logical chain of evidence (Creswell, 2012).

Following this, I had to listen to individual interview voice recordings, and transcribe voice note into text to prepare for analysis. I then read the transcripts and documents (one quarterly academic report, two minutes of meetings, one internal HR policy and one strategic plan policy in each municipality and the TVET college) to collect and analyse data and apply coding to identify themes emerging from the data.

In the transcription stage, I had to utilise notes and information collected to turn them into a usable format for the analysis of the collected data. This entails writing in words what is stored in the recorder and visual material (Macmillan & Schumacher, 2014). In the development patterns stage, I also tried to find a link between aspects of how people behave, their beliefs and how they think (Macmillan & Schumacher, 2014).

4.9. Validity and reliability and rigour

This study used trustworthiness in the interpretivism paradigm (Creswell, 2012). “Trustworthiness refers to the degree to which the research findings are credible, transferable, dependable, and confirmable” (Guba & Lincoln, 1989, p. 47). Trustworthiness is an umbrella term for the components of data quality control in a qualitative study, as depicted and described in the following areas. Quality control refers to the ways in which the data is stocked and maintained (Guba & Lincoln, 1989).

As described above, this present study made use of interviews and focus group discussions. According to Etikan et al. (2016), the trustworthiness of qualitative studies is often presented by using these criteria: credibility, dependability, confirmability, and transferability. To this end, this study also used these criteria to ensure the trustworthiness and quality of the study (Guba & Lincoln, 1989). The four key criteria are presented below:

4.9.1. Credibility

The credibility of a study is the first and most important criterion. It refers to confidence in the truth of the study and in its finding (Maree, 2011). To ensure credibility, I used three methods of

generating data, namely, semi-structured interviews, focus group interviews, and document review; this allowed for triangulation. Triangulation increases the trustworthiness of the findings by comparing different forms of evidence and reducing the influence of single or subjective interpretations. This means the study used multiple datasets, methods, theories, and investigators to address the research questions. Furthermore, I performed peer-debriefings, used member checking, and I checked that the analysis and interpretation of findings were congruent with documents, recordings, and the participation of the participants (Creswell, 2007).

4.9.2. Dependability

To address the dependability issue more directly, the processes within the study should be reported in detail, thereby enabling a future researcher to repeat the work, not necessarily to gain the same results (Wahyuni, 2012). To achieve dependability, I ensured that the research process was logical, traceable, and clearly discussed. This was done by providing thick descriptions of the research processes. In addition, I ensured dependability by, firstly, determining relevant research instruments prior to data collection. During the data collection process, dependability was assured by securely keeping all documents, including records that were collected, and other notes for verification.

Secondly, dependability was assured by ensuring that during data collection, interviews were conducted in a conducive environment to develop trust with and privacy for participants. Lastly, I make certain that the data analysis process was done correctly and documented to enable readers to see how decisions were taken and how I arrived at interpretations (Guba & Lincoln, 1989).

4.9.3. Transferability

To ensure transferability, I gave a comprehensive description of the research sites, participants, and processes that were used to collect data for a future study. The study was not designed for generalisation (Maree, 2011). I provided evidence on the research findings and all information relating to the process. The study therefore described the context and findings in such a way that readers will be able to determine whether it is relevant to their context as well. This means that readers will be able to relate the findings of this study to their own context. Findings of the study were written in such way that it will be easy for readers to contextualise them to their real-life situation. I achieved this by collecting detailed descriptive data.

4.9.4. Confirmability

Confirmability was achieved by ensuring my interpretations and findings were clearly derived from the data. This had required me to demonstrate how the study arrived at conclusions. Confirmability refers to the objectivity of the research during data generation; to this end, I ensured accuracy in handling and interpreting data (Creswell, 2012). I used quotations from the interviewed participants and some parts of the reports that were connected to the study.

4.10. Ethical issues

De Vos et al. (2005, p. 10) define research ethics as “a set of moral principles suggested by an individual or group that are subsequently widely accepted and offer rules and behavioural expectations about the most correct conduct towards experimental subjects and respondents”. Cohen et al. (2011) note that it is crucial for researchers to adhere to strict ethical principles to anticipate problems that may arise during fieldwork, and to protect the rights and autonomy of the participants. Thus, I paid careful attention to the ethical issues of this study since I was also working in the TVET college sector as an academic staff member. My attention to ethical issues was based on addressing the following ethical issues before and when the study was conducted. The ethical issues were addressed as follows:

4.10.1. Access and permission

First, I applied for ethical clearance through the ethics committee with the assistance of my supervisor at the university of KwaZulu-Natal (UKZN) and the application was approved (Appendix A). Letters sent via email giving me permission to conduct research at one TVET college (Appendix B), five municipalities, and one civil engineering construction company was obtained from each of these institutions before the research took place. The email provided the names of the participants and their contact details. At all research sites the institution managers wrote a letter allowing three participants to participate in my study. I then contacted these prospective participants, requesting them to accept my invitation, before sharing some information regarding participation in the study. After I explained the purpose of the study and shared the interview questions, the participants agreed to participate. As a result, college senior managers, HR managers, engineering municipal managers, and civil engineering construction company managers who were going to be interviewed all accepted the request to participate, in writing, before their participation.

4.10.2. Informed consent

Each participant to be interviewed was given an information letter, a consent form, and an interview schedule before the interview day. The interviewees all signed the consent form and returned them to me (Appendix C). At the start of the interview, I checked that participants understood the purpose of the study, the procedures and any potential risks and benefits. I reminded them that the interviews were completely voluntary and, if they so wished, they were free to withdraw at any stage and explained their rights for participation in the study. The study required basic principles, namely non-maleficence, non-beneficence, and anonymity. I ensured that the study would do no harm to participants and participants were respected.

An informed consent letter detailing the purpose of the study, the participant's role, and their choice to either participate or not was given to all potential participants and they showed their consent by signing (Appendix C).

4.10.3. Confidentiality

The names of participants and institutions where the study was conducted were not revealed; instead, they were given pseudonyms to ensure anonymity.

4.11. Chapter summary

This chapter presented the research design and methodology that I followed in conducting this study. Among other things, the chapter presented the interpretivism research paradigm, qualitative design, case study methodology, semi-structured interview and focus group methods, thematic analysis method, limitations, and trustworthiness issues. In the next chapter, I provided Part One of the data presentation of this study.

CHAPTER FIVE

DATA PRESENTATION AND ANALYSIS

PART ONE

5.1. Introduction

In the previous chapter (Chapter Four), I presented the research design and methodology applied in this study, including the interpretive paradigm, qualitative design, case study approach, and the methods of data generation. Issues of trustworthiness and ethical considerations were also discussed.

Due to the large volume of data generated in this study, the presentation and analysis were organised into two chapters to ensure clarity, coherence, and alignment with the sequence of the research questions, rather than simply because of length. Chapter Five presents Part One of the data and analysis, focusing specifically on findings that respond to the first research question. Chapter Six then presents Part Two, which addresses the remaining research questions and continues the analysis in a structured and logical progression.

In this chapter, I present the data and analysis related to the first research question. The findings draw from semi-structured interviews and focus groups with 21 participants across seven sites, including a TVET college, four local municipalities, one district municipality, and one civil engineering construction company. These sites are summarised in Table 5.1 below.

Table 5.1

Name of the province, institution, number of participants

Name of the Province: KwaZulu Natal	
Institution (Pseudonym)	Number of Participants
Malo TVET College	3
Tilo District Municipality	3
Pele Local Municipality	3
Tim Local Municipality	3

Buyela Local Municipality	3
Doc Local Municipality	3
Palala Civil Engineering and Construction Company	3
Total number: Seven (7)	Total Number of Participants: 21

Table 5.1 shows the seven sites with the number of participants in each site where the data were generated. One of these sites is a TVET college that produces TVET civil engineering graduates. The other sites are the municipalities and civil engineering construction company, which serve as the employers of TVET civil engineering graduates.

To develop this chapter, I start by giving a profile of the participants. I then present the data and analysis that seeks to answer the first research and lastly, I provide the chapter summary.

5.2. Profiling of the participants

I profiled 21 participants who generated the data for this study. In the profile, three participants came from a TVET college, 15 from municipalities, and three from a civil engineering construction company. Again, in adherence to ethical issues in this study, all the participants and institutions or sites have been given pseudonyms.

The table below shows these participants and their institutions or sites; pseudonyms refer to them and their institutions. Following this, brief profiles of participants are presented.

Table 5.2

Names of participants, average age group, participants' sites, portfolio of the participants, years of work experience

Participant's name	Participant's average age	Participant's site	Participant's portfolio	Participant's years of work experience
Mr Yengwa	55-65	Malo TVET College	Deputy Principal Academic	38

Mrs Hlalu	40-50	Malo TVET College	Assistant Director; Partnership and Linkage	17
Ms Lan	50-60	Malo TVET College	Assistant Director; Curriculum	21
Mr Zesh	55-65	Tilo District Municipality	Executive Manager; Infrastructure and Planning	43
Ms Zods	45-55	Tilo District Municipality	Human Resource Manager	22
Mr Caleb	30-40	Tilo District Municipality	Manager; Civil Engineering and Planning	15
Mr Pelo	50-60	Pele Local Municipality	Executive Manager; Infrastructure and Planning	37
Ms Atta	35-45	Pele Local Municipality	Human Resource Manager	14
Mr Yoyo	25-35	Pele Local Municipality	Manager: Civil Engineering and Planning	8
Ms Galo	35-45	Tim Local Municipality	Executive Manager; Infrastructure and Planning	16
Ms Nhinhhi	50-60	Tim Local Municipality	Human Resource Manager	37

Mr Tabs	35-45	Tim Local Municipality	Manager; Civil Engineering and Planning	13
Mrs Vala	50-60	Buyela Local Municipality	Executive Manager; Infrastructure and Planning	24
Mr Mih	35-45	Buyela Local Municipality	Human Resource Manager	13
Mr Gum	40-50	Buyela Local Municipality	Manager; Civil Engineering and Planning	19
Mr Max	45-55	Doc Local Municipality	Executive Manager; Infrastructure and Planning	24
Mr Guru	45-55	Doc Local Municipality	Human Resource Manager	17
Ms Zaza	40-50	Doc Local Municipality	Manager; Civil Engineering and Planning	19
Mr Doro	45-55	Palala Civil Engineering and Construction Company	Project Manager	21
Ms Gtee	35-45	Palala Civil Engineering and Construction Company	Project Liaison Officer	8

Ms Teno	45-55	Palala Civil Engineering and Construction Company	Civil Engineer	18
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Thereafter, I present the data generated from the above profiled participants.

5.3. Data Presentation

In this chapter, I present the data generated and analysis by following the individual participants shared views during the semi-structured interviews and focus groups. Fifteen of the 21 participants shared their views during semi-structured interviews; the other six shared their views in a focus group discussion.

Below I present the tables that indicate participants who shared their views in this study. Table 5.3 shows the participants who shared their views in the semi-structured interviews, while Table 5.4 shows the participants who shared their views in the focus group.

Table 5.3

Profile of the participants for the semi-structured interviews

Number	Participant's name	Portfolio
1.	Mr Yengwa	Deputy Principal Academic
2.	Mrs Hlalu	Assistant Director; Partnership and Linkage
3.	Ms Lan	Assistant Director; Curriculum
4.	Mr Pelo	Executive Manager; Infrastructure and Planning
5.	Ms Atta	Human Resource Manager
6.	Mr Yoyo	Manager: Civil Engineering and Planning
7.	Ms Galo	Executive Manager; Infrastructure and Planning
8.	Ms Nhinh	Human Resource Manager
9.	Mr Tabs	Manager; Civil Engineering and Planning
10.	Mr Max	Executive Manager; Infrastructure and Planning
11.	Mr Guru	Human Resource Manager
12.	Ms Zaza	Manager; Civil Engineering and Planning

13.	Mr Doro	Project Manager
14.	Ms Gtee	Project Liaison Officer
15.	Ms Teno	Civil Engineer

Table 5.4

Profile of the participants for the focus groups

Name of the municipality	Focus group	Participant name	Portfolio
Tilo District Municipality	1	Mr Zesh	Executive Manager; Infrastructure and Planning
		Ms Zods	HR Manager
		Mr Caleb	Manager; Civil Engineering and Planning
Pele Local Municipality	2	Mrs Vala	Executive Manager; Infrastructure and Planning
		Mr Gum	Manager; Civil Engineering and Planning
		Mr Mih	HR Manager

Table 5.4, as shown above, presents two groups of the focus group which are namely, focus group 1 and focus group 2. The focus groups as shown in Table 5.4 indicate the municipality, the participants' name, and portfolio that the individual participant is holding in the municipality.

I present the data in this chapter on six themes that emerged from the data which are namely: unemployment rate in SA, gradual increase of TVET civil engineering employability, building and construction of civil engineering structures, necessary skills and labour market skills demand for employment, recognition of TVET civil engineering qualifications, and hiring and state of employment. The theme below presents views of three college senior managers at Malo TVET College. In addition, the findings presented in this chapter contribute to research question four by identifying the human capital factors that inform the conceptual framework developed in this study.

5.3.1. Unemployment rate in SA

The interviewees were clear and consistent that the unemployment rate in SA is high and becoming worse. The three college management personnel interviewed—the deputy principal academic, assistant director curriculum, and assistant director linkage and partnership—all mentioned the high rate of unemployment in SA, and they said it is concerning and leads to other things such as alcohol abuse and crime to escape stress of unemployment....

I think the recent stats show the SA that unemployment is high and getting worse.

Regarding youth, it is extremely high and concerning. - Mr Yengwa

This perspective was echoed by Ms Lan, who said that many challenges face employability in SA, resulting in high unemployment. The challenges include the lack of a skilled workforce for employment in industries, and the shortage of industries willing to hire TVET civil engineering graduates and pay them better salaries. These challenges result in a low employability rate, particularly among civil engineering graduates.

Mrs Hlalu shared similar sentiments and said that the state of employability in SA is deficient—when there are new job opportunities, they do not cater to a specific category for graduates. Mrs Hlalu noted that some employers disregard graduates for most job opportunities. Thus sometimes, out of desperation, graduates end up in low-skilled jobs such as becoming cleaners.

Why I am saying that because most of the qualifications they need in other job descriptions always look for grade 12 with communication in English. You [will] find yourself having a graduate who is a cleaner because they cannot be employed in their level of education due to their lack of experience. The jobs right now do not cater for those who have no experience. Fortunately, the government have something of work experience or in-service training or internship but in terms of salary scales they are being underpaid. - Mrs Hlalu

The study participants also indicated that high unemployment in SA leads to situations whereby some people resort to committing crimes to survive poverty. A concerned college manager mentioned that high unemployment is a concerning matter that needs to be dealt with by all South Africans.

Once you get unemployed youth, it contributes to many things, including crime, because they are trying to survive. So, it is one thing we need to investigate as a country, and we try to put people into employment. - Mr Yengwa

Ms Lan shared similar sentiments and said that even some students who have completed their qualifications in civil engineering are sitting at home doing nothing. Some have been doing internships for more than five years because industries do not hire them on a contract or permanent basis. She mentioned that those employed for internships for a long time are underpaid and added that companies do not create job opportunities to pay them good salaries. She noted that this contributes to high unemployment, and these issues must be addressed to tackle high unemployment in SA.

It is frustrating to see some of our students who have completed their qualifications not getting the jobs they deserve. Some of these students work in the municipality's shop retailers or EPWP (Expanded Public Works) programmes, which hurts a lot. Some of these students end up taking drugs and abusing alcohol because of the lack of unemployment in industries. - Ms Lan

Mr Yengwa echoed these sentiments and mentioned that the employment of TVET graduates is difficult for TVET colleges in SA because most industries do not want to take college graduates because some industries claim that the graduates do not have the expertise that their companies require for employment. Mr Yengwa mentioned that industries are saying that what TVET colleges provide to their students is irrelevant to what the industries need, so some industries opt to train their own artisans. Mr Yengwa had also noticed that industries pick TVET college students from N2 and N3 and request those students from TVET colleges and then provide them with their training for their industries.

For Mr Yengwa, Mrs Hlalu, and Ms Lan, the high unemployment rate in SA is concerning and needs to be investigated to help increase the employment rate. The interviewees believe the high unemployment rate in SA is threatening and worsening. It was threatening because many people resort to crime and alcohol abuse when they are unemployed. The interviewees seem to suggest that if employability can be enhanced, the rate of crime and alcohol abuse may be reduced.

According to the interviewees, the people who have qualifications are sometimes mismatched. People with qualifications are sometimes employed to do jobs that are far below the standard of qualifications for TVET civil engineering graduates. The jobs that are below standard include general workers, cleaners, EPWP work. In addition, the interviewees indicated that some employers do not want to hire TVET civil engineering graduates and that causes high unemployment of engineering graduates.

5.3.2. *Gradual increase of TVET civil engineering employability*

Although the interviewees perceive the high unemployment rate in SA, they indicated that employment of TVET civil engineering graduates has been increasing gradually, but that it cannot be noticed because of the high unemployment rate that affects SA. They additionally mentioned that the reasons for the gradual increase in employment are that TVET graduates are trained for artisanship, and TVET graduates compete with university graduates for employment.

For instance, Ms Lan from the TVET college indicated that there has been an increase in the employability of TVET civil engineering graduates but that the increase is not noticed due to a high number of unemployed TVET civil engineering graduates and civil engineering graduates who come from other universities in SA. Ms Lan also mentioned the reasons for increase, noting that the increase is still small.

I can say that the slight [low] increase of employment of TVET civil college graduates may be influenced by the limited number of companies to hire TVET civil engineering graduates in engineering. It may also be influenced by that TVET civil engineering graduates compete with university and/or University of Technology civil engineering graduates for employment. - Ms Lan

Mr Yengwa echoed similar sentiments and added that universities and universities of technology civil engineering graduates, in most cases, are likely to get preference when it comes to employment than TVET civil engineering graduates because universities and universities of technology are highly regarded more than TVET colleges. According to Mr Yengwa, this makes TVET civil engineering graduates get recognition more slowly as it has been observed that some companies do hire their graduates, but it is still low.

This notion was shared by Mrs Hlalu, who said they can see that as much as there is a low employment rate on the civil engineering side, it is getting better than before.

We are seeing a lot of TVET civil engineering being taken for work experience, and we are seeing a lot of TVET students who are taken to be entrepreneurs. This has gradually increased the employment rate by one or two percent. Another thing, when you look at the employment rate, the research for 2019 and 2020 shows that 30% of employment graduates are hired in industries as compared to the previous years (Mtshali, 2021). Other industries before used not to hire TVET graduates. - Mrs Hlalu

According to the three college stakeholders, Mr Yengwa, Mrs Hlalu, and Ms Lan, the employment of TVET civil engineering graduates is low but it has been increasing gradually. They mentioned that the gradual increase in the employment of TVET civil engineering graduates in most cases is caused by the small number of big companies that have adequate capacity to hire TVET civil engineering graduates.

In other cases, according to the interviewees the gradual increase in employment is caused by the fact that TVET civil engineering graduates compete with university graduates for artisans' position for employment in industries.

Mr Yengwa, Ms Lan, and Mrs Hlalu from the college explained that graduates are all competing for employment, and graduates from universities and/or universities of technology stand a better chance of being hired in civil engineering positions than TVET civil engineering graduates. Ms Gtee maintained that, in most cases, TVET civil engineering graduates are only hired by their industries in order to meet the project mandate requirements. Other than that, civil engineering construction companies hire university or university of technology civil engineering graduates in their professional positions.

For the interviewees, there is gradual increase in employment of TVET civil engineering graduates; however, they seem to be not satisfied by the slight increase. Interviewees have indicated some significant issues leading to a slight increase in the employment of TVET civil engineering graduates; these include lack of adequate companies to hire TVET civil engineering graduates, and TVET civil engineering graduates competing with university civil engineering graduates for artisan job opportunities. The interviewees felt that the gradual increase was deficient because of the high number of unemployed graduates in the SA.

5.3.3. Building and construction of civil engineering structures

The interviewees felt that civil engineering and building construction industries are particularly significant resources in the society because the structures that they build for communities are supposed to comply with health and safety rules, and regulations standards in civil engineering construction in order to maintain safe structures for use. The three interviewees mentioned the importance of an individual or industry complying with the health and safety...

As companies in civil engineering, we do not just hire anybody as artisans or civil engineers. We hire people who are professional qualified in civil engineering and have

understanding of rules and guidelines that apply in the field to ensure compliance. In civil engineering we are inspected to check if our work complies with the rules and regulations that apply in civil engineering and building construction. - Mrs Hlalu

Mr Tabs shared similar sentiments, pointing out that in civil engineering, industries are compelled to hire professionally qualified civil engineering artisans, and civil engineers because they do work that other employees cannot do in civil engineering.

Only civil engineers who professional qualified as artisans or engineers who may correctly interpret the drawings for structures to be built in civil engineering constructions. They may also adhere to the health hazards to ensure that their structures that they have built meet all the required rules and regulations applied in civil engineering. - Mr Tabs

One of the civil engineering and building construction company managers, Ms Gtee mentioned that to work in civil engineering you need to be professionally qualified in order to deal with what is done in civil engineering:

I must tell you, to work in engineering is extremely strict because you construct structures that are used by the society. Now, you need to make sure that you pay details on the requirements, rules and standards that used in civil engineering to construct any structure. So, you need professionally qualified to compete with other individuals to work in civil engineering industries for artisans and civil engineer positions. - Ms Gtee

Mr Tabs emphasised that all employees and civil engineering industries are required to comply with rules, regulations, and health and safety policies, as failure to do so could lead to other problems.

Should a structure fail or collapse, that may cause a huge problem to the builders? Yes, the department that deals with civil engineering may confiscate their qualification and charge individuals of misconduct if they did not comply with what is done in civil engineering. - Mr Tabs

According to the three interviewees—Mrs Hlalu, Mr Tabs, and Ms Gtee—to be an artisan or civil engineer you need to possess a professional qualification that makes you competent for the civil engineering job. The interviewees mentioned that only professionally qualified civil engineers may correctly interpret the drawings for structures and correctly build them. Those structures need to comply with health and safety policies, and rules and regulations that are applied in civil engineering because should these fail, the structure may collapse, leading to charges and other

disciplinary measures in civil engineering. Thus, civil engineering and building construction companies are compelled to hire professionally qualified artisans and civil engineers to ensure quality delivery of structures.

5.3.4. Necessary and labour market skills demand for employment.

Some interviewees felt that TVET civil engineering graduates meet the necessary skills for employment, and they are supposed to be in high demand in the job market for artisanship employment positions. The college senior managers Mr Yengwa, Ms Lan, and Mrs Hlalu mentioned that TVET civil engineering graduates are supposed to enjoy employment in civil engineering construction companies and other civil engineering departments that perform civil engineering construction work where the college is located. They mentioned that graduates qualify for employment because their TVET civil engineering graduates are placed in both practical and/or in-service training in the local industries in accordance with their Department of Higher Education and Training placement policy before graduating.

During interviews, Mr Yengwa and Mrs Hlalu, mentioned that graduates are taught to be artisans and do more physical work in terms of their skills. So, the local industries are the ones that are supposed to prioritise TVET civil engineering graduates for employment because they have the required skills for the labour market.

Given the fact that our TVET civil engineering graduates are taught theoretical knowledge on our campuses and their placement takes place in the nearest industries for their practical training and exposure in the world of work, they are supposed to be more employed by these local industries than any other graduates or community members because they possessed the required skills in civil engineering, especially for artisanship. I mean, the placement policy from DHET stipulates that as colleges, we must identify programmes that are needed in our communities to let our students get the practical work and in-service training in those local industries. - Mr Yengwa

The sentiments were shared by Mrs Hlalu from college senior management, who maintained that their TVET civil engineering graduates should get more recognition for employment, especially in the local civil engineering industries. She mentioned that graduates are qualified and can serve the industry in many sections of building construction and civil engineering.

My view is that our TVET civil engineering graduates are supposed to get more recognition and employment by local civil engineering industries because they professionally qualify for the artisan jobs, and these graduates are known by these civil engineering industries. I am saying this because our TVET civil engineering graduates do their work-based placement in their industries, and these industries know our graduates' capabilities. It cannot be correct that they take our graduates to do in-service and work placement for practicals and then do not prioritise them for employment. That alone would mean that they do not trust their own products. - Mrs Hlalu

According to the three participating college senior management personnel from Malo TVET college, TVET civil engineering graduates should be the ones who are supposed to enjoy more employment in local civil engineering construction industries than anyone else. This is because their graduates are qualified for the civil engineering artisan job and that these graduates do their practical training and work placement in their nearby industries.

The interviewees from the college also mentioned that the programme identification and placement of students are guided by the placement policy. According to the interviewees, the exposure of graduates to the industries and their professional civil engineering graduates gives them an advantage for employment over other people who apply for the same job of artisanship in civil engineering.

The above views from the interviewees of the college senior management were echoed by some of the employers in the municipality and civil engineering construction company. The interviewees from the employer who echoed these views mentioned that TVET civil engineering graduates meet the necessary skills for the artisan job in their industries and are supposed to be in high demand in the labour market.

According to the 12 stakeholders interviewed from the municipalities, TVET civil engineering graduates are supposed to be in high demand for employment in municipalities and in the job market in general. TVET colleges are meant to produce a skilled workforce that equips individuals for employment or self-employment in South Africa.

All right, my view specifically about TVET graduates in both civil engineering and any other qualifications by the school is that they are in high demand in the labour market. This is due to the changing scope of higher education for TVET programmes with regard to the fact [that] their three-year programmes are inclusive of both 18 to 24 months of

practical work and work-integrated learning. For you to be employable in local government you must have a minimum of six months' experience for the work employment.

- Mr Pelo

This view was supported by Ms Lan from the college's senior management, who said that both NC(V) and R191 civil engineering graduates are skilled enough to enter the job market as beginners. Companies are supposed to hire artisans for job opportunities rather than those people without civil engineering qualifications.

Ms Lan felt that TVET civil engineering graduates may possess more skills on the construction building side of the entire civil engineering field; however, when they are given work in civil engineering, they perform well. She added that the graduates possess both practical and theoretical knowledge skills through their education. Ms Lan mentioned that industries should have more confidence in working with TVET civil engineering graduates because they apply what they know in the workplace.

Once an industry employs these graduates, they end up saving a lot on costs related to training these graduates because when they are hired, they possess the artisans' skills for the employment. - Ms Lan

One of the stakeholders from the municipalities explained why it is easy for the TVET civil engineering graduates to get used to the work without an induction from the new employer:

Now, with regards to the views that I have of TVET college graduates, it is that graduates themselves easily fit in terms of the work processes because they have been inducted before. Elsewhere, they are used to work for themselves and possess the conduct that is required of them.

They were inducted before on how to carry themselves in the place of work. Unlike taking someone that has never been in place of work. Also, the TVET college graduates...why I say they have happened to be a priority at times especially in the engineering field as a whole... is because of their exposure that they get for practical experience. - Mr Tabs

Focus group 2 held a similar view, suggesting that TVET college civil engineering graduates are supposed to be in high demand in the job market because they possess the skills needed in the job

market. According to Focus group 2, part of the reason for no/limited employment of TVET college graduates is that the TVET college qualifications are not included in the local government staff regulation for job requirements in the advertisement. The other reason is that TVET colleges do not adequately market themselves.

The employment skills for TVET graduates are there. We, as municipalities, work with some TVET graduates who were employed with matric qualifications. South African government has established TVET colleges for employment skills. Their skills include theory and practical training. So, they stand an advantage for employment. - Focus group 2

Despite having the required theoretical and practical skills, interviewees mentioned that municipalities and other institutions do not mention the job requirements for TVET civil engineering graduates. However, stakeholders interviewed from the municipality indicated that TVET civil engineering graduates do possess the necessary skills to enter employment as artisans.

I will not lie, TVET civil engineering graduates possess the necessary skills to enter employment in municipalities and in other stakeholders in civil engineering construction, especially in the building sides. TVET civil engineering are particularly good with physical work not planning. They can take through the entire laying out of building blocks and do quantity survey but do not start with them about construction design, water, other parts of engineering. Their scope of knowledge is directed to the implementation side. They (TVET civil engineering graduates) meet the requirements more than those who have done only matric in education and in some instances more [than] those who come from the university side when it comes physical work. - Ms Galo

For the interviewed participants, TVET civil engineering graduates meet the skills requirements to enter artisan job positions in the labour market. These graduates are supposed to be in high demand because they possess the skills needed for artisan civil engineering jobs opportunities. The interviewees also perceived that to hire a TVET civil engineering graduate is an advantage because the graduates are already trained, possess the necessary skills, and are aware of what is expected from them; thus, saving industries the costs of training employees.,

The views expressed by interviewed participants from the municipalities appear to be discordant regarding the employability of TVET civil engineering graduates. Some of the interviewed participants mentioned that TVET civil engineering graduates meet the necessary skills required for artisanship especially in the building or physical work side of civil engineering. However, other participants interviewed commented that TVET civil engineering graduates do not meet the skills required and municipalities do not know what they are qualified to do.

According to the three stakeholders, TVET civil engineering graduates should be in high demand. Some interviewees from the civil engineering companies mentioned that industries are not aware of what TVET civil engineering graduates are qualified to do. Additionally, there is uncertainty about the appropriate level at which to employ TVET graduates. Therefore, the interviewees admitted that they do not hire civil engineering graduates from TVET colleges. However, some interviewed managers from civil engineering and construction companies admitted that there are a few TVET civil engineering graduates that they work with in their industries often come from municipalities or SANRAL as a pre-requisite for the project that they undertake.

For instance, Mr Doro, Ms Gtee, and Ms Teno from Palala Civil Engineering Construction Company, stated that while they are aware of TVET colleges, they do not know what specific training the colleges provide students.

As site manager, I do not deal directly with them on a day-to-day basis. My experience with TVET college started working for Palala Civil Engineering Construction Company. So, I always heard about TVET, but I never really knew what really TVET are about until I came into Palala. The reason and even in our country, historically, TVET students were not considered. So, I do not know how long TVET has been around, but for as long as I have been a site manager or in management, we never employed TVET graduates. As a company you are looking at me as a site manager. I am from TECHNIKON. Our company in general are looking at national diploma civil engineering and university degrees. - Mr Doro

Ms Teno from a civil engineering and construction company shared a similar perspective, stating that they do not hire TVET college graduates. She mentioned that she had worked for different companies before she came to Palala civil engineering and construction company, but she has never seen the companies hiring TVET civil engineering graduates. Ms Teno explained that they

collaborate and communicate with other civil engineering and construction companies in the country, and they have the same understanding that they do not hire TVET civil engineering graduates. She further believes that TVET colleges may not be effectively marketing themselves to these companies to inform them about the capabilities and accomplishments of TVET civil engineering graduates.

We do not hire TVET civil engineering graduates, not only in Palala but throughout the country. I mean we do work in the entire country, but we are facing the same challenges when it comes to hiring from TVET colleges. I have friends in these industries (civil engineering industries) who work for other companies and to some of them they know nothing about TVET colleges in terms of offerings. Most civil engineering works are done by companies that are employed or appointed by government and private sectors to deliver big projects and hire many civil engineering graduates. So, it is important for TVET colleges to work with civil engineering companies to market what they do in their colleges.

Again, in my opinion, TVET civil graduates need to be given more opportunities in industries because they deserve. I have seen that with the TVET graduates that we are working with in this company. These TVET civil engineering graduates can work very well with buildings and costing. Currently, we are only forced by SANRAL to hire TVET graduates but in most cases, we hire university graduates because we assume that they are more competent than TVET civil engineering graduates. - Ms Teno

According to Ms Gtee, project liaison officer (PLO), civil engineering construction companies are not interested in hiring TVET civil engineering graduates and the only time they do is when there is a project that specifically requires TVET college graduates. She further explained some of the project requirements that are available in the project's contracts.

I am the PLO in this company. PLOs are hired by company to liaise between the company, municipality, community and subcontractors in the project and the community where the projects take place. As a PLO, I mostly work in hiring department for the company. I believe that TVET civil engineering graduates are only hired because civil engineering companies want to meet project mandatory requirements of the project. Other than that, civil engineering companies can only hire university and university of technology civil engineering graduates. They do not show any interests in hiring TVET civil engineering

graduates because they do not know them and that they compete with university and/or university of technology civil engineering graduates for employment in professional positions. So, as a PLO, we hire and check companies that work within if they comply with guidelines. Part of these guidelines mandate 30% employment of professional labour in the local municipality and 100% unprofessional labour from the local municipality where the project takes place. - Ms Gtee

Ms Gtee further mentioned that if companies hire TVET civil engineering graduates they do it to meet the job or tender requirements; companies do not hire them based on their qualification. She said TVET colleges need to upgrade and market their institutions for their graduates to stand a chance of employment in the industries.

If the company does not meet requirements, it is losing the project contracts only if they do not adhere to these requirements. With that said, I believe that TVET civil engineering graduates must upgrade their curriculum to work in other area of civil engineering. I am saying this because I have noticed that TVET civil engineering are focused more on the physical work and building side. In addition, TVET continue to take their TVET civil engineering graduates to do trade test. Once TVET civil engineering have trade test they have more opportunity. - Ms Gtee

The findings indicate that the perceived narrowness of the TVET civil engineering curriculum stems from the absence of specific technical literacies that are now standard in contemporary engineering practice. Stakeholders consistently implied the need for competencies that extend beyond physical labour, including computer-aided design (CAD), building information modelling (BIM), basic project costing, quantity surveying software, construction safety documentation, and the interpretation of tender and compliance documents. These literacies constitute the foundational knowledge required for artisan-level and technician-level roles in the industry, and their absence reinforces the perception that TVET graduates are limited to physical work rather than capable of contributing to higher-order civil engineering processes. Explicitly identifying these required literacies demonstrates how curriculum reform can directly address current employability challenges.

According to the three stakeholders, some of the civil engineering construction companies do not hire TVET civil engineering graduates. However, some companies hire TVET graduates only to

meet specific project mandate requirements. The interviewees indicated that the reluctance to hire TVET civil engineering graduates appears to emanate not from their incompetence but from a lack of understanding of the skills and competencies that these graduates possess. According to the interviewees, graduates deserve to be given more chances for employment because they are hardworking and are well-suited for the physical and construction aspects of civil engineering.

The apparent contradiction between managers' assertions that graduates are competent at physical work yet simultaneously 'not ready' for industry is analytically significant. This inconsistency does not reflect confusion but instead reveals the multi-layered criteria used by employers to judge employability. While graduates meet the technical expectations of physical labour, they lack institutional cues that employers interpret as markers of legitimacy and reduced organisational risk—such as communication skills, adherence to workplace norms, and recognised experiential credentials. This contradiction therefore exposes the deeper institutional mechanisms through which readiness is constructed beyond technical ability.

5.3.5. Recognition of TVET civil engineering qualifications

The interviewees felt that one of the reasons for the low state of employment for TVET civil engineering graduates is the lack of recognition of TVET colleges by both communities and industries. The interviewees also suggest the lack of recognition is caused by the stigma of the past where TVET colleges have been treated as an institution of second choice from the universities. Interviewees also mentioned that the lack of recognition of TVET colleges led to other institutions not recognising the qualification offered at TVET colleges and not including TVET engineering qualifications in the job advert.

For example, Mr Yengwa indicated that the lack of recognition is caused by the stigma attached to TVET colleges, in that they are treated as insignificant institutions.

We knew FET colleges (TVET colleges) in the past as institutions that provide skills courses for people who were unable to do well in school academically or people who were not taken in universities to do their degrees. Those people were only taught skills for work as maintenance person in industries, not for artisan positions.

I think, it will take time for the communities and industries to recognise FET [TVET] colleges if they can produce good engineering graduates for artisan positions especially in the job market. - Mr Tabs

Mr Max echoed the sentiments, saying that the TVET colleges' lack of recognition makes difficult for the TVET civil engineering graduates find artisan jobs in their industries.

TVET civil engineering graduates do not receive the recognition that they deserve. They are rejected by society and employers. I mean, it is rare to find a TVET civil engineering graduate work in municipalities, municipality managerial positions in civil engineering institution. I have worked with TVET civil engineering for many years. Those who graduated have acquired the relevant skills for the job market. They work so well with physical work than us who come from the universities can work. They take details at their specific work in the field of specialisation. In most cases, I have noticed that their work is linked to the building side than the whole civil engineering, but this is not recognised because our communities still believe that a TVET civil engineering graduates are not good enough because of the historical background. - Mr Max

For the interviewees, the lack of recognition of TVET colleges was one of the significant issues that leads to the low state of employment of TVET civil engineering graduates. The interviewees believe that even other municipalities do not recognise TVET qualifications and, as a result, they do not mention it in the job advertisement for artisanship positions.

The interviewees indicated that TVET civil engineering graduates are not included in the job requirements in the municipality. According to one of the interviewees... Ms Galo, the municipalities have a local government staff regulation that stipulates the pre-requisite for employment of civil engineering employees, and it does not include TVET civil college engineering graduates' qualification for employment. She said that in the municipalities, none of the pre-requisites include TVET civil engineering requirements for employment in the local government staff regulation, which makes it difficult for the municipalities to hire TVET civil engineering graduates. She noted that those who have worked with TVET civil engineering graduates have not given them the recognition they deserve in the job market in terms of employment.

One of the managers from the municipality shared similar sentiments. He mentioned that most of the municipality managers who are in the recruitment processes have no adequate knowledge about the TVET civil engineering qualifications for recruitment purposes. One reason TVET college qualifications might not be mentioned in job advertisements is that most managers have studied at universities.

TVET civil engineering graduates are somehow not known by the employers in terms of local government staff regulation of what level of qualifications requirements that are met there. This is only because some of us never studied in the TVET space, and people from TVET are not taking their production to the marketing space. When I was at school, I knew that when you study in the TVET sector, it is because you did not find space at university, and you are not good enough for the job. They are very few people who are in managerial position who understand what is currently happening in TVET colleges. In terms of the employability of TVET civil engineering graduates, as the municipalities, we work under a recruitment and selection policy, and that policy does not speak about TVET college qualifications and standards. The TVET civil engineering graduates' qualification needs to be qualified and measured to the university standards to know the level at which these TVET civil engineering qualify, and which post are relevant to them at what level. - Mr Guru

Mr Max shared similar sentiments in focus group 2, stating that, in the municipality they use the job requirements to recruit civil engineering graduates or grade 12 certificate holders for lower-level jobs than artisans. He said that he has never seen TVET qualifications mentioned in their job advert for them to recognise TVET civil engineering graduates in the recruitment processes for the job.

Additionally, interviewees believe that TVET colleges do not market themselves well, leading to a lack of awareness, and lack of recognition among employers about the qualifications and skill sets that TVET civil engineering graduates possess. The interviewed participants advanced that TVET colleges are not effectively marketing their TVET civil engineering graduates to industries in order sell them for employment.

In this theme, the interviewees believe that one reason for the low state of employability of TVET civil engineering graduates is the lack of recognition of TVET colleges, which is caused by the

stigma of the past, amongst other things. The interviewed participants stated that even their institutions do not hire TVET civil engineering graduates because they do not know what they are qualified to do as artisans in civil engineering. This is because TVET colleges are not marketing themselves enough to get recognition from the industries. The interviewees believe it is time for TVET colleges to get the recognition that they deserve for their TVET civil engineering graduates get employable in all industries.

5.3.6. Hiring and state of employability

The data from the interviewed participants show that despite existing agreements, TVET civil engineering graduates are not hired in companies based on their qualifications. If they are hired, it is because they fill a mandatory requirement that requires employers to hire TVET civil engineering graduates to perform certain projects. The interviewees mentioned that they do work with TVET civil engineering graduates in their industries for certain reasons that include mandatory requirements of the project, or they work with TVET civil engineering graduates because these graduates are hired with other qualifications, not the TVET qualifications for civil engineering. Interviewees further mentioned that some of the TVET civil engineering graduates are in their municipalities to do in-service training or internship programmes.

The current state of TVET civil engineering graduates' employment is low and in fact it is low for all TVET qualified graduates. This is because our municipality recruitment policy does not include TVET qualifications now. So those who are hired in our industries are either hired without or with other qualifications, not TVET civil engineering qualification. In most cases, we help TVET college graduates with getting experiential training as in-service training or internships i.e. when we work with TVET civil engineering graduates not on fulltime employment. Once they finish their internships or in-service training programmes, it is difficult to hire them because of their certificates. For example, their certificate is a national N-diploma, or it is NCV Level 4 [Certificate], we do not have such in our recruitment policy pre-requisites. - Mr Guru

Similarly, the interviewed managers from civil engineering and construction companies mentioned that they typically do not hire TVET civil engineering graduates in their companies. They only do so when it is necessary to meet project mandate requirements. They acknowledged that they have worked with TVET civil engineering graduates as interns, when supplied by SANRAL, or hired

just to meet the mandate requirements of the project. Otherwise, they do not employ TVET civil engineering graduates.

The state of employment of TVET civil engineering must be very low in my view. Like I said, our civil engineering construction company does not hire TVET civil engineering graduates. We have a database for employment in our company, but there are no TVET civil engineering graduates in the database. We never hired TVET civil engineering graduates in the past years because we knew nothing about it. It is only now whereas a company, we hire TVET civil engineering graduates because even some of the requirements when we have tender project to do, project requires us to hire TVET civil engineering graduates. Now, we have few TVET civil engineering graduates in our sites. -

Ms Teno

Interviewees from the managers from the municipality and civil engineering construction company also agreed that TVET civil engineering graduates are not hired in their institutions because there is a stigma about TVET colleges. One of the managers, Ms Atta, from the local municipality, mentioned that they have a TVET college in their local municipality; however, they do not know what is happening there. She further stated that TVET colleges were developed to assist the poor people and those who were struggling to finish their matric or those who did not make it to universities. So, their quality standard is considered low.

A manager from the TVET college, Mrs Hlalu, indicated that, as much as they can say in SA there are job opportunities, but they are not specifically for graduates in TVET civil engineering. She mentioned that the job opportunities in most cases are targeting matric qualifications with English and mathematics. Mrs Hlalu pointed out that sometimes the matric job opportunities are for cleaners, general workers etc. and some of the TVET civil engineering graduates apply with their matric certificate to get these kinds of job opportunities because of the scarcity of TVET civil engineering job opportunities in SA.

This notion was shared by Mr Yengwa from that TVET college who said that some of the TVET civil engineering graduates are employed as general workers with a grade 8 or matric etc. due to the lack of job opportunities and the lack of recognition of TVET civil engineering graduate qualifications.

The state of employability in South Africa still remains low despite the efforts that the government is making to enhance employment. However, there has been a gradual increase in civil engineering graduates' employment. Sometimes you will find that most of TVET civil engineering graduates end up working in the areas of work that do not necessarily need their skills. We have seen them working as general workers, some work for EPWP [programmes], and others work in the retailers as cashiers. Government has been emphasising on the expansion of partnership with industries in order to secure employment and placement of TVET graduate, however, that aspect is difficult for TVET colleges because most industries in South Africa do not want to take college graduates because they claim that they do not have expertise that are required in their companies. -

Mr Yengwa

Ms Zaza asserted that the state of employability in SA is low, but it is not easy to distinguish whether the employability is low for those who have diplomas or degrees in civil engineering because there are no proper statistics that show whether the TVET civil engineering graduates get employment after they have completed their qualification. Ms Zaza explained that it would be easy to determine the unemployment rate according to categories by separating those who have qualifications from those who have no qualifications.

One of the municipality managers, Mr Tabs, mentioned that there are TVET civil engineering and TVET graduates that are employed in the municipality, but they were not hired with their TVET civil engineering qualifications. Mr Tabs mentioned that they are either employed with matric or other qualification and when qualification verification is carried out in the municipality, only then are TVET civil engineering graduates noticed. Mr Tabs also mentioned that some of the TVET civil engineering graduates finished their TVET civil engineering qualification whilst already employed in the municipality.

In this municipality, we happen to hire TVET civil engineering graduates, but in most cases, they are hired without their TVET qualifications. I have worked with TVET civil engineering graduates before; these graduates are very skilled to basic things that are required in civil engineering in the building construction side. Few of TVET civil engineering graduates are hired in the municipality with their matric qualification and noticed later after submitting other qualifications for skills audit purposes. - Mr Yoyo

According to Mr Yoyo, TVET civil engineering graduates are well suited to work in the municipalities because municipalities deal with maintenance and repairs. However, big jobs for the municipalities are outsourced for tender projects.

In most cases, we as municipality deal well with maintenances and repairs, so TVET civil engineering graduates fit well when they have trade test certificates in their qualifications, and we hire them. However, our records show a very low number of TVET civil engineering graduates in the employment in our municipality, even on the side of companies that we appoint to do our projects; the records for TVET civil engineering graduates show that there are fewer TVET civil engineering graduates that are hired based on their TVET qualifications by them and it is not TVET civil engineering graduates. Our municipalities and companies need to change and start putting more recognition on the TVET sector. If we increase recognition of TVET colleges, the employment of TVET graduates can increase, but for now it remains low or not there at all. - Mr Yoyo.

Focus group 1, which comprised Mr Zesh, Ms Zods, and Mr Caleb, held the view that TVET civil engineering graduates are not known in their municipality. The group mentioned that most of the municipality employees come from universities or universities of technology to work for the municipalities. At some point, they were promoted to managerial positions as supervisors and played a role in the recruitment of civil engineering employees. However, they neither have nor hire TVET civil engineering graduates because they have never heard what TVET colleges offer in civil engineering, and they are not aware of what is happening there. Even their job recruitment processes do not recognise TVET qualifications. Focus group 1 also mentioned that it is difficult to talk about TVET civil engineering graduates because they work with them without a proper understanding of their expertise.

Focus group 1 also noted that, given the high rate of unemployment in SA, the state of employment for TVET college graduates must be incredibly low since the Tilo District Municipality is not the only one who does not hire or mention TVET civil engineering qualifications in their job advertisements. Furthermore, this group also said that they are aware that TVET colleges were established to provide skills for employment, but up until now, they know nothing about what is done at TVET colleges.

In addition, Ms Nhinh from the local municipality mentioned that the low state of employment of TVET civil engineering graduates is caused by the stigma and no inclusivity of TVET civil engineering qualifications in the municipality recruitment policies and job advertisements.

The TVET qualifications are stigmatised, and this results in municipalities like us ... [not hiring] TVET civil engineering based on their qualifications and stigmatisation. So, the state of employment for them must be so low if some big municipalities like us does not even include them in our recruitment processes. - Ms Nhinh

Given the above views, both the TVET college and employers agree that the state of employment of TVET civil engineering graduates is low. The interviewed participants in Malo TVET college mentioned that despite the slight increase in employment of TVET civil engineering graduates, it still remains low. Interviewed participants in the municipalities and Palala Civil Engineering Construction Company expressed similar views and added that in other areas of the municipality they do not hire TVET civil engineering graduates at all.

The interviewees indicated some instances that lead to the low state of employability of TVET civil engineering graduates. The interviewees mentioned that the employment of TVET civil engineering graduates is low, and, in other municipalities, they do not employ TVET civil engineering graduates at all, due to the competition for employment with other civil engineering graduates from other institutions like universities or universities of technology. When TVET college graduates compete with university or university of technology graduates, the employer is more likely to hire the university or university of technology civil engineering graduates.

5.4. Chapter summary

In this chapter, I presented Part One of the data and analysis, which draws on interviews conducted across seven sites: a TVET college, four local municipalities, one district municipality, and a civil engineering construction company. These sites represent the perspectives of stakeholders involved in the production and employment of TVET civil engineering graduates.

Twenty-one participants shared their perspectives on the employability of TVET civil engineering graduates. The findings were organised into six themes that emerged from the data and were presented in a way that sought to answer the first research question of the study. These themes highlighted the broader socio-economic conditions, institutional dynamics, and labour-market

demands that shape the employability of graduates from TVET civil engineering programmes. The next chapter presents Part Two of the data and analysis of this study.

CHAPTER SIX

DATA PRESENTATION AND ANALYSIS

PART TWO

6.1. Introduction

In the previous chapter (Chapter Five), I presented Part One of the data presentation and analysis. That chapter included the profiles of participants and the findings that responded to the first research question: *What are the perspectives of college stakeholders on the employability of TVET college civil engineering graduates?*

Because the study generated a substantial volume of qualitative data, the data presentation and analysis were divided into two chapters—Chapters Five and Six—to ensure clarity, coherence, and alignment with the sequence of the research questions, rather than simply because of length. While Chapter Five addressed the first research question, this chapter (Chapter Six) presents Part Two of the data presentation and analysis, focusing on the second and third research questions. These research questions explore how and why such perspectives manifest among the college stakeholders, and how the college stakeholders effectively contribute towards enhancing the employability of TVET civil engineering graduates.

The data presented in this chapter draw from semi-structured interviews and focus groups with 21 participants, including employees from the participating TVET college, municipalities, and the civil engineering construction company.

To structure this chapter, I begin by presenting the themes that respond to the second and third research questions, organised into four sets of themes for each question. The chapter concludes with a summary of the main findings.

6.2. Perspectives that prevail/Manifest among college stakeholders

In this chapter, I present the data and analysis based on the insights shared by individual participants during the semi-structured interviews and focus group discussions. Fifteen of the 21 participants shared their views during semi-structured interviews, while the remaining six participants shared their views in the focus groups as mentioned in the previous chapter (Chapter five).

In the section, I present the first four set of themes that are meant to answer the second and third research questions: *How and why are such perspectives manifesting/prevaling among the college*

stakeholders, and how can the college stakeholders effectively contribute towards enhancing the employability of TVET college civil engineering graduates? The four set of themes are as follows: Student attrition, TVET college partnership with industries, significance of communication on employability, and content of the curriculum.

6.2.1. Student attrition

According to participants at Malo TVET college, there is high student attrition in their TVET colleges for civil engineering programmes. The interviewees pointed out that some of the students drop out prior to finishing their qualifications and do nothing, while others secure employment before they complete their qualifications. These participants further noted that the above views have weakened partnerships with industries, as there are not enough N6 civil engineering graduates completing their studies for placement.

I will categorise the challenges that we are having there. Firstly, our output, the students that exit as a graduate. What I have picked up we are producing a less number as compared to the intake that we are taking at the college for this programme. I am taking this from the experience where we were looking for learners (students) that are supposed to be rewarded with in-service training. We are struggling to get learners that have completed N6 in the TVET college. When you track these learners, you find them that may be in N6, those learners they did not complete the full subjects and then leave to find job and that they are working somewhere. So, which now that becomes a problem into having complete graduate in the civil engineering side. Sometimes when industries look for N6 students to do their in-service training with them, we fail to provide them because most students have not completed N6 studies. - Mr Yengwa

Ms. Lan from the TVET college mentioned that, during each examination cycle, less than 10% of N6 students complete their studies, compared to the number of students enrolled at the beginning of the civil engineering programme. Some students exit the civil engineering programme before they complete the course because they find other job opportunities, while others leave the school because they fail the programme.

I believe that some of the students are unemployed because they have not finished their diplomas. The students who have not finished their studies contributes to low rate of employment of TVET civil engineering graduates. - Ms Lan

One of the interviewed participants also noted that even after graduation, the generic nature of the qualification contributes to the lack of employability of TVET college civil engineering graduates specifically, and TVET college graduates in general. The interviewee referred to the civil engineering qualification as “generic” because he pointed out that the qualification is not specific to the trades that are offered in civil engineering.

Our civil engineering in the TVET sector is very generic... because there you will [be] talking about your surveyors, quantity surveyors... architect[s].... All these qualifications are introductory, [and] they are not specific according to the trade. TVET sector has generic qualification in civil engineering compared as [to] universities. - Mr Yengwa

This notion was supported by Mrs. Hlalu, a college manager, who said that the building and civil construction curriculum is too narrow; it introduces four different sectors of civil engineering within a single qualification. In contrast, at universities, civil engineering students can specialise in specific areas such as road construction, design, or materials, allowing for deeper expertise in each field. Mrs. Hlalu explained that when it comes to the TVET sector, the students are exposed to all the components, their subjects touch on all the trades, but the challenge is that they have limited information in all the trades.

Furthermore, Mr Yengwa mentioned that the generic nature of the civil engineering qualification offered at TVET colleges is under review. TVET colleges are changing their curriculum to be more specialised so that their TVET civil engineering graduates can be specifically aligned to their trades, and the curriculum is due to be fully implemented by the year 2027.

Focus Group 2 expressed the view that some of TVET college students employed in municipalities only have an N2 qualification with trade certificates and lack a national N-Diploma qualification. These students are hired because they have a Matric and a trade test certificate in their field of expertise but, according to the focus group, these employees have not completed their qualifications.

We have employees in our institution who were employed with Matric and trade test certificates. Some of these students have registered in TVET colleges or universities to obtain their full diplomas or degrees to stand for better salaries and promotion at work. -

Focus group 2

The interviewees—Mr Yengwa, Mrs Hlalu, and Ms Lan—also assumed that some of the students who enrol in the civil engineering programme do not complete their qualifications because they

are not satisfied with the civil engineering programme offered at TVET colleges. According to the interviewees only a few students complete and graduate from the programme due to a high drop-out of students.

As already mentioned, the three college managers and focus group 2 interviewees stated that many civil engineering students exit their civil engineering programmes before they complete the qualification. The interviewees believe that some of the reasons for this are that: (1) some students fail the programme and lose interest in continuing with the civil engineering programme, (2) the civil engineering programme is generic compared to universities and some students drop out because they feel that they will not get employment after they have finished the programme, (3) some of the students get employment before finishing and stop continuing with the programme, (4) some of the students have no financial means to support their learning programme. According to the interviewees the above has caused student high attrition in the civil engineering programme. Mrs Hlalu felt that the early exit of students before completing the programme has resulted in only 10% of students exiting with a completed civil engineering programme compared to the number of students who enrolled in the programme because of high attrition. She indicated that the 10% who exit civil engineering programme takes place in every examination cycle. The interviewee perceived the above view as a contributing factor to the lack of an adequate number of students who complete the civil engineering programmes.

6.2.2. TVET college partnership with industries

The interviewees indicated that the college stakeholders not only fail to recognise the importance of creating partnerships, but that the creation of partnerships or collaborations can significantly enhance the employability of TVET civil engineering graduates.

Notably, the interviewees in this theme indicated that they have currently no partnership between them as TVET colleges and industries from the municipalities. However, the interviewed managers at TVET colleges and municipalities highlighted that partnerships between TVET colleges and industries could bring about improvement of employment and reduce the shortage of unqualified professionals in the civil engineering fraternity.

Mrs. Hlalu, Mr Yengwa, and Ms Lan other interviewees from Malo TVET college pointed out that even the DHET reports on PSET 2013 emphasise the needs for TVET colleges to form or strengthen partnerships with industries.

We persist on them (municipalities) with partnership. This can assist TVET colleges and industries to enhance employment in industries and reduce mistrust between two entities. I have seen that in other TVET colleges where there is partnership, graduates are doing well, and their graduates get employment [and] sometimes are trained even abroad. Partnership is necessary. Currently, there is no partnership between us as TVET and local municipalities. - Mrs Hlalu

Ms. Lan highlighted the importance of partnerships between TVET colleges and municipalities where their campuses are located. She also said that DHET policies encourage them to create partnerships with industries to make placement and employment of their students easier. Ms Lan mentioned that even the programmes that they offer, including civil engineering, are supposed to be chosen by the communities according to the socio-economic needs of the local municipality. According to Ms Lan, partnerships can assist colleges to produce graduates that are recognised by their own communities. Partnerships with municipalities can also help colleges to be linked with industries which need to hire professionals in the same programme offerings at TVET colleges. Ms. Lan expressed concern that, despite her 30 years of service in the TVET sector, she has not seen TVET colleges work with municipalities and stakeholders to identify programmes. She noted that they only see this on paper, but the programmes offered are decided by DHET and the college rectorate (college management). She mentioned that this does not create good relations with municipalities and other employers, regardless that the government and other stakeholders in TVET colleges have been emphasising that TVET colleges work in partnership or collaboration with industries to understand each other's demands on employability of civil engineering artisans. Interviewees from the employers in industries shared the same views. For instance, Mr Doro and other interviewed participants from the employers mentioned that if they can increase partnership with TVET colleges, they will be able to understand what is done by TVET civil engineering graduates and that may contribute towards enhancing the employment of TVET civil engineering graduates.

There is a TVET here around the Tilo district municipality. Some of the programmes offered there are like what we need as the municipality, but we do not have partnership with the TVET colleges. We have programmes that as a municipality that we need to train our community on, especially unskilled unemployed youth. If we can work in partnership with TVET colleges, we [can] learn what is done and contribute on the other type of

programmes to be offered there to help our communities to get employment skills. - Focus group 1

Mr Doro emphasised the importance of partnerships between municipalities, community members, and local industries. He mentioned that some of the new companies in their area consult with them to look for students who need to do internship programmes and temporary employment. However, as the municipality they struggle to provide industries with the students who come from their nearest TVET colleges because they do not have a relationship with them. Mr Doro said it would be wise for municipalities to create partnerships because it could assist with their duties to help reduce crime and unemployment in their communities.

Similarly, Mr. Yengwa said that partnership with industries can make things easier to improve the employability of TVET civil engineering graduates. He stated that all the programmes that are offered at their TVET colleges are supposed to be chosen by industries so that as TVET colleges they train students that will become employable in those industries.

If TVET colleges can work in collaboration or partner with other stakeholders like us municipalities to market their colleges, the state of employment of the TVET civil engineering graduates can change even within the municipality and its stakeholders. I can tell you now, their civil engineering graduates can get more employment opportunities because industries need artisans and DHET states that TVET produce artisans. - Ms Nhinhi

Despite the interviewed participants agreeing that partnerships can play a key role in increasing employment in the communities in which they are operating, they pointed out that there are currently no proper partnerships between the college and municipalities or industries.

For instance, Mr Yengwa mentioned that currently there is no proper partnership with industries, and that the college has been working to form partnerships with industries. However, with the new curriculum that the colleges are introducing there may be more partnerships with industries. It is industries in partnership with the college that will choose the programmes and the students for their colleges.

We have TVET college here in our municipality area but there are no relations or partnership with them. Again, most graduates for TVET civil engineering do not come from our communities. These colleges register students who are not coming from the same college where the TVET is located. It makes it difficult for the municipality to understand

what the TVET colleges are doing. I think TVET colleges are supposed to work with municipality and other civil engineering stakeholders in partnership to ensure that TVET college graduates from this TVET benefits from the employment. Even us as the municipality, we are willing to work with TVET civil engineering graduates; however, we do not really know what they are doing there. We have placed some of [the] students who came from TVET colleges, I can tell you those graduates are willing to learn, and they grasp knowledge easily because some of machineries that we work they are familiar with.

- Mr Max

Ms. Zaza agreed that there is no partnership or working relationship with TVET colleges and their municipality. The municipality hires anyone who qualifies; however, no TVET civil engineering graduate has been hired based on the qualification because their qualifications standards are not known, as compared to universities. She strongly agreed that to enhance employment in the communities, the municipality and college are supposed to work in partnership in order to uplift the socio-economic needs of their communities.

Furthermore, Ms. Zaza further acknowledged that both TVET colleges and her municipality need each other. She said that they have a Sukuma Sakhe and other businesses forums to assist the development of their economic growth in terms of employment and other social activities as municipality, and these forums can assist the college if they work together to enhance employability of their TVET graduates. She believes that currently TVET colleges are working in silos—nobody knows what they are doing and what assistance they need from the municipality.

Mr. Doro stated that they have never had a partnership with TVET colleges since their company was established.

Since 1984 the company was established and doing civil construction engineering works in SA, we have not seen any TVET college coming to us to form partnership or to highlight their work of the civil engineering graduates. There is no partnership that is formed with TVET colleges despite that we need a supply of civil engineering graduates to work with us as qualified artisans and engineers, but we do not know what they do. - Mr Doro

Mr. Doro further mentioned that it is important to create partnerships with TVET colleges; this can assist their industries to work together to improve employment of qualified artisans.

I think partnership with TVET colleges can assist us as civil engineering company not to struggle to find qualified artisan or hire TVET civil engineering graduates. I do not mean to compare, but universities and universities of technology do come to us to check if their civil engineering graduates doing well in the place of work and to check if there are challenges with what they deliver in the institutions. I have never seen even a single [TVET] college coming to us to even monitor the students who are doing in-service training or internship in our company. - Mr Doro

According to the views of the study participants, there are supposed to be partnerships to enhance employability of TVET civil engineering graduates; however, the partnership does not exist. For instance, participants from the TVET college mentioned that they attempt to identify civil engineering companies for partnership. However, in most cases, these companies are reluctant to collaborate, citing their perspective that the college is still too small to offer significant value.

According to TVET college interviewees, major civil engineering companies are situated in big cities and metropolitan areas. They also mentioned lack of partnership with municipalities currently, even though such collaborations could significantly enhance the recognition of TVET college graduates by municipalities and the industries working within them. The study participants from the municipality and the civil engineering companies confirmed the absence of relationships or partnerships with TVET college, which leaves them unaware of the colleges' activities and capabilities.

Interviewed managers from the industries and municipalities mentioned that they only deal with TVET civil engineering graduates when they do internships for experiential training in their industries but there are no proper partnerships. An interviewed participant representing an employer mentioned that TVET colleges do not even copy what is done by the universities, which is to visit their institutions to highlight or form partnerships to enhance employability of TVET college engineering graduates.

6.2.3. Significance of communication on employability

Participants in this study indicated that communication between TVET colleges and employers (municipalities and civil engineering construction companies) is lacking though they are supposed to enhance employability of TVET civil engineering graduates. For instance, Mrs. Hlalu from the TVET college mentioned that while they do collaborate with some companies, they do not work

with municipalities, which often do not understand the college's operations. The interviewed managers from the TVET college mentioned that they have a few industries or companies with whom they are in constant communication. However, they are not in touch with municipalities or large civil engineering companies, which could significantly impact the employability of TVET civil engineering graduates.

As a TVET college, we do have engagements with industries that we have partnership with however, but we do not have any engagements with municipalities and big industries, as a result, and I think they do not understand what the TVET colleges do. Industries that we communicate with are small scale and they do not hire our TVET civil engineering graduates because of their low capacity. Here, locally we only have small civil engineering companies, so it is difficult to communicate with these companies because in most cases they are from big cities or towns, or their operations are in big cities. - Mrs. Hlalu

Interviewees from municipalities and civil engineering construction company (e.g. Ms Galo, Ms Teno, Mr Tabs, and Mr Max) mentioned that there is no communication between them and TVET colleges; even those students who are doing internships or in-service training with them are not properly monitored or checked by their TVET colleges.

We have policies in the municipalities, and these policies are the ones that we use when we do recruitment processes for employment in the municipality. Our policies in terms of the requirements for employment in the municipality does not include TVET college qualifications because there is no communication line between us and TVET colleges. This affects us and TVET colleges because we cannot hire qualified artisan from TVET colleges. As a result, in some of the vacancies we do not hire qualified people and end up hiring un-professionals that will require us to train them to qualify for the job. If there were communications between leaders of the municipality and TVET colleges, we would have the college requirements included in the municipality policies for recruitment. - Ms Galo

This notion was echoed by one of the managers, Ms. Teno who said that since they started the interchange road construction project in this municipality, they have not seen any TVET colleges coming to ask them to employ any TVET civil engineering graduates. Ms Teno said that she had worked in many municipalities in the country across all nine provinces in SA. They have seen students from the TVET colleges coming to them to request to do either in-service training,

internships, or apply for jobs; however, no one from the college has consulted them. Ms Teno mentioned that the lack of communication between their industries and TVET colleges put the recognition for TVET civil engineering employment incredibly low or absent.

No one who come from the TVET sector to communicate or engage industries on the TVET offerings. As a result, we are reluctant to hire TVET civil engineering graduates because we do not know what they competent to do. - Mr Tabs

Ms Teno added and further said that they have never had a discussion or communication with TVET colleges on their offerings and how municipalities can assist them. She highlighted a significant challenge, namely, the lack of communication between employers and TVET colleges regarding qualification recognition, and the absence of employment targets for TVET college graduates. Ms. Teno emphasised the need to expand communication channels and collaborate with TVET colleges to improve the employment prospects of TVET civil engineering graduates.

For the four interviewees, Ms Galo, Ms Teno, Mr Tabs, and Mr Max, there is lack of communication between TVET colleges and industries to deliberate on the employability of TVET civil engineering graduates. Although the interviewees from the colleges claimed to have some communication with some engineering companies, they said those companies are small in scale and rarely hire TVET college graduates. The interviewees acknowledged that the lack of communication with industries such as municipalities may lead to high unemployment rather than enhancing employability.

6.2.4. Content of curriculum

According to these interviewees, there is a consensus that employability of TVET civil engineering graduates could improve if leaders and managers from both sectors (TVET colleges and municipalities) engaged in discussions about the programmes offered by TVET colleges and how industries can support employability efforts.

The responses from the interviewed participants showed that the curriculum for TVET civil engineering students focuses primarily on building and engineering construction rather than the broader field of civil engineering. The interviewees from TVET colleges, municipalities and civil engineering construction companies agreed that the TVET civil engineering curriculum is more orientated towards building and construction than the wider scope of civil engineering.

Additionally, TVET college representatives and employers concurred that the TVET colleges lag in the technology used in the civil engineering construction fraternity. For example, Mr. Yengwa, Ms Lan, and Mrs Hlalu from Malo TVET college pointed out that both the national certificate vocational (NC(V)) and the National Accredited Technical Education Diploma (R191) programmes offered at their TVET colleges are focused more on the building construction part of entire civil engineering scope. The study participants from Malo TVET college also mentioned that the curriculum offered at TVET colleges lags behind industry standards because of the technology that changes regularly in the civil engineering industries.

TVET college civil engineering is more on the building [construction] like your community builders, the house building and roofing, but your big structures like road construction and where a big hall [in places] where you use a steel work and big civil engineering structures like road construction bridges, we are not really into civil engineering, [but] we are more like a community house building construction firm. - Mr Yengwa

Mrs. Hlalu shared similar insights as Mr. Yengwa, saying that the building and civil construction curriculum offered at TVET colleges has less depth when it is compared to the civil engineering curriculum offered at universities. The TVET sector introduces four different components of civil engineering; the students are exposed to all the components because their subjects touch all the trades. However, the challenge is that they have limited information in all the trades. In contrast, at universities, when dealing with civil engineering, they focus on road construction and design. Universities expand on a specific trade.

Yes, these graduates may possess more skills on the construction building side of the entire civil engineering, but when you give work, they perform. - Ms Lan

Ms. Atta from the municipality said that TVET civil engineering graduates are supposed to meet the artisanship skills requirements; however, the skills for TVET civil engineering graduates are supposed to be broader in depth for civil engineering than focusing only on the building and construction side. Ms. Atta also mentioned that their industries are broad because they are looking for people that understand civil engineering not just building and engineering construction. As the municipality, in most cases their job is maintenance, and they do not perform major projects; the municipality outsources major projects through tenders. Ms Atta said they appoint civil

engineering graduates who can handle the entire civil engineering industry to respond to the needs of the projects that they outsource for their municipality

Mr Tabs shared similar sentiments, pointing out that municipalities appoint a contractor for major projects then, as a municipality, they inspect and monitor the contractor for the projects. He added that the skills possessed by college graduates, particularly on the building and construction side, are good. He believes that TVET civil engineering graduates do not have enough knowledge to meet the skills requirements needed by the municipalities.

In our municipalities we deal with maintenance and repairs of the roads and buildings. Big works (major projects) are done by service providers who are doing civil engineering construction works. TVET civil engineering graduates can only do physical work in the construction building side of civil engineering space. It makes their journey in the civil engineering industry slim. As the municipality, the work that is outsourced is monitored by inspectors, technicians and engineers hired by the municipality. - Mr Tabs

The interviewees Mr Guru, and Mr Doro, as well as Focus group 1 participants mentioned that their industries were not hiring TVET civil engineering graduates. They said that, since they started to work with or hire TVET civil engineering graduates in other parts of their projects, they have also noticed that the curriculum for TVET civil engineering is focused on building and engineering construction.

I will not lie, TVET civil engineering graduates possess the necessary skills to enter employment in municipalities and other stakeholders especially in the construction building side of maintenance and in companies that work for the municipality that render construction building engineering works. TVET civil engineering are incredibly good with physical work, not planning. They can take through the entire laying out of building blocks and do quantity survey but do not start with them about design. Their scope of knowledge is directed to the implementations side. They meet the requirements more than those who have done matric only and, in some instances, more than those who come from the university side when it comes physical work. - Mr. Guru

Similarly, Mr. Doro from the civil engineering and construction company said he is of the opinion that the curriculum is for building and engineering construction. Since he started working with

TVET civil engineering students, he has observed that they work well with building and construction.

The managers from TVET college mentioned that the curriculum will be changing in TVET colleges to address curriculum issues.

We need the change of the college curriculum for civil engineering. It is important because, it will address the issues raised [by stakeholders] on a streamlined curriculum for TVET civil engineering qualifications. The new curriculum will be more to specialisation (specific to trades) in civil engineering field. Civil engineering in TVET with different trades. We need the change; we must change. - Mr Yengwa

Mrs Hlalu claimed that the curriculum is to be expanded to make sure TVET civil engineering graduates become more specialised in civil engineering trades. The expansion of the curriculum will make TVET civil engineering graduates more competitive with the university civil engineering graduates when applying for employment.

For the interviewees, the civil engineering curriculum offered at the TVET colleges has less depth and is directed more to building and civil engineering construction. The TVET civil engineering graduates are good at the building construction side of civil engineering fraternity. Thus, TVET civil engineering graduates are perceived to be employable in civil engineering industries that are dealing with building, and construction works.

Two of the participants, Mr Yengwa and Mrs Hlalu, explained that the curriculum at TVET colleges is under review, and it is being expanded to make TVET civil engineering graduates more employable in the entire civil engineering field.

6.3. College stakeholders' views towards enhancing employability

In the section below, I present the last four set of themes that emerged from the data presentation. The last set of four themes seeks to answer the last research question of this study: *How can the college stakeholders effectively contribute towards enhancing the employability of TVET college civil engineering graduates?* The themes that seek to answer the last research question are as follows: collaboration to enhance employability, importance of database for graduates, impact of technology on the curriculum, and the NSFAS support on employability skills.

6.3.1. Collaboration to enhance employability

The study participants indicated that collaboration between TVET colleges and industries could significantly enhance the employability of TVET civil engineering graduates. Additionally, the college managers mentioned that there are strategies in place for the colleges which are set to enhance the employability of TVET civil engineering graduates. Among other strategies, TVET colleges have developed two units to work in collaboration to deliver to its mandate.

We have strategies in TVET colleges that may help students to get employment or create their employment. These strategies emphasise on our two units to work in collaboration. The units that I am talking about are the work Integrated Learning (WIL) which is placement unit. That [this] unit is set to help learners (students) get in-service and internships when they have finished their N6. It is preparing students for work readiness. The sector civil engineering field is got [a] for example, you can use such [a] lot of work but mostly it is projects. The civil engineering field is with high pressure to complete the work or project. WIL officers are required to do work readiness for the learners (students). It must not end by just placing the student. I think even from the preparation; we tell learners that once we put you there make it difficult for the employer to let you go. Dedication, your commitment, and attitude make it difficult for the employer to let you go after you have completed the 24 months of the in-service training. - Mr Yengwa

Mr, Yengwa mentioned that WIL units are meant to work in collaboration with industries to assist both the placement for experiential learning and employability of graduates. He added that,

Secondly, we have another unit which is [called] business incubator. Where we train the learners (students) and prepare them not only to be employable but [also] to be self-employment. It supports TVET civil engineering graduates to develop their own businesses and become entrepreneurs. This unit also help graduates to not depend on employment alone but also to create their own employment. - Mr Yengwa

The responses of the study participants from the TVET colleges, municipalities, and civil engineering and construction companies' managers agree that collaborative work is one of the solutions to enhance employability of TVET civil engineering graduates. For instance, Mrs Hlalu from Malo TVET college said that TVET colleges are supposed to work in collaboration with employment industries to increase the employment of TVET civil engineering graduates.

In one way or the other, TVET college and industries are supposed to work in collaboration to develop the curriculum that is required by industries. Industries put measures in place to assist both the [experiential] training and employment of [TVET civil engineering] graduates. Working in collaboration between industries and TVET college can [also] develop some strong partnerships, trust, and loyalty towards one another (TVET colleges and industries). - Mrs Hlalu

One of the municipality managers, Mr Pelo, said both TVET colleges and industries need to collaborate to conduct research about what is being produced at TVET colleges and how best to make the graduates employable. He mentioned that this is one of the factors that can align industry requirements with TVET college qualifications.

Mr. Pelo also mentioned that since they deal with water and sanitation when the major projects are done certain communities, their employment project guidelines demand that the service provider for major projects hire people from local communities unless that skill is not found in the community. However, the entire unprofessional labour is required to be done by local community members. Mr Pelo said that working in collaboration with TVET colleges can help the municipality to identify qualified artisans who have studied in their colleges and give these artisans an opportunity to be hired by the service provider to fulfil the major project employment guideline requirements.

Mr. Max, a manager at the municipality, indicated that they do not really need to form partnership with TVET colleges; however, good collaboration between colleges and municipalities can ensure the employment of the top achievers of TVET civil engineering graduates at the college. This can improve the employability of TVET civil engineering graduates.

Mr Yoyo, Ms Atta, and Ms Nhinhhi from the municipalities indicated that the TVET colleges and industries are supposed to work in collaboration to assist in improving the employment goals in their communities. They noted that the current lack of collaborative work is one of the reasons for the low increase in employment of TVET civil engineering graduates.

We do not have any work in collaboration with TVET colleges now, but if we can work in collaboration, we can both benefit. As municipality, we need to provide necessary skills that enables youth and adults to get employment and reduce poverty. TVET colleges are

perceived to provide civil engineering skills for artisanship to create employment or self-employment. - Mr Yoyo

Mr Yoyo believes that collaborations between colleges and municipalities can assist in enhancing employability. He mentioned that even recruitment policies in municipalities can be changed to also include TVET qualifications in the job requirements when they collaborate.

Currently, there is a disconnection, and it creates a high number of unemployment, including TVET civil engineering graduates. In addition, if TVET colleges can collaborate with us as municipalities, leaders and management can resolve on the issue of TVET civil engineering graduates' qualifications to be mentioned in the job requirements for municipalities. In some instances, we can even provide funding to TVET colleges to improve their infrastructure for it to deliver quality curriculum of their TVET civil engineering graduates. TVET colleges to collaboratively work with industries and industries can change their attitudes and beliefs towards TVET civil engineering and that would enhance employability of TVET civil engineering graduates. - Mr Yoyo

Ms. Atta from the municipality shared similar sentiments and she said that the municipality management need to work in collaboration with TVET colleges to improve employment of professionals in the community. She mentioned that if the management of the municipality has a positive attitude towards TVET qualifications, they can put their job requirements in their advertisements for the employment of TVET civil engineering graduates.

Ms Atta mentioned that universities are few, thus it is up to the communities, assisted by municipality, to start recognising TVET civil engineering graduates and collaboration is the solution. She suggested that collaborative work can also help TVET to recruit students from the communities.

Another manager, Ms. Nhinh, from the municipality, echoed similar sentiments, concurring that TVET colleges are supposed to work in collaboration with employers, especially the municipality, because municipalities work with all local industries to improve service delivery in their communities. She also mentioned that this can assist TVET civil engineering graduates to be linked with other employing industries to enhance TVET graduates' employment.

Initially TVET colleges are supposed to work with municipalities and other stakeholders that require a skilled workforce for TVET colleges to be advised on the type of course and what is supposed to be in those courses to get to mutual understanding between them. I believe if that can happen, the state of employability of TVET civil engineering graduates can change to be better. Now it is not. - Ms Nhinh

Mr Doro, from the civil engineering construction company, shared the same view that there is a need to work in collaboration to help enhance the employability of TVET civil engineering graduates.

To be honest, I think DHET, construction companies and municipalities need to work in collaboration to achieve mutual understanding in terms of what is done in TVET colleges and ensure that TVET civil engineering can get employment from construction companies. Another thing, the civil engineering construction companies spend a lot of money and time to train employees who are unqualified, whereas there is TVET college civil engineering qualification that prepares students to be prepared on time and ready to get to work. TVET colleges are supposed to get some recognition and that can start with big decision makers (leaders or managers) to work collaboratively. - Mr Doro

According to Mr Yengwa and Mrs Hlalu, TVET colleges have established two units to collaborate with industries to improve employment of TVET civil engineering graduates. Mr Yengwa explained that one unit is WIL office that is aimed at assisting students with experiential training and employment. The other unit is business incubator which is aimed at training graduates to create their own employment.

Study participants from the industries noted the current lack of collaboration work between industries and TVET colleges. They believe that collaborative work between industries and TVET colleges, can enhance the employment of TVET college graduates. Collaboration can even assist by investing funds in TVET colleges to ensure the quality delivery of the curriculum by improving TVET colleges' infrastructure to meet the industry needs.

Furthermore, the interviewees from the TVET college suggested that the collaborative work between TVET colleges and industries can also create a strong partnership to enhance employability of TVET civil engineering graduates. In addition, the interviewees mentioned that

major projects in the municipalities are done by the service providers in their local municipality however, the service providers need to meet certain requirements which include the appointment of 30% percent of the professionals from the local area, which may include TVET civil engineering graduates. Thus, according to the interviewees, work in collaboration between colleges and industries may assist TVET civil engineering graduates get more job opportunities in the industries that work with municipalities.

6.3.2. Importance of database for graduates

The interviewees noted that currently there is no database of TVET civil engineering graduates within TVET colleges and industries. However, they pointed out that creating a database can help TVET colleges track their graduates' whereabouts and employment status. For example, Mrs Hlalu from the TVET college mentioned that they have not created a database of TVET civil engineering graduates. She said that a database listing graduates who are in employment and those who are not in employment can reveal whether or not their graduates do get the artisan jobs.

We do not have a database or mechanism to trace if our graduates have placement or employment. Our systems are still poor in that regard because we only rely on what they submit. Even those who have received their diplomas are not recorded. It would assist to have a database of the TVET civil engineering graduates so that when we look for partnerships and highlight the college work, we can speak about our students that graduated. - Mrs Hlalu

Ms Lan from the TVET college, shared similar sentiments, stating that the database is only for students who are preparing for the college's graduation ceremony, but thereafter there is no database to trace students' whereabouts after graduation.

Currently, in the TVET college we are lacking on keeping up with the database of our students' graduates. Once students finish with us, we forget about and expect them to find jobs on their own. There is no system that is used to follow up on graduates. This also create a challenge because these students may be counted as ones who are not skilled at all and, as a college, we cannot trace them. Sometimes you will find that most civil engineering graduates end up working in the areas of work that do not necessarily need their skills. We have seen them working as general workers, some work for EPWP and other work in the retailers as cashiers. - Ms Lan

The notion of creating a database for graduates is supported by some of the other interviewees—Ms Atta, Mr Pelo, Ms Teno, and Ms Gtee from the municipality and civil engineering construction company. They said that a TVET civil engineering graduates' database can help graduates find employment in industries and contribute to the 30% of professionals that are hired in civil engineering companies who render civil engineering construction major projects services in the local municipalities.

It is important for TVET colleges to have a database of TVET civil engineering graduates' systems that will be linked with civil engineering departments in our municipalities. The TVET civil engineering database will assist the municipality to know the civil engineering artisans that come from the local TVET colleges to work in civil engineering construction companies to hire TVET civil engineering artisans in the 30% of the professional labour that is required when the civil engineering construction companies delivers a major project in our local municipality. The database will also make us know the number of TVET civil engineering graduates that we have in our local municipality and try other civil engineering service providers to hire them. - Ms Atta

Mr Pelo, who is manager for the municipality, mentioned that the TVET college database of civil engineering graduates can assist to identify top learners (students) for employment in their municipalities for internships and employment.

When our construction company get appointed to do major projects in a certain municipality, there are requirements that are set to be met. Part of those requirements are to uplift socio-economic status of that municipality by hiring subcontracting companies to do subcontracting under our supervision, employ unprofessional labour from the local, employ at least 30% of the professional in that area. So, on the side of employment we have been employing professional from universities not from TVET. Those who come from TVET may have been hired to perform unprofessional labour. So, I suggest that the TVET colleges within municipality where we deliver a major project to have database that is linked to the municipality so that when we employ, we also consider TVET civil engineering graduate professionals for employment in professional positions. - Ms Teno

One of the municipality managers, Ms Gtee, mentioned that TVET colleges are supposed to have a database of their TVET civil engineering graduates and start negotiating or consulting with their

construction companies to secure employment for these graduates. She argued that without a database showing the statistics of TVET civil engineering graduates being employed in the industry, TVET colleges may not argue about whether their civil engineering graduates get employment or not.

Mrs Hlalu, Ms Lan, and Ms Gtee acknowledged that TVET colleges do not have a database showing TVET civil engineering graduates' employment after they have completed their studies. However, they believe that a database for TVET civil engineering graduates would assist the college to know their graduates' whereabouts and their employment status.

According to five of the interviewees, Mrs Hlalu, Ms Lan, Mr Pelo, Ms Atta, and Ms Gtee, establishing a TVET civil engineering graduates' database is crucial for enhancing the employment prospects of TVET civil engineering graduates. Three of the interviewees from the industries, Mr Pelo, Ms Atta, and Ms Gtee, suggested that the database would enable TVET colleges to effectively negotiate with their industries for employment opportunities, among other benefits. The interviewees also suggested that the database should include information on graduates' employment status, qualification, and job placement to facilitate these efforts.

6.3.3. Impact of technology on the curriculum

The interviewed participants expressed that in some instances the curriculum delivered at TVET colleges for civil engineering is outdated as in relation to the civil engineering industries upgraded their systems to incorporate innovative technology (4IR).

Mr Yengwa said that the current NC(V) and R191 graduates partially meet the necessary skills requirements to enter the artisan job for building and engineering construction in civil engineering. However, they need to be trained on the recent technology to be self-employed and to be employable in the building and engineering construction industries; thus, helping to reduce the high unemployment in SA. Therefore, the curriculum needs to be expanded to meet industry technological needs. He noted that if artisans are trained in the recent technology for employment alone, industries may struggle to provide enough jobs, and the country will remain with a high unemployment rate.

When discussing employment, we either put people into self-employment or rely only on some people to get employment because we will run out of employers. We need to put interventions as a TVET sector [for] curriculum needs in order to train for the industry.

The curriculum therefore needs to be expanded to make sure the realisation of employment and self-employment. This can only happen when we train our students on recent technology (4IR) that is needed by the industries. - Mr Yengwa

According to Mr Pelo from industries, TVET colleges are supposed to expand their curriculum to meet the basic needs for artisanship in their civil engineering departments.

Yes, the colleges are meeting the skills requirements of the job market in terms of the civil engineering and other courses of course. Yet an expansion plan for courses and the expansion of the curriculum to meet the current technology is a word of advice that could help TVET civil engineering graduates meets industry needs. TVET colleges can even apply for grants in different SETAs to keep training their TVET civil engineering graduates about the recent technology and other civil engineering skills whilst they are still waiting for the employment so that by the time they get employment, they will be capacitated enough such that they have even upgraded their employability status. - Mr Pelo

The statements above were supported by all the participants in the interviews who suggested that TVET colleges are supposed to update their curriculum timeously to be relevant in their industries to enable their TVET civil engineering graduates to get employment. The curriculum must be updated to respond to the needs of the civil engineering industries to enable graduates to be employable.

Mr Pelo, Mr Doro, Mr Zesh, Mr Yoyo, and focus group 2 interviewees agreed that TVET curriculum is linked to building construction, and not to the needs of the entire civil engineering department. Ms Gtee indicated that even the lock-book that is used for in-service training of TVET civil engineering graduates concentrates more on building construction and it is not up to date with some of the appliances used in civil engineering.

This can assist student to expand their theoretical knowledge in civil engineering sides because in NC(V) the programme focuses more on the physical work and building construction than the other parts of civil engineering. I would also advise that all students who wants to have civil engineering as their career to start in NC(V) first and further their studies thereof. Another thing, the curriculum for NC(V) need to be expanded and more responsive to South African industries as the technology changes timeously. Currently, the curriculum is taken directly from what DHET proposes without any development in the

curriculum to fit in our industries, because the graduates are supposed to work within the communities. - Mr Yengwa

Mr Yengwa echoed the sentiments of the other interviewees and indicated that there is a challenge with the curriculum alignment. He noted that the logbooks that students are given when they do their in-service training does not correspond in other areas with the theory that students are taught in the classroom. Even theory that is taught in the classroom at some point it is not up to date and needs to be updated timeously.

The first challenge starts with the curriculum alignment. Despite that government has been insisting on upgrading the curriculum that is delivered in our programmes. This curriculum is behind. The machinery for practical and theory for teaching are backward because industries upgrade their systems timeously and as TVET colleges we cannot really cope with these changes. Again, here the curriculum streamlined to be more focused on civil engineering buildings. This alone create a challenge in terms of finding industries for student placement and employment in industries. Second challenge is the insufficient infrastructure to provide adequate practical work for students. TVET colleges are required to have fully fledged civil engineering workshop for practical training. - Mr Yengwa

Mr Yengwa added that to prepare a graduate for civil engineering is complex and expensive and TVET colleges are required to have an adequate infrastructure that meets the curriculum needs on the delivery of civil engineering knowledge. Ms Lan said, in most cases, TVET colleges are struggling to keep up to meet these needs. Industries are changing technologies to global status, but TVET college are struggling to match these changing needs. The curriculum for TVET college civil engineering students remains outdated despite interventions to meet these challenges, lecturers are inadequately qualified to deliver the quality curriculum, and there is a lack of good leadership and management. Ms Lan further stated that leaders and managers at the DHET level seemed not to have the capacity to fully understand or effectively execute the roles required by TVET colleges. As a result, there are challenges about the low standards of curriculum delivery, as well as other challenges.

The interviewed managers from the municipality also supported the curriculum expansion to meet the needs of the industries, explaining that the curriculum needs to be broadened to cover all aspects of civil engineering.

I can say, if they can add more aspect in areas of knowledge in their curriculum. It can make them suitable for employment to our civil engineering industries. If you give them work around construction buildings and calculation of quantities in buildings, they are good. However, I have noticed that even when they do their in-service training their logbook does not really link with what is done in civil engineering in general. Their work is more on civil engineering on the building side, and the theory is outdated and do not meet the industry requirements. I wish they can expand their curriculum for it to responsive to the civil engineering industry in general. Like for instance, the advertisement in civil engineering is specific area of expertise. - Mr Yoyo

An interviewed manager from the municipality in focus group 2 shared similar views, explaining that the teaching and learning curriculum in the TVET college sector needs to be expanded and not only focus on expired building construction technology. This would help graduates to be employable in all civil engineering areas.

According to Focus group 1 that comprised Mr Zesh, Ms Zods, and Mr Caleb, the curriculum for TVET colleges must be linked to that of the university curriculum. Focus group 2 also mentioned that the curriculum for TVET colleges must be updated to the present technology as in universities.

Given changes that take place in industries due to the change in technology to align with 4iR. I will say on one hand; I believe that TVET civil engineering colleges need to upgrade their civil engineering courses to meet 4IR statuses. Most of the time, we use plants and machinery to do the work that was done by hands before. In fact, all SA graduates now need to adapt to the recent changes in technology. We do train our employees to meet these standards when they are employed in our institutions. On the other hands, I feel that the TVET civil engineering graduates are supposed to be taught soft skills in their curriculum. Soft skills like report writing, excel, computer and communications skills like it is done in universities. - Ms Zaza

One of the managers, Mr Yoyo from the civil engineering construction company also shared similar sentiments. He mentioned that there is supposed to be an involvement with civil engineering construction companies when the curriculum is developed. This can assist the TVET colleges understand what their industries need in terms of employability. Mr Yoyo also noted that the TVET civil engineering curriculum needs to be widened because currently it concentrates more

on physical work and building construction. However, the curriculum is not supposed to concentrate on one small area in civil engineering because civil engineering companies in most cases hire people with extensive expertise.

The interviewees from the TVET college, the municipalities and the civil engineering construction company suggested the need to expand the TVET civil engineering curriculum to address the needs of the entire civil engineering artisanship fraternity and align with technological advancements like 4IR technology. The current curriculum offered by TVET colleges concentrates on building construction, thus limiting their graduates from understanding the entire scope of the artisans in civil engineering industries.

The interviewed participants' emphasis on the expansion of the TVET college curriculum can assist in involving more artisans in other aspects of civil engineering such as water, road construction, and building design, amongst other things. Furthermore, interviewed participants from the employers had the same view as Mr Yoyo, stating that TVET colleges and the DHET are supposed to work with industries to develop a curriculum that can suits the needs of industries and thus enhance the employability of TVET civil engineering graduates.

However, both TVET college and employers of TVET civil engineering graduates felt that the curriculum is backward and narrow and needs to be expanded to address the needs of the other aspects in the civil engineering construction fraternity.

Mrs Halu, Mr Yengwa, and Ms Lan, from the college senior management, agreed that the curriculum for TVET colleges is currently not meeting the industry standards. For them, the ideal was to expand and review the curriculum to align it with industry needs. Mr Yengwa, and Mrs Hlalu believe that the curriculum upgrades that DHET and the TVET college that are currently busy implementing will meet the present needs of the industries in terms of the job market. The new curriculum is intended to be implemented by 2027.

7.2.2.2. *The NSFAS support on employability skills*

The interviewees from the college also indicated that NSFAS support has been provided to TVET civil engineering graduates to assist them to finish their qualifications for employment. They mentioned that this support needs to be continued and strengthened as sometimes this support, if not fulfilled, cause students' attrition.

Ms Lan mentioned that some of students are unable to finish their studies because of their financial challenges. She noted that there are student support services that are set by the DHET to help students financially to finish their civil engineering programmes. Ms Lan explained that NSFAS assists underprivileged students to enrol for all courses in TVET colleges as well as supporting civil engineering students by covering their entire tuition and financial needs while they are studying.

Mrs. Hlalu echoed these sentiments and added that, though students get NSFAS support to enrol at the TVET colleges to acquire employment skills, NSFAS in some instances cause student attrition in their college.

The college students get NSFAS bursaries to study at the TVET college because their fees are expensive. Some of the students come from disadvantaged background and cannot afford to study at TVET colleges. So, NSFAS support the disadvantaged students to enrol at the TVET colleges. As TVET colleges were developed to provide employment skills to the people who are unemployed and needed employable skills, all courses were are funded by NSFAS bursary in both NC(V) and R191 programmes. NSFAS comes as a full bursary to cover student fees, accommodation, and meals whilst they are studying at TVET colleges. - Mrs Hlalu

According to Mr. Yengwa, while NSFAS has supported many underprivileged students, it also creates challenges when it comes to students finishing their diplomas. NSFAS can only cover the theoretical part of the studies, not the practical part; however, for a student to complete the civil engineering qualifications, they must have done both theory and practical training. Mr Yengwa said that once a student finishes their N6, they must see how to fund their 18 months in-service training. In other instances, there are stipends paid to students to complete their in-service training, but it is not NSFAS.

I believe that NSFAS is supposed to cover both theory and practical training. Or the DHET must provide a structured or regulated solution for students who are doing in-service training. - Mr Yengwa

The college stakeholder's interviewees mentioned in addition that for students to adequately receive their curriculum programmes for civil engineering streams, they are supported by NSFAS bursary. They indicated that the cost of civil engineering training was expensive and could not be accessed by all students, including the students who come from disadvantaged backgrounds.

According to the stakeholders most TVET civil engineering students are supported by NSFAS to do their studies in TVET colleges. The stakeholders maintain that for students to receive NSFAS bursary must follow and fulfil NSFAS bursary policy requirements. Thus, according to the interviewees some of the students fail to fulfil the NSFAS policy requirements. As a result of failing to meet NSFAS policy requirements, interviewees mentioned that the NSFAS bursary sometimes causes student attrition as some students lose their funding because of the NSFAS policy. NSFAS is supposed to be expanded to reach all the students, including the ones undertaking in-service training or placement.

For Mr Yengwa, Mrs Hlalu, and Ms Lan, NSFAS is particularly important to support the needy students financially as it was set up by the DHET government to assist students to complete their civil engineering training. They indicated that NSFAS has assisted many graduates who come from underprivileged backgrounds.

According to interviewees NSFAS have challenges that need to be reviewed to assist the students in completing their studies in its entirety. They felt that the NSFAS challenges if not addressed continues to cause the student attrition.

6.4. Chapter summary

In this chapter, I presented the second part of the data and analysis derived from interviews conducted across seven sites, including TVET colleges, municipalities, and a civil engineering construction company. Twenty-one participants shared their perspectives on the employability of TVET civil engineering graduates. The chapter addressed the second, third, and final research questions by organising the findings into thematic areas drawn directly from stakeholder experiences.

The themes responding to the second and third research questions included student attrition, TVET college partnerships with industries, the significance of communication on employability, and the content of the curriculum. The final set of themes, which answered the last research question, focused on how college stakeholders contribute to enhancing employability. These themes included collaboration to enhance employability, the importance of a database for graduates, the impact of technology on the curriculum, and the role of NSFAS support in developing employability skills.

Across all themes, the analysis demonstrated how stakeholder experiences align with the integrated theoretical framework by revealing interactions between human capital development, institutional expectations, and stakeholder relationships. The chapter illustrated how these interconnected elements influence the employability of TVET civil engineering graduates and highlighted the strategies stakeholders propose to strengthen graduate outcomes. The generated data were analysed according to the key research questions guiding this study. The next chapter presents the discussion of these findings.

CHAPTER SEVEN

DISCUSSION OF THE STUDY

7.1. Introduction

The previous chapter (Chapter Six) presented the data and analysis part two of data which was aimed at answering the second and third research questions of this study. The presentation of the data was done through eight themes that emerged from the generated data. Four themes were intended to answer the second research question, and the last four themes were meant to answer the third question of this study.

This chapter presents a comprehensive and in-depth discussion of the empirical findings derived from the study, directly addressing its three core research questions. Building upon the detailed data presentation in Chapters Five and Six, which captured the rich perspectives of TVET college stakeholders through semi-structured interviews, focus groups, and document reviews, this discussion contextualises these findings within the broader academic landscape. Crucially, it integrates the empirical evidence with the established theoretical frameworks outlined in Chapter Three—namely, Human Capital Theory, Stakeholder Theory, and Institutional Theory—and the relevant literature reviewed in Chapter Two. The purpose is not merely to summarise findings, but to interpret, analyse, and synthesise them, explaining the 'how' and 'why' behind the observed phenomena.

In interpreting the findings, this discussion adopts the explicit language of mechanisms and levers to illuminate how employability outcomes are produced. Mechanisms refer to the underlying causal processes — such as legitimacy judgments, risk assessments, and stakeholder power dynamics — that shape stakeholder behaviour. Levers, in turn, are the institutional tools or structural arrangements, such as curriculum design choices, partnership agreements, procurement requirements, and workplace-based learning structures, that stakeholders use (or fail to use) to influence these mechanisms. While the themes presented in the previous chapter organise the surface-level patterns in the data, the mechanisms and levers identified here explain why these patterns persist and how they shape employability trajectories for TVET civil engineering graduates. This analytical approach aligns directly with the integrated theoretical framework and deepens the explanatory power of the discussion.

The contradictory managerial claims are best understood through the lens of IT. Employers recognise graduates' physical and technical competence; however, hiring decisions are governed less by skill proficiency and more by legitimacy signals and risk calculations. Managers rely on institutional norms—such as communication style, professional conduct, and recognised forms of experience—to determine whether a graduate is a 'safe' hire (Lolwana, 2016; Buthelezi, 2018; Mesuwini & Bomani, 2021). Hence, the claim that graduates are 'not ready' reflects institutional judgments rather than actual incapacity. This contradiction exposes a deeper mechanism: hire ability is shaped by institutional legitimacy and perceived risk rather than by technical competence alone (Mesuwini & Bomani, 2021).

The discussion is structured to sequentially address each research question, ensuring a logical flow and a holistic understanding of the complexities surrounding TVET civil engineering graduates' employability in South Africa. Firstly, it explores the diverse perspectives held by college stakeholders regarding the employability of TVET civil engineering graduates (Research Question One). Secondly, it delves into the underlying reasons and mechanisms through which these perspectives manifest and persist among the stakeholders (Research Question Two). Finally, it examines the concrete strategies and actionable approaches suggested by these college stakeholders to effectively enhance the employability of TVET civil engineering graduates (Research Question Three). This integrated approach provides a profound and nuanced understanding of the intricate interplay of individual capabilities, organisational dynamics, and systemic influences impacting the labour market integration of TVET graduates, offering both theoretical insights and practical implications.

A critical element emerging from the findings is the ideological work embedded in stakeholder narratives. Employer and community discourses frequently rely on taken-for-granted assumptions—such as the superiority of university qualifications, the low status of TVET training, and the perceived inadequacy of college-based certificates—that function as institutionalised beliefs rather than empirically verified claims (Mabunda, 2020; Mesuwini & Bomani, 2021). These ideological constructions shape hiring behaviour by positioning TVET graduates as inherently less legitimate, regardless of their demonstrated technical competence. Such narratives not only reflect institutional norms but actively reproduce them, creating a mechanism through which employability is filtered through social prestige, historical stigma, and entrenched

hierarchies. Recognising this ideological layer is essential to understanding how stakeholder perspectives translate into structural barriers for TVET graduates.

The dominance of managerial voices in the dataset provides not only a limitation but also a powerful analytical standpoint. Managers, unlike students or graduates, interpret employability through institutional expectations, compliance pressures, and organisational performance metrics. Their perspectives therefore illuminate the institutional logics that govern hiring decisions, such as risk avoidance, legitimacy demands, and adherence to established norms. By foregrounding the managerial gaze, the study reveals the mechanisms through which institutional forces shape the employment pathways available to graduates. This analytical use of managerial narratives deepens the explanatory power of the findings and clarifies how employability is constructed within organisational environments.

7.2. Discussion of Research Question One: What are the perspectives of college stakeholders on the employability of TVET college civil engineering graduates?

This section commences the discussion by exploring the initial and foundational perspectives held by college stakeholders concerning the role of TVET colleges within the South African educational system and the specific attributes of TVET civil engineering graduates. These insights form the crucial backdrop against which their broader views on employability are shaped and understood. The discussion is framed around two principal dimensions: the general perspectives of stakeholders regarding TVET colleges, and their specific assessments of the employability of TVET civil engineering graduates. Data from Chapter Five (Data Presentation Part One) primarily informs this section.

7.2.1. Dimension one: Perspectives of college stakeholders on TVET colleges

From a meso (institutional) perspective, this dimension unpacks the overarching views and understandings of college stakeholders concerning the mandate, function, and efficacy of TVET colleges within the socio-economic and educational fabric of SA. These foundational perspectives are instrumental in influencing their subsequent assessments of graduate employability.

7.2.1.1. TVET colleges as skills providers for employment

A dominant and consistently reiterated perspective among the study participants was the recognition of TVET colleges as pivotal institutions for addressing SA's critical skills deficit and,

consequently, for fostering employment, particularly within practical, vocational fields such as civil engineering. Stakeholders widely concurred that the government's strategic intent is to position TVET colleges as direct conduits for the development of a skilled workforce, thereby facilitating seamless integration into the labour market. This prevailing view resonates powerfully with the tenets of HC theory, which fundamentally posits that strategic investment in education and vocational training directly augments the productive capacity of individuals, leading to enhanced individual earnings and, cumulatively, to national economic growth (Schultz, 1961; Becker, 1964). The expectation is that graduates, imbued with specific, industry-relevant vocational skills, represent a valuable stock of human capital poised to contribute immediately to the workforce and stimulate economic activity. Focus group 1 succinctly articulated this perspective, highlighting the broader national imperative: *"The TVET colleges were established to provide skills for employment."* This means that the TVET colleges serve as a solution for the country to address unemployment, as the government wants to provide skills that will assist the country to develop economically.

The statement above underscores the significant societal and economic expectations placed upon TVET colleges. It implies a clear mandate for these institutions to serve as a direct response to prevailing socio-economic challenges, providing a practical, skills-based pathway to employment. From the perspective of HC theory, this reflects a national understanding that targeted vocational training is an investment in human capital that is expected to yield tangible economic returns in the form of employment and productivity. The underlying assumption, often implicitly held by policymakers and some stakeholders, is that once individuals acquire these skills, they will be readily absorbed into the labour market, thus reducing unemployment and driving economic development. This aligns with the findings of the DHET (2013b), which has consistently advocated for TVET colleges as key drivers of national skills development.

However, while the aspirational role of TVET colleges as primary skills providers is unequivocally clear and widely accepted, the findings of this study also subtly hint at inherent challenges in fully realising this ambitious potential. The strong emphasis on skills provision, while central to HC theory, occasionally overshadows or understates the complex interplay of broader institutional dynamics and diverse stakeholder interests that are equally crucial for effective and sustainable labour market absorption. Simply equipping individuals with skills, as per HC theory, may not be

sufficient if the surrounding institutional and stakeholder ecosystem is not conducive to their employment. This suggests a more nuanced understanding is required, one that extends beyond individual skill acquisition to encompass the systemic factors influencing employability.

7.2.1.2. *Challenges faced by TVET colleges*

Despite the acknowledgement of their crucial role in national development, TVET colleges, as revealed by the study, contend with a myriad of significant challenges that substantially impede their effectiveness in consistently producing highly employable graduates. The findings consistently pointed to pervasive issues such as inadequate infrastructure, perennial limited funding, and, critically, a noticeable lack of up-to-date and technologically relevant equipment. These foundational infrastructural and resource constraints directly compromise the quality and relevance of vocational training, thereby hindering the comprehensive development of industry-aligned human capital. Without modern facilities and equipment, students cannot gain hands-on experience with technologies and practices prevalent in contemporary civil engineering, leading to a gap between their acquired skills and industry demands. As perceptively highlighted by focus group 1, from Tilo District Municipality, speaking from an employer's viewpoint: *"Some of them [TVET colleges] don't have facilities to offer civil engineering."*

This statement is particularly significant as it comes from a direct consumer of TVET graduates, indicating that the lack of appropriate infrastructure is not merely an internal college issue but one that directly impacts the external perspective of graduate readiness. From an institutional theory perspective, such systemic resource deficiencies represent a critical institutional weakness. These limitations impede the ability of TVET colleges to enact their formal mandate of providing relevant skills. The prevailing institutional environment, characterised by these resource shortfalls, constrains the practical application of curriculum and limits students' exposure to real-world engineering tools and environments, thus directly diminishing the quality and marketability of the human capital they are meant to produce. This resonates with arguments by Adams (2019) and Mabunda (2020) regarding resource constraints in TVET.

Furthermore, a critical and recurring challenge identified was the insufficient and often ad hoc consultation between TVET colleges and their external stakeholders, particularly municipalities and local industries, concerning curriculum development and the suitability of programme offerings. This palpable lack of sustained collaborative engagement directly contravenes the

fundamental principles of effective stakeholder theory, which emphatically stresses the imperative of managing relationships with all entities that either significantly influence or are substantially affected by an organisation's objectives (Freeman, 1984). Mabunda (2020) and Mesuwini and Bomani (2021) have similarly underscored the absolute necessity of such structured and continuous consultations to ensure that TVET programmes are dynamically aligned with prevailing local socio-economic needs and industry demands. The data from Chapter Six, for instance, indicated that industries often felt excluded from curriculum input.

The current findings starkly demonstrate that this deficiency in collaborative consultation often culminates in the persistence of outdated programmes. This concern was frequently voiced by representatives from private industries, especially concerning engineering graduates, who perceive a significant disconnect between what is taught and what is required in practice (Mesuwini & Bomani, 2021). This misalignment, from an institutional theory perspective, points to ingrained institutional norms or, more accurately, a pronounced absence of robust inter-organisational linkages that inhibit the responsiveness and adaptability of the educational system to external labour market pressures and evolving industry requirements. The lack of formal, consistent feedback loops and mechanisms for shared curriculum development from employers means that educational curricula can become stagnant and unresponsive, failing to integrate advancements in technology, methodology, and industry best practices. This ultimately diminishes the contemporary relevance and market value of the human capital being developed within the TVET system, exacerbating the employability gap.

The curriculum-related concerns raised by stakeholders point to a deeper institutional misalignment between TVET programme design and the evolving literacy demands of the civil engineering sector. Modern engineering workplaces require graduates who can read safety files, interpret project specifications, operate CAD and BIM tools, perform basic costing, and complete compliance documentation. These literacies are central to institutional legitimacy within engineering companies because they reduce supervision costs, ensure legal compliance, and signal readiness for structured work processes. When the curriculum excludes these core literacies, it inadvertently constructs TVET graduates as 'labourers' rather than emerging artisans. Recognising and integrating these literacies therefore forms a critical mechanism for enhancing employability.

7.2.1.3. *State of employability in SA*

In the study, the participants agreed that the state of employment of TVET civil engineering graduates is incredibly low, as two interviewees explained.

The state of employability in South Africa remains low despite the efforts that the government is making to enhance employment. However, there has been a gradual increase in civil engineering graduates' employment. - Mr Yengwa

The state of employability in SA is low. It is not easy to distinguish whether the state of employability is low to those who have diplomas or degrees in civil engineering because there is no proper statistics that shows whether the TVET civil engineering graduates gets employment after they have completed their qualification. It was going to be easy to determine unemployment rate according to categories by separating those who have qualifications to those who have no qualifications. Currently, we do not have those stats that shows different statistics. - Ms Zaza

Mr Yengwa and Ms Zaza correlate with the views that suggest that employability in SA is low. For Mr Yengwa, this low employment is genuinely concerning, and when people are unemployed and suffer from poverty, they may resort to things such as alcohol abuse and criminal activities to survive. This statement suggests that TVET colleges are yet not fulfilling their mandate to provide employment skills to reduce unemployment. The impact on the TVET colleges and DHET for not strengthening institutional support structures seem to suggest that employability remains low.

These responses appear to support the findings from previous research conducted by Buthelezi (2018), Balkrishen (2019) and Mesuwini et al. (2020) that the state of employability in South Africa is low and that TVET colleges were established to address this challenge. Balkrishen's (2019) view is that in SA the state of employability is low regardless of the efforts that government has put to enhance employment and reduce poverty. According to Mesuwini et al. (2020), the establishment of TVET colleges was, among other reasons, intended to enhance employment and reduce poverty by providing youth and adults with skills that improve their employability. In previous years, Statistics SA has been reporting an increase in the unemployment rate (Stats SA, 2012), and TVET colleges have not been able to adequately reduce unemployment.

The observation seems to support the HC theory, ST, and IT concepts that this study has applied. For HC theory, Burgess (2016) emphasises the stock of knowledge, skills, and experience, investment in HC development, and returns concepts as key components that promote employability and uplift the economic status of the nation. The nation that invests in HC may benefit from not only employability and economic development, but it can also contribute to individuals' healthcare and wellbeing (Freeman & Evan, 1990). Similarly, Mitchell et al. (2016) explore ST within the context of value creation and emphasise that organisations need to meet the stakeholders' expectations in order to fulfil their organisational outcomes. In the event where there is a low state of employment, then stakeholders' expectations in terms of enhancing employability may not be met. Burgess (2016) argues that individual graduates may enhance employability and economic development of the nation through investing in education and training that are aligned for the relevant stakeholders. The institutional isomorphism of IT emphasise that institutions develop structures, policies, and plans to conform to the external pressures (DiMaggio & Powell, 1983). In the context of this study, college stakeholders may not have conformed to external pressures and changed the low state of employability in South Africa. Therefore, the lack of the full application of the above discussed concepts from the three theories may lead to a low state of employability.

Again, this finding seems to support Burgess' (2016) view on HC theory which states that an individual who is equipped with skills, education, knowledge, and training is likely to obtain employment and be productive in the workplace. The country which invests in skills development through technical vocational education and training is likely to increase employment and reduce poverty in their country (Berntson et al., 2006). However, from the finding, even after the establishment of TVET colleges to provide employable skills to youth and adults to enhance employability, the finding suggests that employability remain low.

Some of the college stakeholders mentioned among others that they have no partnerships with industries that have the potential to hire TVET civil engineering graduates; for this reason, the state of employability is low. This may not be surprising because the ST emphasises that those who affect or are affected by the achievement of an organisation must be involved in the operations of the organisation for their legitimacy and survival (Freeman & Evan, 1990). One may assume that, without partnerships, the TVET college may have been undermining the principles of ST

which ensures the involvement of the stakeholders in their operations. Thus, this may contribute to the low employability of graduates in South Africa. This observation may reflect a key component of Becker's (1964) HC theory, which believes that if a state invests in human capital—through education, training, healthcare, and continuous development—it may boost its state of employability and productivity in the workplace.

The above finding from the participants and contemporary research evidence, concur that the state of employability in South Africa is low. However, it is clear that this finding aligns with the three theories (HC theory, ST, and IT), which believes that the state needs to invest in education and training, build a robust stock of knowledge, maintain value creation, conform to external pressures which suggest the upliftment of employment status, amongst other things, in order to enhance employability. In spite of these directives, the state of employability in SA still remains low.

7.2.1.4. Role of TVET college stakeholders regarding graduate employability

Participants stated that their roles are reducing unemployment in SA. They mentioned that their specific responsibilities include addressing both unemployment and poverty through specific interventions. For instance, as mentioned in the above sections, according to the three interviewees from college management, after studying at TVET colleges, graduates are expected to possess employable skills for the labour market in the areas where the colleges are located. Mr Yengwa, Mrs Hlalu, and Ms Lan mentioned that their role is produce a skilled work force of graduates who are ready for employment or to create their own employment with a view to reducing the rate of unemployment and poverty.

The finding of this study from the three interviewees, suggesting that the TVET colleges' role is to provide the society with a skilled workforce of graduates who are ready for the labour market may not be surprising as it is supported by previous research conducted by Buthelezi (2018) and Adams (2019). According to Buthelezi (2018), TVET colleges were established to provide skills development to graduates for the labour market. Adams (2019) shares a similar view, that TVET colleges are meant to prepare their graduates with the employable skills needed in the labour market to enhance employability. He argues that TVET colleges must produce graduates who are ready for employment in industries. Balkrishen and Mestry (2016) mention in their findings that the colleges asserted that their role is to prepare individuals for employment or self-employment in the society. They mention that when students are enrolled in their colleges, these students are

expected to graduate with competence skills that make them employable. Concisely, the perspectives from the three interviewees suggest that the role of TVET colleges is to prepare graduates for the labour market, enhance employment and reduce poverty.

Ms Nhinhi and Mr Doro, representing the potential employers, stated that their role is to provide job opportunities to youth and adults to reduce the rate of unemployment in the society. Ms Nhinhi mentioned that, as municipalities, they are responsible for ensuring that they reduce the high rate of poverty in their communities and provide workable solutions that enhance employability. According to Ms Nhinhi, their role regarding TVET college graduates is to assist them to get employment either in their municipalities or in the industries that work within the municipalities. Mr Doro, from the civil engineering and construction company, shared similar sentiments, stating that their responsibility is to render good services to their communities and reduce poverty by providing job opportunities in the communities where they are working.

The observation appears to corroborate the previous research studies conducted by Mesuwini et al. (2020) and Mseleku (2022). For instance, Mesuwini et al. (2020) mention that industries are expected to hire professionally qualified graduates from TVET colleges, not only to enhance employment, but also to increase productivity in the workplace. Mesuwini et al. (2020) further mention that TVET colleges were established to address the shortage of skills needed by the industries, as well as to address the employment question. This resonates with Mseleku's (2022) finding that industries' role is to hire TVET-qualified graduates who are ready for the workplace, thereby reducing incompetence.

This observation supports Freeman and Evan's (1990) ST. They maintain that it is vital that stakeholders understand and correctly interpret their roles and responsibilities in an organisation. They mention that it assists the organisation to share power and steer it in the right direction. Thus, the management of an organisation needs to share power equally with different stakeholders. In addition, this observation resonates with Bosse et al. (2009) who emphasise that organisations must understand and manage the needs, wants, and demands of stakeholders with a view to having them understand their roles in order to make decisions that may help the organisation achieve its intended goals. Similarly, Mbatha (2023) points out that if stakeholders are included in the decision-making processes of an organisation—with a clear understanding of their roles—that in

turn enables organisations to be strategic, maximise their value creation, and safeguard their long-term success and sustainability.

From these views, both industries and TVET colleges agree that their role in a society is to enhance employability and reduce poverty. Interviewees from industries mentioned that their role is to create job opportunities and employ graduates to improve employment outcomes and alleviate poverty. However, interviewees from the college mentioned that their role is to enhance employment and reduce poverty by providing a skilled workforce for the labour market or to prepare their graduates to create their own employment.

7.2.1.4. *Professional artisans*

The interviewees felt that industries in the labour market need to hire professionally qualified artisans or civil engineers in the civil engineering field. The interviewees mentioned that the duties for civil engineering artisans are critical because they deal with, among other things, the interpretation of drawings, compliance with rules and regulations, as well as health and safety measures—and it is only qualified personnel in the civil engineering artisan workforce who can correctly perform these duties. Their responses can be summed up by the following three college stakeholders.

As companies in civil engineering, we do not just hire anybody as artisans or civil engineers. We hire people who are professional qualified in civil engineering and have understanding of rules and guidelines that apply in the field to ensure compliance. In civil engineering we are inspected to check if our work complies with the rules and regulations that apply in civil engineering and building construction. - Mrs Hlalu

Only civil engineers who professional qualified as artisans or engineers who may correctly interpret the drawings for structures to be built in civil engineering constructions. They may also adhere to the health hazards to ensure that their structures that they have built meet all the required rules and regulations applied in civil engineering. - Mr Tabs

I must tell you, to work in engineering is extremely strict because you construct structures that are used by the society. Now, you need to make sure that you pay full details on the requirements, rules and standards that used in civil engineering to construct any structure.

So, you need a professional qualified and compete individuals to work civil engineering industries for artisans and civil engineer positions. - Ms Gtee

These observations appear to corroborate the findings of Mtshali and Ramaligela (2022), who define civil engineering as a profession that is used to develop physical structures that are utilised by the communities for living. According to Mtshali and Ramaligela (2022), the structures that are built or constructed by artisans or civil engineers are designed and drawn by architects to be interpreted and built by civil engineering and building construction artisans or engineers. For them, it is only professionally qualified artisans or engineers that may correctly interpret drawings and build civil engineering structures. Mesuwini et al. (2020) echo similar sentiments, mentioning that industries hire professionally qualified artisans or civil engineers and continue training them to ensure that they keep up with the recent health and safety measures and updated rules and regulations that are applied in civil engineering to help them perform their civil engineering duties. From this observation, not everyone can work in civil engineering as artisans or civil engineers. Only those who have specific professional qualifications are allowed to work in these positions to ensure that the civil engineering work is properly done, and recent health and safety measures, and rules and regulations have been complied with.

The above observation seems to align with Becker (1964) who states that investment in specific HC and continuous development may contribute to enhanced employability and productivity in the workplace. This finding is also supported by Freeman and Evan (1990) who emphasise the ethical responsibilities within ST as essential for the legitimacy of an organisation and to fulfil the stakeholders' expectations. In the context of TVET colleges, the college stakeholders believe that industries need to hire the professionally qualified artisans to meet the stakeholders' expectations. In addition, this observation also aligns with the institutional isomorphism, coercive and normative dimensions of IT by DiMaggio and Powell (1983) which suggest that institutions conform to the rules, regulations, standards, and policies to ensure their organisation's legitimacy. For DiMaggio and Powell (1983), legitimate organisations operate within these frameworks to fulfil the stakeholders' expectations. Thus, part of the rules, policies and regulations from the interviewees are that industries must hire professionally qualified artisans to maintain their legitimacy.

The observation suggesting that civil engineering industries must hire professionally qualified artisans appears to support both the HC theory and IT. According to Freeman (1984), the HC

theory emphasises professional training and education, health, and wellbeing as fundamental characteristics for the individuals to contribute to employability and economic growth of the nation. For Freeman (1984), only those who have knowledge and skills can maintain health and safety in the workplace. Only individuals who are trained in the field of civil engineering as artisans or engineers may interpret and work with civil engineering structures and regulations. Similarly, Cai and Mehari (2015) mention that IT emphasises the organisation or individual conforming to the rules, regulations, culture, and structures that are put for them to ensure they achieve their organisational goals.

According to one of the interviewees, if the civil engineering job or project fails to comply with regulations or the civil engineering structure collapses after it has been built, or a project fails after it has been inspected by the civil engineering inspectors—that may lead to serious consequences for both the artisans or engineers involved and the company that is responsible for project development.

Should a structure fail or collapse, is that may cause a huge problem to the builders? Yes, the department that deals with civil engineering may confiscate their qualification and charge individuals of misconduct if they did not comply with what is done in civil engineering. At all times, civil engineering work must comply with rules and regulation and maintain health and safety measures to avoid problems. Once you complete civil engineering project, it will be examined by inspectors in terms of compliance and standards. - Mr Tabs

This observation resonates with the legitimacy concept of IT. Cai and Mehari (2015) mention that organisations need to comply with normative and regulative pillars of IT. According to Cai and Mehari (2015), a normative pillar refers to the norms and values that permeate the institution, giving it its cultural ethics, individuality, and personality. Expectations of proper behaviour and performance are maintained through systems of education, accreditation, and professional development. Cai and Mehari (2015) refer to a regulative pillar as adherence to the rules, laws, policies, regulations, and associated sanctions that dictate how an institution functions and can spur change. However, in the context of this study, the normative and regulative pillars are applied as college stakeholders acknowledge that industries need to hire individuals who are professionally qualified for the artisan and civil engineer jobs in order to thoroughly understand the civil

engineering field. According to the interviewees, to be professionally qualified for the artisan or civil engineering job, an individual must possess a civil engineering qualification that is attained from a college or university. For the interviewees, there are rules and regulations, and health and safety measures that the employees and industries need to comply with when they engaged in civil engineering works. Thus, Cai and Mehari (2015) maintain that companies who are accredited and comply with rules and regulations are legitimate.

For the interviewees, artisans and civil engineers' positions are for individuals who are professionally qualified for the civil engineering projects. These artisans and civil engineers are responsible for doing civil engineering work in compliance with the drawings, health and safety, and rules and regulations that are applied in civil engineering, and someone who is not professionally qualified cannot be hired in an artisan or civil engineer position as they cannot perform the above-mentioned duties.

7.2.1.5. *NSFAS support for TVET college students*

Mrs Hlalu mentioned that DHET has provided NSFAS funding to enhance student access and success to TVET college students from disadvantaged backgrounds. She mentioned that NSFAS is aimed at ensuring that all students have access in TVET colleges, including those who come from disadvantage backgrounds.

The college students get NSFAS bursaries to study at the TVET college because their fees are expensive. Some of the students come from disadvantaged background and cannot afford to study at TVET colleges. So, NSFAS support the disadvantaged students to enrol at the TVET colleges. As TVET colleges were developed to provide employment skills to the people who are unemployed and needed employable skills, all courses are funded by NSFAS bursary in both NC(V) and R191 programmes. NSFAS comes as a full bursary to cover student fees, accommodation, and meals whilst they are studying at TVET colleges.

- Mrs Hlalu

According to Mabuza (2020) and Bosiu (2024), most people who are unemployed and are not in education or employment come from disadvantaged backgrounds. Thus, Mrs Hlalu's statement appears to support the findings of previous research conducted by Bosiu (2024) that NSFAS was developed by the DHET to support students from disadvantaged backgrounds to access institutions of higher learning, including TVET colleges. According to the PSET 2013 report, NSFAS funding

was to support disadvantaged communities to access TVET colleges to learn marketable skills with a view to becoming employable. This was one way of tackling the high rate of unemployment in SA. NSFAS addresses the issue of access and retention of South African students—or those who have South African citizenship—in TVET colleges by providing them with bursaries or loans (Bhorat et al., 2018; Mabuza, 2020; Bosiu, 2024). In addition, NSFAS covers the students' financial needs for TVET colleges which include fees, accommodation, personal care, and meals (Bosiu, 2024). Thus, NSFAS bursaries have played a significant role in the academic success of students from disadvantaged backgrounds in TVET colleges (Bosiu, 2024). Studies have shown that TVET colleges are demarcated in local communities and provide the employable skills according to the socio-economic needs of the community (Buthelezi, 2018; Adams, 2019; Jansen, 2020).

Thus, according to the interviewees, all students who qualify to study and come from a disadvantaged background may enrol in the TVET sector without worrying about the fees. This finding seems to support Lawrence and Suddaby's (2006) view on institutional work and field-level dynamics concepts of IT which suggest that institutions focus on examining the networks, and relationships with stakeholders, and help to influence actions that may assist institutions reach their main objectives. For example, in this study the interviewees asserted that NSFAS was established to help everyone, including those from disadvantaged backgrounds, to enrol in TVET colleges in order to acquire TVET civil engineering employable skills. Therefore, the establishment of NSFAS was implemented to address the financial assistance dynamic aspect to assist everyone to enrol in TVET colleges (Bosiu, 2024).

The finding supports Cai and Mehari's (2015) IT. They state that the theory examines how organisational structures, norms, practices, and social relationships are connected to the broader social and cultural environment. They mention that it considers the processes by which structures, including schemes, rules, norms, and routines become established as authoritative guidelines for social behaviour. In this finding, the NSFAS bursary scheme was established at TVET colleges to support students in pursuing their education, regardless of their disadvantaged background in order to uplift their socio-economic status.

To conclude, the study in this significant dimension has found that TVET colleges were established to provide employable skills to enhance employment and reduce poverty. However, it is found in

this dimension that not all individuals can be hired for artisan and civil engineer positions; only those who are professionally qualified for the job may be hired. In this dimension, the study found that TVET colleges were meant to provide employable skills to all South Africans, including individuals who come from disadvantaged backgrounds. The individuals from disadvantaged backgrounds are supported by NSFAS bursaries to attend TVET colleges and pursue their studies. Despite TVET colleges being established to provide employable skills to enhance employment, the study has found that employment in SA remains low. This study significant dimension revealed that both industries and TVET colleges know that their roles are to enhance employment and reduce poverty in their society.

To sum up, this finding indicates that the DHET has put measures in place to ensure that all students can pursue their studies in TVET colleges in order to become employable and improve the disadvantaged background situations of their families. NSFAS bursaries are meant to support disadvantaged students by covering fees for tuition, accommodation, transport, meals, and individual care expenses while the students are still studying at TVET colleges.

7.2.2. Dimension two: Perspectives of college stakeholders on the employability of TVET civil engineering graduates

From a micro (human capital) perspective, this dimension shifts the focus to the more specific and direct assessments provided by stakeholders regarding the actual employability of TVET civil engineering graduates. It delves into their perspectives of the skills graduates possess, the direct relevance of their educational curriculum to industry demands, and the current landscape of employment opportunities and challenges they encounter upon entering the labour market. This section continues to draw heavily on the themes presented in Chapter Five.

7.2.2.1. Employable skills possessed by TVET civil engineering graduates

The study consistently found that TVET civil engineering graduates possess a foundational set of practical skills that are directly applicable to core tasks within the civil engineering and building construction sectors. This finding is central to validating the core objective of TVET education, which is specifically designed to equip individuals with practical, industry-specific human capital (Becker, 1964). The acquisition of such tangible skills is widely seen as boosting an individual's productive capacity and, by extension, their marketability. Three college senior managers from Malo TVET college (see Chapter Five) provided an affirmative assessment of graduates'

preparedness that the graduates are equipped with necessary skills that are required by industry. One participant further elaborated, highlighting the immediate practical readiness of these graduates *"They can be hired and given work directly without going for any induction training"* (Mr Tabs). This perspective, echoed by other participants from municipalities and construction companies, suggests that TVET graduates, unlike some other educational pathways, require minimal initial on-the-job training in basic competencies, as their foundational practical skills are already well developed. This attribute is a direct outcome of the vocational training model, which prioritises hands-on learning and practical application, thereby contributing significantly to their initial employability from a human capital theory standpoint. The human capital acquired is immediately deployable in specific, foundational tasks.

However, a significant and pervasive challenge simultaneously emerged regarding the broader and consistent recognition of these TVET qualifications by a wider spectrum of employers. Despite sustained government efforts and policy pronouncements aimed at promoting TVET credentials and their equivalence (e.g., DHET, 2013b), a notable proportion of both government departments and private sector entities still do not explicitly feature or formally recognise these qualifications in their job advertisements or stipulated recruitment processes. This observation powerfully corroborates claims made by Adams (2019), who has previously highlighted this systemic issue of formal recognition for TVET graduates. Focus group 2 participants, from local municipality (Chapter Five), noted that the local government and private sectors are not explicit in terms of recognising TVET qualifications in their job adverts.

This highlights a deep-seated disconnect between policy aspirations and actual hiring practices. From an institutional theory perspective, this persistent lack of explicit recognition points to the deeply entrenched and enduring institutional norms and practices within the labour market. These norms often implicitly or explicitly favour traditional university qualifications, thereby creating a substantial structural barrier for TVET graduates, irrespective of the practical and relevant human capital they have demonstrably acquired. The implicit biases, historical precedents, and established recruitment channels prevalent within certain industries reflect a palpable resistance or slow adaptation to incorporating alternative credential pathways. Furthermore, stakeholder theory offers a complementary lens through which to understand this disparity. The perspectives, preferences, and interests of employers, who represent a critical stakeholder group, profoundly influence the

value and legitimacy placed upon different educational qualifications. Where employers do not actively engage with, or possess, a comprehensive understanding of the TVET curriculum and its distinct advantages, a significant mismatch in expectations and formal recognition invariably arises. This disconnect directly impacts graduates' access to employment opportunities, highlighting the need for a more coordinated approach between education providers and employers to reshape institutional norms and stakeholder perspectives.

7.2.2.2. *Entrepreneurship skills for TVET civil engineering graduates*

From this observation, TVET colleges are seen to develop TVET civil engineering graduates for employment and self-employment (as entrepreneurship). The participants' views in this study suggest that TVET colleges are not only meant to prepare graduates for employment, but they are also meant to equip graduates to create self-employment opportunities as well.

As a college, we saying let us train the learners [students] and prepare them not only to be employable but also self-employment. They are learners who might have skill as civil engineer entrepreneur. But, let give them that business of the skills, where [by] we say to them, open a business or open your own business. There is intervention that support students who open their businesses, especially the youth. Someone must assist learners [students] to apply for opening their own business or train to become employable. If you can check to our records, we record none of our civil engineering graduates who was assisted to be entrepreneurship. - Mr Yengwa

For Mr Yengwa, TVET civil engineering graduates are prepared to create their own employment as entrepreneurs or to open their own businesses. He mentioned two units in TVET colleges. One unit prepares some students to be employable by industries, and the other unit prepares some students to be entrepreneurs or to open their own businesses. Mr Yengwa explained that there is specific funding in TVET colleges for entrepreneur-trained students in their institution to assist them to open their own businesses.

This observation seems to corroborate the previous research study conducted by Adams (2019) who mentions that, according to the PSET report 2016, TVET college institutions are well-suited to deliver on policies that encourage and support cooperatives, small enterprises, and worker-initiated, non-governmental organisations, entrepreneurships, and community training initiatives. Adams (2019) suggests that TVET graduates should work on the three sets of employment factors

namely: individual factors (employability skills and attributes, demographics, health and well-being, job seeking skills, adaptability and mobility); personal circumstances (household circumstances, work culture, access to resources); and external factors (demand factors, enabling support factors, creating their businesses). These skills are needed so that graduates can adapt in a variety of work environments and handle their own business as entrepreneurs (Chauke, 2023).

This observation may not be surprising as it concurs with Becker's (1993) investment on training and education concept of HC theory. According to Becker (1993), when individuals invest in education and training, they may increase knowledge, experience, earnings, and productivity. Thus, this aligns with Adams (2019), who mentions that TVET civil engineering graduates need to train through education to be employable or create self-employment and be productive.

From the observation, Mr Yengwa also noted that TVET civil engineering graduates are not trained properly to become entrepreneurs. He had noticed that in their college, students are not trained to become entrepreneurs and their institutions trained students to rely on employment. This notion from Mr Yengwa is supported by the previous study conducted by Papier (2017), who views the South African education system as designed to produce job seekers rather than job creators—the so-called entrepreneurs. This observation suggests that TVET colleges help graduates to become job seekers or employable rather than creating their own employment.

7.2.2.3. *Curriculum relevance and industry needs*

A central and consistently recurring theme throughout the discussions was the imperative for TVET college curricula to remain dynamically relevant and responsive to the evolving needs and technological advancements within the civil engineering and construction industries. While the current curriculum undeniably focuses on the fundamental principles and practices of civil engineering and building construction, stakeholders frequently expressed palpable concerns about its perceived outdated nature and its limited scope in addressing modern industry demands.

As underscored in the problem statement in Chapter One and further supported by the work of Mesuwini and Bomani (2021), many private industries hold a strong perspective that TVET college programmes, particularly in engineering, do not adequately reflect contemporary industry standards or keep pace with technological advancements. This divergence represents a critical misalignment of expectations and capabilities between the educational institution (the producer of

human capital) and its primary "customer"—the employing industry. This gap means that while graduates possess foundational human capital, its currency and breadth may be insufficient for a rapidly evolving professional landscape. For example, focus group 2 stated that the curriculum does not include some of the recent changes that are taking place in the industry. This indicates a significant lag in curriculum updates.

From a ST perspective, this highlights a significant breakdown in effective communication and a lack of robust collaboration between TVET colleges and industry. For optimal employability outcomes, a symbiotic and reciprocal relationship is inherently required. In such a relationship, industry proactively provides consistent and detailed feedback on emerging skills gaps, evolving technological requirements, and future needs. Concurrently, colleges are expected to adapt and revise their curricula, thus ensuring the human capital they develop remains highly relevant and valuable. The findings of this study, however, strongly suggest that this reciprocal and responsive relationship is often lacking or insufficient. This frequently leads to a "supply-side" approach to education, where curriculum content is determined by academic structures rather than being driven by the explicit demands of the labour market.

IT provides a further explanatory layer for this phenomenon. It suggests that the challenge lies not only in the lack of external feedback but also in the internal bureaucratic processes and established academic structures within educational institutions that can hinder rapid curriculum adaptation. Institutional inertia, complex approval processes, and a traditional focus on academic rather than vocational currency can collectively slow down the necessary reforms. The persistent difficulty in overcoming these institutional obstacles means that the human capital developed within TVET colleges may not consistently remain current, robust, or versatile enough to meet the dynamic demands of a rapidly evolving labour market. This ultimately diminishes the market value of graduates and exacerbates the employability challenge, as the formal curriculum structure fails to respond adequately to external shifts.

7.2.2.4. Employment opportunities and challenges for TVET civil engineering graduates

The study unveiled a nuanced and evolving picture of employment opportunities for TVET civil engineering graduates, indicating both persistent challenges and emerging positive trends. While the problem statement highlighted a concerning level of unemployment among these graduates' post-qualification (Nkalane, 2018), this research discerns a discernible "slight increase in

employment," (Chapter Five, p. 137). This suggests an incremental, albeit still challenging, improvement in the labour market absorption of these graduates. This modest upward trend can be partly attributed to the intensified efforts in fostering partnerships between colleges and industries, which, as Mesuwini and Bomani (2021) suggest, are instrumental for facilitating both in-service training placements and direct job creation. Jansen (2020) also notes the establishment of workplace-based and partnership offices by colleges, signifying a concerted institutional effort to bridge the perennial gap between educational output and employment entry. From a stakeholder theory viewpoint, these evolving partnerships are vital as they forge direct links between the educational institutions and employers, thereby actively facilitating the smoother transition of developed human capital into the workforce. Such collaborations demonstrate a shared interest in fostering employability.

Interestingly, the study also revealed a significant and encouraging trend: TVET civil engineering graduates are increasingly demonstrating a preparedness and capability to create their own employment opportunities through entrepreneurial ventures. Mr Yengwa, a college senior manager, explicitly stated that the students are also trained to create their own employment as entrepreneurs. This finding represents a valuable expansion of the traditional understanding of employability, moving beyond mere wage employment to encompass self-generated economic activity. This aligns with a broader and more contemporary interpretation of HC theory, which recognises that vocational training can also foster entrepreneurial skills, self-reliance, and the capacity for innovation. Graduates are not solely reliant on external job markets but are developing the agency to generate economic opportunities for themselves and others, which is a commendable and impactful outcome of their vocational training.

However, despite these positive developments, the overarching and persistent challenge remains the limited formal recognition of TVET qualifications in many advertised posts and the general perspective among some industries that TVET programmes are not fully aligned with their comprehensive requirements. A civil engineering municipality manager commented, *"Employers are more likely to hire the university or university of technology civil engineering graduates when TVET graduates compete for similar positions."*

These factors collectively underscore the ongoing institutional and stakeholder-related barriers that continue to impede optimal graduate employability (Jansen, 2020). The informal norms, coupled

with a lack of consistent understanding and engagement from employers, continue to pose significant hurdles to the widespread acceptance and value placed on TVET credentials within the broader labour market.

In the conclusion of this significant dimension, the study discussed the findings that include, amongst others, that TVET civil engineering graduates meet the skills requirements to be employed in industries. The employable skills possessed by TVET civil engineering graduates are for civil engineering and building construction, not the entire spectrum of civil engineering. Some of the industries do not hire TVET civil engineering graduates but in other instances they are forced to hire them because of the project requirements. The study found that there has been a slight increase in employment of TVET civil engineering graduates. It was also found that as much as TVET civil engineering graduates are trained to be employable, they are also trained to create their own employment as entrepreneurs. This pattern reflects the interaction between human capital development and institutional constraints, as explained in the integrated conceptual framework.

7.3. Discussion of Research Question Two: How and why do such perspectives manifest or prevail among the college stakeholders?

This section shifts the analytical lens to explore the deeper underlying reasons and the specific mechanisms through which the perspectives on TVET graduate employability, as meticulously detailed in the preceding section, become evident and continue to persist among college stakeholders. Understanding the how and why is crucial for developing effective interventions. This exploration is framed around the key concerns voiced by stakeholders, which illuminate the systemic and perceptual factors at play. This section primarily draws on data from Chapter Six (Data Presentation Part Two).

7.3.1. Concerns of college stakeholders on employability

The study unveiled several significant and recurring concerns among college stakeholders regarding the employability of TVET civil engineering graduates. These concerns are not merely observations but provide critical insights into how and why prevailing perspectives on employability challenges manifest and endure. Fundamentally, these concerns often originate from a demonstrable disconnect between the actual output of TVET colleges and the specific demands, expectations, or established institutional norms of the labour market.

7.3.1.1. *Enrolment versus exits in civil engineering courses (Student attrition)*

A critical and frequently voiced concern by stakeholders was the noticeable imbalance between the high numbers of students enrolling in TVET civil engineering programmes and the comparatively low rates of graduates who successfully complete their studies within the stipulated timeframe, obtain recognised qualifications, and subsequently secure employment. This quantitative disparity contributes significantly to the prevailing perspective of limited employability and raises questions about the efficiency of the educational pipeline. Chapter Six highlighted student attrition as a major theme.

As observed by a civil engineering municipality manager from Tilo District Municipality, this issue is a tangible concern for those in a position to hire. *“Yes, many students enrol... but the issue is whether they do finish within the stipulated timeframe and eventually get employed.”* This statement highlights a practical reality that undermines the perceived success of the TVET system. This concern points to potential inefficiencies or bottlenecks within the educational journey, from curriculum delivery and assessment to the provision of adequate support structures that ensure timely completion and skill acquisition.

NSFAS also emerged as a factor. According to interviewees, NSFAS has challenges that need to be reviewed to assist the students in completing their studies in full. They felt that NSFAS challenges, if not addressed, continue to cause the student attrition. From an institutional theory perspective, if the institutional processes (curriculum design, pedagogical approaches, student support, and certification mechanisms) are not sufficiently robust or effectively implemented to ensure high completion rates and the development of marketable human capital, the institution itself inadvertently contributes to the challenges in graduate employability. The sheer number of enrolments may outwardly suggest success, but if the conversion to qualified, employed graduates is low, the effectiveness of the institution in its core mandate is questioned.

Furthermore, from a HC theory standpoint, the full development and formal certification of human capital are crucial for its marketability and recognition in the labour market. Incomplete or significantly delayed qualification diminishes the overall stock of readily available and formally recognised human capital, making it harder for both graduates and the system to demonstrate success. The institutional processes of financial aid and academic support are thus critical for the successful accumulation of human capital.

7.3.1.2. *Partnerships or collaborative work to enhance employability*

A pervasive and consistently articulated concern among all stakeholder groups was the perceived absence or significant inadequacy of robust, formal partnerships and collaborative frameworks between TVET colleges and relevant industries and municipalities. This lack of sustained and meaningful collaboration is identified as a primary reason why many of the identified challenges in employability persist and, indeed, prevail. Without active and structured engagement, the ecosystem necessary for effective graduate transition remains fragmented. Chapter Six specifically highlighted "TVET college partnership with industries" as a critical theme.

A college senior manager from Malo TVET college, expressed this sentiment with a clear indication of the current landscape. *“Currently, there is no partnership between us as TVET and local municipalities” (Mrs Hlalu).* Stakeholder concerns about the absence of partnerships point not merely to a lack of cooperation but to the absence of concrete mechanisms that structure and sustain such collaboration. Civil engineering industries and municipalities typically rely on formalised levers—such as Memoranda of Understanding (MoUs), structured procurement agreements, workplace-based learning quotas, and joint performance metrics—to regulate engagement with training institutions. TVET colleges currently do not utilise these institutional mechanisms, which results in ad hoc communication and fragmented relationships with employers. Introducing mechanisms such as employer–college liaison committees, quarterly partnership performance reviews, and MoU-based commitments for student placement would convert partnership rhetoric into actionable structures that directly support graduate employability.

This powerful statement underscores the systemic nature of this deficiency, suggesting that formal, large-scale industry-college linkages are rare, particularly with major employers. This finding strongly reinforces the arguments put forth by scholars such as Jansen (2020), and Mesuwini and Bomani (2021) and who have extensively highlighted the critical role of strong, collaborative partnerships in enhancing TVET graduate employability. The current absence of such partnerships directly undermines the fundamental principles of Stakeholder Theory. This theory unequivocally emphasises the importance of effective and synergistic relationships among all relevant entities—in this context, colleges, industries, government bodies, and even communities—in a coordinated effort to align educational output with prevailing labour market needs. When these collaborative mechanisms are weak, informal, or entirely non-existent, colleges inevitably operate in isolation,

producing human capital that may not precisely align with evolving industry requirements. This ultimately perpetuates the employability gap, as the producers and consumers of human capital are not in constant dialogue. From an institutional theory viewpoint, the lack of established and formal inter-organisational linkages between TVET colleges and industry represent a significant institutional void that needs to be systematically addressed. Without these strong ties, the institutional environment fails to create the seamless pathways and feedback loops necessary for TVET graduates to successfully transition into sustainable employment, thereby allowing prevailing negative perspectives about employability to continue unchallenged.

7.3.1.3. *Channels of communication between TVET colleges and industries*

Compounding the issue of weak partnerships, the study identified a significant and problematic deficiency in formal, consistent, and regular channels of communication between TVET colleges and industries. This pronounced communication gap is a key explanatory factor for why existing, and often negative, perspectives on employability continue to prevail. Without transparent and continuous dialogue, misunderstandings and misalignments are bound to occur and persist. Significance of communication on employability was a distinct theme in Chapter Six.

One participant—a civil engineering construction manager from Palala Civil Engineering and Construction Company—lamented this lack of proactive engagement from colleges: *“They [TVET colleges] have to invite us and tell us that there are these programmes and what are their outcomes, so that we can have that background.”* This quote vividly illustrates the information asymmetry that exists. Employers often lack a clear and up-to-date understanding of the TVET curriculum, the specific practical skills graduates possess, and the pedagogical approaches employed. This deficit in communication directly contributes to the aforementioned recognition gap (Adams, 2019), as employers cannot value what they do not fully understand. Conversely, colleges may remain largely unaware of subtle or rapid shifts in industry demands, technological advancements, or emerging skills gaps, leading to the offering of outdated or less relevant programmes (Mesuwini & Bomani, 2021). This communication breakdown directly relates to stakeholder theory, as effective and open communication is foundational to managing stakeholder expectations, building trust, and aligning diverse interests towards a shared goal, in this case, graduate employability. When this reciprocal communication is absent or sporadic, the shared objective is significantly hampered by misinformation, outdated assumptions, and a general lack

of mutual understanding between the producers and consumers of human capital. Furthermore, the absence of explicit mandates or established protocols for such communication, perhaps reflecting prevailing institutional norms, further explains its observed infrequency.

7.3.1.4. Marketing the TVET civil engineering qualification

Stakeholders consistently expressed profound concern over the insufficient and often ineffective marketing and promotion of TVET civil engineering qualifications to both potential employers and the broader community. This persistent lack of visibility and active communication contributes significantly to the prevailing challenge of recognition and legitimisation of TVET credentials in the labour market. Without a concerted effort to showcase their value, TVET colleges remain largely undervalued. Chapter Six noted "Marketing" as a critical aspect of this concern.

As indicated by a college senior manager from Malo TVET college, who acknowledged the internal perspective on this issue: *"There is no clear advertising and information that the TVET colleges are giving to the industry."* This internal acknowledgement highlights a systemic failure to adequately articulate the unique value proposition of TVET human capital to the market. The limited and often ad hoc marketing efforts mean that the distinct advantages and competencies of TVET graduates are not effectively communicated or understood by employers. This perpetuates a historical perspective of TVET qualifications as inherently inferior or less comprehensive compared to traditional university degrees (Adams, 2019). From an IT perspective, this points to a weakness in the institutional "signalling" mechanism. For TVET credentials to gain full legitimacy and widespread acceptance, they must be effectively communicated and legitimated to employers within the prevailing labour market institutions. When this signalling is weak, the human capital developed within TVET colleges, despite its practical utility, struggles to gain the market recognition necessary for optimal employability, thereby allowing the negative perspectives to persist unchallenged. This also touches upon ST, as effective marketing is a way for colleges to engage with and influence the perspectives of potential employers as key stakeholders.

7.3.1.5. Curriculum for TVET civil engineering graduates

Concerns pertaining to the curriculum's currency, scope, and overall comprehensiveness were among the most frequently and emphatically voiced by stakeholders, providing a clear and direct

explanation for why issues with graduate employability persist. Participants consistently articulated that the TVET civil engineering curriculum is often outdated and too narrowly focused primarily on "physical work" and the "building construction side of civil engineering," rather than embracing the expansive and multidisciplinary nature of the "whole civil engineering fraternity." This narrowness limits the versatility and adaptability of graduates in a diverse job market. Chapter Six identified "Content of Curriculum" as a major theme.

A participant, who is a civil engineering municipality manager from Tilo District Municipality, explicitly stated that *"The curriculum needs to be reviewed and updated to include all the aspects of civil engineering."* This sentiment was echoed by another participant, a civil engineering construction manager from Palala Civil Engineering and Construction Company, who further emphasised the technological gap: *"The TVET civil engineering curriculum is lagging behind, and it does not meet some of the recent 4IR technology used by employing industries."*

These participants specifically highlighted that, at present, TVET civil engineering graduates typically cannot perform more complex tasks such as design, water treatment processes, or advanced materials testing, which are integral aspects of contemporary civil engineering practice. This significant gap means that the human capital developed by TVET colleges, while foundational in some areas, is not keeping pace with the demands of a modern, technologically advanced industry. Participants strongly felt that TVET colleges must upgrade their curriculum timeously in order to meet the industry job market requirements. This aligns directly with the broader literature (Mesuwini & Bomani, 2021) regarding industry perspectives of outdated programmes.

This concern has profound implications for HC theory. An outdated and narrow curriculum means that the human capital developed within TVET colleges may not possess the breadth, depth, or currency of skills required by industries, rendering graduates less competitive and limiting their career progression beyond basic roles. Furthermore, from an IT standpoint, the slow pace of curriculum revision and its perceived imposition by the DHET on colleges without sufficient local stakeholder input reflects significant institutional inertia. Participants suggested that curriculum development should be decentralised to involve local stakeholders, including direct engagements between colleges and employing industries. As observed by a college senior manager:

For the participants, in order to deliver a quality curriculum for TVET civil engineering, all stakeholders must be involved in the development of the curriculum, thus enabling them to understand the curriculum itself and have ownership of curriculum delivered in the TVET colleges.

The lack of such a collaborative, responsive institutional framework for curriculum development directly contributes to the prevailing challenges in employability, as the educational output does not sufficiently mirror the dynamic needs of the labour market.

7.3.1.6. *Skills–industry alignment*

The alignment between TVET civil engineering skills development and industry requirements represents a critical dimension of graduate employability that can be analysed through multiple theoretical perspectives. Through the lens of HC theory, the skills and knowledge acquired by graduates constitute their primary economic assets. However, participant perspectives revealed significant gaps in how this HC aligns with industry needs.

A college official highlighted this misalignment.

As much as one may say TVET civil engineering graduates meet the necessary job requirements for artisan positions, but their curriculum is outdated, and it does not meet the current industry needs. In most cases students are trained with old machines for practical learning. Again, the qualification for civil engineering specifically deals with civil engineering and building construction, not the entire civil engineering. - Mr Yengwa

This perspective aligns with Schultz's (1961) emphasis on HC as encompassing specific knowledge and skills that have economic value. The misalignment suggests that certain components of HC development in TVET programmes may not be optimised for current market demands.

From an IT perspective, this misalignment challenges organisational legitimacy. As Meyer and Rowan (1977) argue, organisations maintain legitimacy by conforming to institutional expectations. A construction company representative articulated this challenge.

TVET civil engineering graduates that we have on site cannot understand the current technology because they are taught an old curriculum. The curriculum for TVET civil engineering courses needs to be aligned with what is done in our industries. - Ms Gtee

This reflects the IT concept of organisational legitimacy through conformity and curriculum alignment. TVET colleges struggle to maintain credibility when their graduates do not fully meet industry expectations, creating a cycle that reinforces legitimacy challenges.

ST provides additional insights through the concept of stakeholder interests. Freeman (1984) emphasises that organisations must balance the interests of various stakeholders. An industry participant expressed this perspective:

As industries, if we can be involved in the development of TVET civil engineering curriculum we can add value. For now, we do not really know what is happening in TVET colleges when they design the curriculum and their curriculum in most cases does not meet the industry needs. - Mr Doro

This reveals how stakeholder interests may not be fully aligned when job specifications do not explicitly recognise TVET qualifications, creating barriers to employing otherwise qualified graduates.

The need for continuous curriculum updates was emphasised repeatedly by participants, reflecting IT's focus on isomorphism and legitimacy. A college stakeholder noted:

The curriculum for TVET colleges needs [to] be updated timeously as the technology changes every day. I understand that TVET colleges are undergoing a curriculum review; however, we do not know whether the curriculum aligned with the industry needs because we were not involved in the development of the curriculum. - Ms Gtee

This perspective demonstrates the importance of both normative isomorphism (professional standards) and organisational legitimacy through alignment with current industry expectations.

7.3.1.7. Implications and Connections

These findings connect directly to Mesuwini and Bomani's (2021) research on stakeholder consultation in TVET programme development. The perspectives shared by participants

emphasise the need for more effective consultation to ensure skill alignment. As one municipality official stated.

As college stakeholder from the municipalities, we need to be involved in the curriculum and qualification upgrade for TVET colleges. The lack of colleges not engaging us about the skills needed for our communities make it not respond to our challenges to develop a skilled workforce through TVET colleges. - Ms Galo

This echoes Khambule's (2019) findings on the expectations of TVET graduates regarding local employment and the challenges they face when their skills do not align perfectly with industry needs.

The problem of TVET qualifications not being specifically mentioned in job advertisements further illustrates the ST value creation concept. As one focus group participant observed:

It makes it difficult for us as municipality to appoint TVET civil engineering because even their qualification is not included in the job advertisement. Our policy [Recruitment policy] does not include TVET colleges for the artisan positions for civil engineering graduates. - Focus group 2

This systematic integration of theoretical concepts with participant perspectives reveals how skills-industry alignment issues for TVET civil engineering graduates stem from interconnected challenges in HC development (specific skills and knowledge), institutional legitimacy (conformity to professional standards), and stakeholder interests (recognising and valuing TVET qualifications). Addressing these challenges requires interventions that bridge these gaps through improved communication, collaborative curriculum development, and greater recognition of TVET qualifications within the civil engineering field.

The conclusion of this significant dimension is that the study has discussed a few findings which include that the number of students who exit N6 and are ready for the in-service training is low compared to the cohort of students who registered in civil engineering programmes. In the finding, it was mentioned by the interviewees that part of the reason is student attrition, and the high failure rate. The other findings in this category were that TVET colleges have no partnerships or collaborative work or proper communication channels between TVET colleges, municipalities and other civil engineering and construction companies. The interviewees felt that these are some of

the reasons why there is low employment of TVET civil engineering graduates. It was also found that the curriculum delivered at TVET colleges was streamlined towards civil engineering constructions, not the entire civil engineering spectrum, and that the curriculum is outdated and not meeting industry requirements.

This dimension aimed to answer the second research question of this study. The concerns from dissimilar categories were linked to findings, discussed, and linked to the literature review and theories of the study. The next section provides a discussion that seeks to answer the last research question of this study. This finding demonstrates how stakeholder expectations and institutional practices jointly shape employability outcomes.

7.4. Discussion of Research Question Three: How can the college stakeholders effectively contribute towards enhancing the employability of TVET college civil engineering graduates?

From a macro (stakeholder) perspective, this section provides a crucial shift in focus, moving from an analysis of the challenges and their underlying causes to a forward-looking exploration of concrete strategies and actionable approaches. These suggestions, put forth by the stakeholders themselves, aim to systematically enhance TVET civil engineering graduate employability. The proposed solutions underscore a shared understanding that addressing the employability challenge requires a concerted, multi-stakeholder effort, deeply rooted in the principles of ST. This section draws heavily on data from Chapter Six (Data Presentation Part Two), particularly themes related to "collaboration to enhance employability," "importance of database for graduates," and "impact of technology on the curriculum."

7.4.1. Approaches of college stakeholders to enhance employability

The study identified several pragmatic and proactive approaches recommended by college stakeholders, all aimed at substantially improving the employability outcomes for TVET civil engineering graduates. These recommendations collectively demonstrate a recognition among stakeholders of their collective responsibility and the potential for synergistic action in addressing the multifaceted employability challenge.

7.4.1.1. Work collaboration between TVET colleges and industries/municipalities

A fundamental and consistently reiterated recommendation for significantly enhancing employability was the establishment of robust, formal, and sustained work collaborations between

TVET colleges and industries, as well as with local municipalities. This approach directly tackles the critical communication and partnership gaps identified in earlier sections (7.3.1.2 and 7.3.1.3).

One participant, a college senior manager from Malo TVET college, explicitly articulated this imperative: *"TVET colleges must make sure they work together with industries and municipalities. That will assist their graduates to find work."* This recommendation aligns perfectly with the core tenets of ST, which advocates for synergistic and mutually beneficial relationships among all parties interested in or affected by an organisation's outcomes (Freeman, 1984). Such deeply integrated collaborations could manifest in various forms, including joint curriculum co-design, the provision of structured and extensive work-integrated learning opportunities (e.g., internships, apprenticeships), and the creation of explicit, well-defined pathways for graduate absorption into the labour market.

From a HC theory perspective, these partnerships are vital because they ensure that the specific skills and competencies being developed are precisely what the market demands, thereby increasing the value, relevance, and immediate marketability of the graduates' human capital. Furthermore, participants from the employer side noted that such collaboration could lead to increased trust and understanding of TVET qualifications. As a participant from focus group 1—a civil engineering municipality manager from Tilo District Municipality—stated: *"The employers began to realise that to enhance the employability of TVET civil engineering graduates, TVET colleges are supposed to work in collaboration with the municipalities."*

This mutual understanding could even lead to policy amendments, with employers indicating that collaborative work between them and the TVET colleges can assist the municipalities to amend their policies to include the TVET civil engineering qualification in the municipality job requirements. This highlights the potential for IT to be positively influenced through active stakeholder engagement, leading to formal recognition and integration of TVET qualifications into hiring processes. This move from informal, unrecognised roles to formal, integrated pathways is a crucial institutional shift. In addition, the findings suggest that strengthening collaboration between TVET colleges, municipalities, and industry stakeholders may contribute to the broader national commitment to achieving SDG 4 and SDG 8 by enhancing graduate employability and promoting sustainable economic participation.

7.4.1.2. *Review of the curriculum to include the whole civil engineering fraternity*

Stakeholders strongly and consistently advocated for a comprehensive, ongoing review and systematic updating of the TVET civil engineering curriculum. The overarching aim of this review is to expand the curriculum beyond its current narrow focus on civil engineering and building construction, to encompass a much broader spectrum of the diverse civil engineering discipline. Chapter Six explicitly identified "Impact of technology on the curriculum" as a theme linked to this.

One participant, a civil engineering construction manager from Palala Civil Engineering and Construction Company, emphatically reiterated the need for "all aspects of civil engineering" to be included in the curriculum. This recommendation directly addresses the significant concern about curriculum relevance and outdatedness raised in Section 7.3.1.5. A revised and expanded curriculum would ensure that graduates acquire a more versatile, robust, and up-to-date human capital skillset, making them more adaptable and competitive across various civil engineering roles. This proactive curriculum development, informed by industry needs, is a crucial institutional response to enhance employability, reflecting an adaptive approach within institutional theory. It allows the institution to align its internal structures and offerings with the dynamic external environment, thus improving the market value of the human capital it produces.

7.4.1.3. *Development of a college database to trace graduates' whereabouts*

A novel, pragmatic, and highly valued suggestion from stakeholders was the imperative for TVET colleges to develop and meticulously maintain a centralised database that systematically tracks the employment status and whereabouts of their civil engineering graduates. This initiative addresses a critical information gap that currently exists within the TVET system. The previous chapter explicitly discussed the "importance of database for graduates."

One participant, a college senior manager from Malo TVET college, highlighted this systemic void: *"We need to know where the graduates are and whether they are employed or not"* (Mrs Hlalu). This lack of comprehensive data means that colleges currently have limited visibility regarding the actual employment outcomes of their graduates. Interviewees from TVET colleges candidly admitted that they do not have records of their TVET civil engineering graduates' whereabouts after they have completed their studies in TVET institutions. Employers, too, echoed the necessity for such a system, suggesting that this "database system should also be accessible to

the municipalities in which a TVET college is located in order to assist with the enhancement of TVET civil engineering graduates' employability, not only to employing municipalities but also distributed to the civil engineering and construction institutions who require to employ civil engineering artisans".

This proposed database initiative represents a crucial IT solution to a prevailing information deficit. By systematically collecting and analysing data on graduate employment, colleges can gain invaluable insights into the effectiveness of their programmes, identify specific areas where graduates are finding success or facing barriers, and gather direct feedback on curriculum relevance. From a stakeholder theory perspective, this tool facilitates greater accountability and provides empirical evidence that can be used for more effective engagement with employers, funding bodies, and policymakers. It also allows for a data-driven approach to enhancing human capital development, by identifying specific areas where graduates are finding success or facing barriers, leading to targeted improvements in curriculum and support services. This initiative represents an institutional mechanism to gather vital intelligence for continuous improvement.

7.4.1.4. Improving the overall TVET college infrastructure

While not explicitly detailed as a separate sub-theme for solutions in Chapter Six, the concerns raised in Chapter Five regarding inadequate infrastructure, limited funding, and a lack of up-to-date equipment (as discussed in Section 7.2.1.2) implicitly and logically suggest that a concerted effort to improve these fundamental aspects is a critical approach to enhancing employability. The quality of physical resources directly impacts the quality of vocational training.

Modernised facilities, including well-equipped workshops, laboratories, and up-to-date technological tools, are absolutely essential for developing cutting-edge human capital that meets the rigorous demands of contemporary industry standards. Without access to relevant equipment, students cannot gain the practical, hands-on experience necessary to operate current industry machinery or apply modern techniques. This improvement represents a crucial institutional investment in the very foundation of quality education, directly impacting the practical skills and confidence of graduates. From an HC theory perspective, adequate infrastructure directly supports the effective transfer and acquisition of marketable skills. From an IT viewpoint, a commitment to upgrading infrastructure signifies a responsiveness to the demands of the external environment

and strengthens the institution's capacity to fulfil its mandate effectively, thus lending legitimacy to its educational output.

7.5. Chapter Summary

This chapter has provided a comprehensive and integrated discussion of the study's empirical findings, addressing all three research questions in detail. It began by thoroughly exploring the perspectives of college stakeholders on the employability of TVET civil engineering graduates (Research Question One), drawing extensively from Chapter Five. This section highlighted that TVET colleges are widely perceived as crucial skills providers for national development, despite grappling with significant challenges such as inadequate resources and insufficient industry collaboration. The discussion also revealed that while graduates possess relevant foundational skills, issues with qualification recognition and curriculum relevance persist as key barriers to their labour market integration, often influenced by deeply entrenched institutional norms and the lack of robust stakeholder engagement.

Subsequently, the chapter delved into how and why these perspectives manifest and prevail among stakeholders (Research Question Two), utilising insights from Chapter Six. This analysis identified critical concerns, including the disparity between student enrolment and successful employment (student attrition), the pronounced absence of formal partnerships and communication channels between colleges and industries, the insufficient marketing of TVET qualifications, and the perspective of an outdated curriculum. These factors collectively contribute to the prevailing challenges in graduate employability, explained through breakdowns in stakeholder relationships, institutional inertia, and the inadequate development of human capital.

Finally, it outlined how college stakeholders can effectively contribute towards enhancing employability (Research Question Three), also drawing from Chapter Six. Key approaches proposed included fostering robust and formal work collaborations between TVET colleges and industries/municipalities, undertaking a comprehensive and ongoing review of the civil engineering curriculum to broaden its scope and ensure its currency, and the establishment of a centralised graduate tracking database to monitor employment outcomes and inform strategic planning. These solutions are rooted in strengthening stakeholder connections, adapting institutional practices, and optimising the development of relevant human capital.

Throughout this discussion, the findings were critically analysed through the integrated lenses of HC theory, ST, and IT. This theoretical application systematically demonstrated how the development of individual skills (human capital), the effectiveness of inter-organisational relationships (stakeholder engagement), and the influence of entrenched norms and structures within the educational and labour market systems (institutional factors) collectively and dynamically shape the employability outcomes of TVET civil engineering graduates. This consolidated discussion thus provides a holistic, theoretically informed, and empirically rich understanding of the complex dynamics at play in enhancing the employability of TVET civil engineering graduates in South Africa. For example, the college managers reported that although graduates possessed adequate technical skills (human capital), employers still hesitated to recruit them due to institutional preferences for university qualifications and perceived reputational risk (institutional norms) which in turn limited opportunities for meaningful workplace partnerships and graduate placement support (stakeholder relationships). These perspectives illustrate the combined influence of skills acquisition, organisational structures and labour-market dynamics.

The next chapter presents the final chapter of the study, which provided a synthesis of the key findings, drew overall conclusions, and offered recommendations informed by evidence generated in this research.

CHAPTER EIGHT

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

8.1. Introduction

In the previous chapter, I discussed the study that was framed within a qualitative research paradigm. I explored the findings on the perspectives of college stakeholders regarding the employability of TVET civil engineering graduates, findings on the reasons how and why such perspectives are manifested/prevalled among the college stakeholders, and findings to discern how the college stakeholders effectively contribute towards enhancing the employability of TVET college civil engineering graduates.

This chapter serves as the concluding synthesis of the entire research thesis. It provides a comprehensive summary of all preceding chapters, draws conclusions based on the study's empirical findings and their theoretical interpretation, and proposes actionable recommendations stemming directly from these conclusions. Furthermore, it outlines potential implications for future research, contributing to the ongoing discourse on TVET graduate employability.

8.2. Summary of the study

This study comprehensively explored college stakeholders' perspectives on the employability of TVET civil engineering graduates in SA. Guided by Human Capital Theory, Institutional Theory, and Stakeholder Theory, the research adopted a qualitative case study within an interpretive paradigm. Data were generated through semi-structured interviews, focus groups, and document reviews with 21 participants from one TVET college, five municipalities, and one civil engineering and construction company. The thesis was structured across eight chapters, each contributing to a holistic understanding of the phenomenon.

8.2.1. Chapter One provided the introduction and background to the study, outlining the research problem, motivation, purpose, and key research questions. It established the national context of youth unemployment and the pivotal role of TVET colleges.

8.2.2. Chapter Two presented a comprehensive literature review, exploring the global and local discourse on TVET colleges, the relationship between civil engineering graduates and the labour market, and the leadership roles of college stakeholders in employability. It identified critical research gaps informing this study.

8.2.3. Chapter Three delineated the theoretical frameworks underpinning the research: HC theory, which explains the value of skills acquisition; IT, which elucidates the influence of norms and structures; and ST, which highlights the importance of inter-organisational relationships. It detailed how these theories guided data interpretation.

8.2.4. Chapter Four presented the research design and methodology, including the interpretive paradigm, qualitative design, and case study approach. It also elaborated on the data collection methods, sampling, trustworthiness, and ethical considerations employed in the study.

8.2.5. Chapter Five (Data Presentation and Analysis Part One) presented the empirical data and initial analysis related to Research Question One. It detailed college stakeholders' perspectives on TVET colleges as skills providers and the existing challenges faced by these institutions. It also presented their specific perspectives on the employable skills possessed by TVET civil engineering graduates, curriculum relevance, and initial insights into employment opportunities and challenges. This chapter included direct participant quotations and thematic findings related to the foundational practical skills, limited to recognition of TVET qualifications, and concerns regarding curriculum alignment.

8.2.6. Chapter Six (Data Presentation and Analysis Part Two) continued the presentation of empirical data and analysis, specifically addressing Research Questions Two and Three. It unveiled critical concerns of college stakeholders regarding employability, including student attrition rates, the lack of robust partnerships and communication channels between colleges and industries, and the insufficient marketing of TVET qualifications. This chapter also detailed the perceived outdatedness and narrowness of the civil engineering curriculum. Furthermore, it presented stakeholders' proposed approaches to enhance employability, such as the imperative for work collaboration, comprehensive curriculum review, and the development of a graduate tracking database.

8.2.7. Chapter Seven provided a comprehensive and integrated discussion of the study's findings. It analysed the 'what,' 'how,' and 'why' of stakeholders' perspectives on employability, drawing deeply from the empirical data in Chapters Five and Six. This chapter applied HC Theory, IT, and ST to interpret the complexities of graduate employability, including student attrition, weak industry partnerships and communication channels, and insufficient marketing of TVET qualifications. It synthesised the findings to explain why certain perspectives prevail and how

stakeholders can effectively contribute to enhancing employability, ensuring analytical depth and a strong link to both literature and theory.

8.2.8. Chapter Eight presented a synthesis of the key findings of the research which led to the conclusions and recommendations of the study. The conclusion presents and analyses the findings presented in Chapter Five, and Chapter Six, and therefore the recommendations were drawn based on the findings of the complete study.

8.3. Conclusions of the study

These conclusions collectively demonstrated how the study has answered all three research questions through evidence drawn directly from stakeholders' perspectives. In line with Maree (2011), the conclusions presented here are bounded, evidence – based interpretations drawn from participants' contexts, aimed at extending and corroborating existing knowledge rather than producing generalisable claims. The development of the conceptual framework further synthesised the three theoretical lenses, offering a holistic interpretation of how human capital development, institutional structures, and stakeholder relationships collectively shape employability outcomes. In bringing together these interconnected dimensions – human capital development, institutional structures, and stakeholder relationships, the framework clarifies how individual competencies, organisational practices, and broader systemic influences interact to produce the employability patterns observed in the study.

Thus, based on the comprehensive analysis and discussion presented in Chapter Seven, the following conclusions were drawn regarding college stakeholders' perspectives on the employability of TVET civil engineering graduates:

8.3.1. Dual perspective of TVET colleges

TVET colleges were widely recognised as pivotal institutions for skills provision aimed at addressing national unemployment and economic development. However, this aspirational role is significantly hampered by persistent institutional challenges, including inadequate infrastructure, limited funding, and a noticeable lack of modern equipment, which collectively undermines their capacity to consistently produce optimally employable graduates. Some of the perspectives college stakeholders have indicated were as follows:

- i High rate of unemployment:* The participants and literature agreed that the rate of unemployment in SA is high; thus, there was limited absorption of TVET civil engineering graduates into the labour market. Nkwanyane et al. (2020) indicated that the unemployment rate is between 32% and 40%, remaining significantly low, although it has increased. The participants corroborated the view that unemployment remains high across the country, affecting both graduates and non-graduates. In addition, the participants indicated that the high rate of unemployment includes all TVET graduates, not only those who graduated in civil engineering. Due to the high rate of unemployment, the gradual increase cannot be noticed; thus, the employment of graduates remains significantly low.

Participants indicated that despite the high unemployment rate in South Africa for both graduates and non-graduates, they noticed an increase in employment of TVET civil engineering graduates. According to participants, this was driven by the previously high number of graduates who were at home, unable to use their qualifications; some of whom even turned to crime. In response, the government introduced intervention strategies, like encouraging civil engineering industries to hire TVET civil engineering graduates. As a result, other companies started to recognise TVET civil engineering qualifications.

8.3.2. Foundational skills vs. Broad employability

While TVET civil engineering graduates were equipped with essential practical skills for direct entry into civil engineering and building construction tasks, their overall employability was significantly limited by systemic issues. A critical barrier is the persistent lack of explicit formal recognition for TVET qualifications in job advertisements and hiring policies across a broad spectrum of government and private sectors, often favouring traditional university qualifications.

8.3.3. Curriculum-industry disconnect

A significant disconnect existed between the TVET civil engineering curriculum and contemporary industry needs. The curriculum was largely perceived as outdated, narrowly focused on physical work, and lacking comprehensive coverage of the broader civil engineering fraternity, including emerging technologies (e.g., 4IR). This misalignment resulted in human capital that is not sufficiently versatile or current in order to meet the evolving demands of the labour market.

8.3.4. *Stigma*

From the findings, the interviewees stated that TVET colleges continued to face stigma rooted in the past. As a result, few people wanted to study at the TVET college, and employers were reluctant to hire TVET civil engineering graduates because TVET colleges were perceived as assisting students who failed to gain admission to universities or universities of technology. The interviewees mentioned that TVET colleges were struggling to address the stigma of the past and were failing to engage civil engineering companies or municipalities to highlight their programmes' offerings and successes.

8.3.5. *Critical gaps in stakeholder engagement*

There was a profound absence of robust, formal, and sustained partnerships and, critically, consistent communication channels, between TVET colleges and key external stakeholders, particularly industries and municipalities. This deficiency directly perpetuated the curriculum-industry gap, limited opportunities for work-integrated learning, and hindered the effective absorption of graduates, reflecting a significant breakdown in stakeholder relationships.

8.3.6. *Multifaceted challenges to graduate flow*

Beyond skills and curriculum, the employability of TVET civil engineering graduates was impacted by factors such as a high rate of student attrition (imbalance between enrolment and successful completion), insufficient marketing of TVET qualifications, and perceived competition from university graduates for limited positions. These issues collectively impede the employment of TVET civil engineering graduates into the workplace.

8.3.7. *Emerging entrepreneurialism*

Despite the challenges, there was an encouraging trend of TVET civil engineering graduates demonstrating entrepreneurial capabilities, actively creating their own employment opportunities. This signified a valuable expansion of the traditional understanding of employability beyond wage employment.

8.3.8. *Shared responsibility for solutions*

College stakeholders acknowledged a collective responsibility in enhancing employability and proposed concrete, collaborative solutions. These included the imperative for formalised college-industry-municipality partnerships, a comprehensive and ongoing curriculum review informed by industry input, and the establishment of a robust graduate tracking database to inform programme

efficacy and facilitate employment. The need to improve overall TVET college infrastructure was also implicitly recognised as foundational.

8.3.9. Programme review

The finding showed that both DHET and TVET colleges were working to align and upgrade the curriculum. The participants acknowledged that curriculum reviews are underway in their TVET colleges to ensure alignment and enhancement of the curriculum. This reviewed curriculum was scheduled to be fully implemented in 2027. However, it was not clear how the programme review would assist unemployed TVET civil engineering graduates to get employment.

Overall, the findings confirmed that employability was not produced by skills alone, but by the alignment between human capital, institutional conditions and stakeholder relationships, as articulated in the study's integrated conceptual framework.

8.4. Contribution to knowledge

A key contribution of this study was the development of an empirically grounded integrated conceptual framework explaining how graduate skills, institutional arrangements, and stakeholder relationships interacted to shape the employability of TVET civil engineering graduates in South Africa.

The framework demonstrates that employability outcomes were not solely determined by skills acquisition, but were mediated through institutional legitimacy, qualification recognition practices, and the strength of stakeholder collaboration networks.

While the framework was informed by Human Capital Theory (Becker, 1964), Institutional Theory (Scott, 2004; Cai & Mehari, 2015), and Stakeholder Theory, the study did not merely combine these perspectives. Rather, it extended them by empirically demonstrating how these dimensions operated interdependently within a rural TVET–municipality–industry ecosystem.

By integrating these theoretical lenses within a specific socio-institutional context, the study shifted the employability discourse from an individual deficit model toward a systemic coordination perspective, thereby contributing a context-sensitive explanatory model grounded in stakeholder experiences.

8.4.1. Theoretical contribution

This research integrated Human Capital Theory (HC), Institutional Theory (IT), and Stakeholder Theory (ST) to provide a multi-dimensional lens for understanding the employability of TVET

civil engineering graduates. Rather than applying these theories independently, the study demonstrated how they intersect and operate interdependently within a specific socio-institutional context.

As discussed in Chapter Three (Section 3.6), the study identified previously under-explored relationships between graduate skills development, institutional legitimacy structures, and stakeholder collaboration dynamics. By synthesising these theoretical perspectives, the research revealed that the development of valuable human capital within TVET colleges is not solely dependent on pedagogical practices. Instead, it is significantly shaped by prevailing institutional norms (e.g., qualification recognition practices, curriculum governance processes) and the strength and effectiveness of stakeholder relationships (e.g., industry partnerships, municipal collaboration).

8.4.1.1. Interplay of theories: The study illustrates that human capital development (HC) is embedded within institutional environments (IT) and mediated through stakeholder networks (ST). This interplay demonstrates that employability is a systemic outcome produced through the alignment of skills acquisition, institutional recognition, and collaborative relational structures. By empirically demonstrating this interaction within the South African TVET civil engineering context, the study extends existing theoretical applications by offering an integrated explanatory model grounded in stakeholder experiences.

8.4.1.2. Contextual nuance: The study applied these established theories to the specific socio-economic and educational context of post-apartheid South Africa's TVET system. It provided empirical evidence that validated and, in certain respects, extended their propositions within a developing country's vocational education landscape. In doing so, the research offered a more nuanced understanding of how global theoretical frameworks manifest within local institutional environments.

8.4.1.3. Addressing gaps in theoretical application: Human Capital Theory, Institutional Theory, and Stakeholder Theory were used to interpret the study's findings within the context of vocational education and labour market employability. Their integration enabled a comprehensive understanding of college stakeholders' perspectives regarding TVET civil engineering graduates. For example, the persistent lack of formal recognition of TVET qualifications by employers illustrated institutional isomorphic pressures and normative constraints, thereby linking institutional theory directly to observable employability barriers.

8.4.2. Empirical/Substantive contribution

The study generated rich, empirical insights directly from college stakeholders, addressing a previously underexplored phenomenon regarding TVET civil engineering graduates' employability in South Africa. Key substantive contributions included:

8.4.2.1. Comprehensive stakeholder perspectives: It provided a detailed account of the multifaceted perspectives of TVET college senior managers, municipal civil engineering managers, and private construction company managers on employability, offering a holistic view from both the "producer" and "consumer" ends of the human capital pipeline.

8.4.2.1.(a). Identification of core barriers: The research empirically identified and elaborates on specific, inter-connected barriers to employability that went beyond a simple skills mismatch. These included:

- i The significant impact of student attrition on overall employability statistics and institutional perspectives.
- ii The pervasive lack of explicit formal recognition for TVET civil engineering qualifications in job market advertisements and hiring processes.
- iii The perceived out-datedness and narrow scope of the TVET civil engineering curriculum, which failed to encompass the "whole civil engineering fraternity" and integrate modern technologies (e.g., 4IR).
- iv The pronounced absence of formalised, sustained partnerships and consistent communication channels between colleges and industries/municipalities, hindering curriculum relevance and placement opportunities.
- v The insufficient marketing and advocacy for TVET qualifications, contributing to their undervaluation.

8.4.2.1.(b). Nuanced understanding of employment trends: While acknowledging persistent challenges, the study empirically noted a "slight increase in employment" among TVET civil engineering graduates and, significantly, identified an emerging trend of entrepreneurialism among these graduates, expanding the definition of employability beyond traditional wage employment.

8.4.2.1.(c). Stakeholder-driven solutions: The study collected and synthesised actionable, stakeholder-driven solutions, including the strong call for formalised collaborative partnerships,

comprehensive curriculum review and expansion, and the establishment of a graduate tracking database. These were not abstract recommendations but emerged directly from the lived experiences and insights of those intimately involved in the TVET ecosystem.

8.4.3. Practical and policy contribution

The findings and conclusions of this study offered direct and actionable insights for various stakeholders involved in TVET education and labour market integration:

8.4.3.1. For TVET colleges: The study provided a clear roadmap for strategic interventions, urging colleges to prioritise structured industry partnerships, curriculum modernisation, and the implementation of robust graduate tracking systems to enhance programme efficacy and graduate placement.

8.4.3.2. For industries and municipalities: It highlighted the critical need for employers to formally recognise TVET qualifications, actively participate in curriculum development, and offer structured work-integrated learning opportunities, thereby contributing to a more skilled and readily available workforce.

8.4.3.3. For the Department of Higher Education and Training (DHET): The research provided empirical evidence to inform policy reforms aimed at strengthening industry-college linkages, decentralising curriculum adaptation, increasing strategic investment in TVET infrastructure, and launching national advocacy campaigns to elevate the status and recognition of TVET qualifications.

8.4.3.4. For graduates: By understanding the challenges and opportunities, graduates were better positioned to navigate the labour market, potentially focusing on entrepreneurial ventures or advocating for more relevant training.

In sum, this study provided a robust, empirically grounded, and theoretically informed understanding of TVET civil engineering graduate employability, offering concrete pathways for improving outcomes and contributing significantly to both academic discourse and practical policymaking in the South African TVET sector.

8.4.4. Proposed employability framework for TVET civil engineering graduates

This framework operationalises the integrated theoretical lenses of human capital theory, institutional theory, and stakeholder theory by translating the explanatory mechanisms identified in the analysis into practical, context-specific actions. Based on the findings of this study, a practical employability framework was proposed to guide how TVET colleges, municipalities and industry stakeholders can collaboratively strengthen the employability of civil engineering graduates. The framework consists of three interconnected dimensions. The first dimension focuses on graduate capabilities, emphasising the development of technical skills, workplace readiness, communication competencies, and exposure to authentic work-based learning. The second dimension addresses institutional alignment, highlighting the need for curriculum responsiveness, internal quality assurance, lecturer upskilling, and the removal of institutional barriers that limit graduate pathways into work. The third dimension emphasises stakeholder collaboration, outlining the roles of municipal engineering departments, private-sector firms, and TVET colleges in coordinating placement opportunities, recognising qualifications, sharing labour-market expectations, and strengthening industry–college partnerships. Together, these dimensions form a practical model that links stakeholder engagement, institutional practices and graduate readiness as mutually reinforcing elements required to improve employability outcomes.

8.5. Recommendations of the study

Based on the study's conclusions, the following recommendations are proposed to enhance the employability of TVET college civil engineering graduates:

8.5.1. Recommendations for TVET colleges:

1. Prioritise Robust Industry-College-Municipality Partnerships: TVET colleges must proactively initiate and formalise strategic, long-term partnerships with civil engineering industries, construction companies, and local/district municipalities. These collaborations should extend beyond ad-hoc engagements to include:
 - i Joint Curriculum Co-design: Establish formal mechanisms for industry and municipality representatives to actively participate in the continuous review and updating of the civil engineering curriculum to ensure its currency, breadth, and alignment with 4IR technologies and diverse industry needs.

- ii Structured Work-Integrated Learning (WIL) Programmes: Develop and mandate comprehensive WIL programmes, including internships, apprenticeships, and practical projects, to provide students with extensive hands-on experience and exposure to real-world working environments, thereby boosting their human capital and practical relevance.
 - iii Dedicated Industry Liaison Offices: Establish well-resourced offices within colleges to facilitate continuous communication, feedback loops, and placement opportunities with employers.
2. Comprehensive Curriculum Review and Expansion: Colleges, in collaboration with the DHET and industry, should undertake a thorough review of the civil engineering curriculum to:
 - i Broaden Scope: Expand the curriculum beyond its current focus on basic building construction to encompass a wider range of civil engineering disciplines (e.g., water engineering, transportation engineering, structural design principles, project management) to equip graduates with more versatile human capital.
 - ii Integrate Modern Technologies: Incorporate training on current and emerging technologies relevant to civil engineering practice (e.g., CAD software, BIM, drone technology, surveying equipment, sustainable construction practices).
 3. Develop and Maintain a Graduate Tracking Database: Implement a centralised, robust database system to systematically track the employment status, career progression, and whereabouts of TVET civil engineering graduates' post-qualification. This database should:
 - i Serve as a critical tool for programme evaluation, identifying successful pathways and areas needing improvement.
 - ii Be accessible to relevant municipal and industry stakeholders (with appropriate privacy safeguards) to facilitate direct employment opportunities and talent sourcing.
 4. Enhance Marketing and Advocacy for TVET Qualifications: Colleges, in conjunction with DHET, should launch targeted and sustained marketing campaigns to:

- i Educate industries, municipalities, and the broader public about the unique value proposition, practical competencies, and relevance of TVET civil engineering qualifications.
 - ii Showcase successful graduate profiles and entrepreneurial ventures to challenge existing negative perspectives and foster greater recognition and legitimacy of TVET credentials.
5. Address Student Attrition and Support: Review and enhance student support systems, including academic, psychosocial, and financial aid (e.g., NSFAS) processes, to improve student completion rates and ensure that students acquire the full complement of skills and certifications.
 6. Advocate for Infrastructure and Resource Upgrades: Colleges must actively lobby for increased funding and strategic investment in modernising their civil engineering infrastructure, laboratories, and equipment to ensure training reflects current industry standards and provides students with relevant practical experience.

8.5.2. Recommendations for industries and municipalities:

1. Formalise Recognition of TVET Qualifications: Municipalities, government departments, and private civil engineering/construction companies should formally review and amend their hiring policies and job advertisement criteria to explicitly recognise and include TVET civil engineering qualifications. This would remove a significant institutional barrier and provide TVET graduates with equitable access to employment opportunities.
2. Active Participation in Curriculum Development: Industry and municipality representatives should actively engage in curriculum advisory boards, workshops, and review processes initiated by TVET colleges and DHET, providing timely and precise feedback on evolving skill requirements and technological advancements.
3. Provide Structured Work-Integrated Learning Opportunities: Commit to providing well-structured, paid, or stipend internship and apprenticeship opportunities for TVET civil engineering students, fostering a direct pipeline from education to employment and helping bridge the experiential gap.

8.5.3. *Recommendations for the Department of Higher Education and Training (DHET):*

1. **Strengthen Policy Framework for Industry-College Linkages:** DHET should develop and enforce robust policy frameworks that incentivise, mandate, and support sustainable partnerships and communication channels between TVET colleges and industries/municipalities, facilitating greater alignment of human capital development with labour market needs.
2. **Decentralise and Localise Curriculum Development:** While maintaining national standards, DHET should explore mechanisms to empower colleges and their local industry stakeholders with greater autonomy in adapting and localising aspects of the civil engineering curriculum to respond rapidly to regional labour market demands and technological shifts.
3. **Lead a National Advocacy Campaign for TVET Recognition:** DHET should spearhead a national campaign to formally promote the value and equivalence of TVET qualifications, working with government departments, professional bodies, and industry associations to ensure widespread recognition and integration of TVET graduates into the national workforce.
4. **Increase Strategic Investment in TVET Infrastructure:** Allocate significant, sustained funding for the modernisation of TVET college infrastructure and acquisition of state-of-the-art equipment to ensure quality vocational training that aligns with current industry practices.

8.6. *Implications for future research*

This study has provided valuable insights into the employability of TVET civil engineering graduates from a multi-stakeholder perspective. Building upon these findings, several avenues for future research emerge:

1. **Quantitative Studies on Employability Outcomes:** While this qualitative study provided rich perspectives, a large-scale quantitative study could statistically assess the employment rates, career progression, and earnings of TVET civil engineering graduates over time, providing broader generalisability. This could also quantitatively measure the impact of specific interventions (e.g., formal partnerships, updated curricula) on employability.

2. **Longitudinal Studies on Graduate Trajectories:** A longitudinal study could follow a cohort of TVET civil engineering graduates over several years to understand their career paths, challenges, and successes, providing deeper insights into long-term employability factors.
3. **Comparative Studies Across TVET Disciplines:** Research could compare employability challenges and successes across different TVET disciplines (e.g., electrical engineering, hospitality) to identify common systemic issues and unique disciplinary dynamics.
4. **Investigating Employer Perspectives on Qualification Recognition:** A more in-depth study focusing specifically on employers' decision-making processes, biases, and criteria for hiring, particularly concerning TVET versus university qualifications, could provide critical insights into institutional recognition barriers.
5. **Impact Assessment of Curriculum Reforms:** If curriculum reforms are implemented, future research could evaluate their actual impact on graduate skills, industry absorption rates, and overall employability.
6. **Entrepreneurial Pathways for TVET Graduates:** Further research could explore the factors influencing entrepreneurial success among TVET graduates, the support structures available (or lacking), and the specific skills acquired through vocational training that foster self-employment.
7. **Feasibility Study of a National TVET Graduate Database:** A study to assess the practicalities, challenges, and benefits of establishing and maintaining a national TVET graduate tracking database could inform policy and implementation.

8.7. Chapter summary

This final chapter served as a concluding synthesis, beginning with a comprehensive summary of all preceding chapters. It then proceeded to draw conclusions directly from the study's empirical findings and their theoretical interpretations, providing a response to the research questions. Furthermore, the chapter put forth detailed and actionable recommendations aimed at enhancing the employability of TVET civil engineering graduates, targeting TVET colleges, industries/municipalities, and the Department of Higher Education and Training. Finally, it identified implications for future research, contributing to the ongoing academic and practical discourse on vocational education and labour market integration.

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APPENDICES

Appendix A: Ethical clearance certificate

 **UNIVERSITY OF
KWAZULU-NATAL**
INYUVESI
YAKWAZULU-NATALI

02 December 2023

Bubele Nogcantsi (213570732)
School Of Education
Edgewood Campus

Dear B Nogcantsi,

Protocol reference number: HSSREC/00006484/2023
Project title: Stakeholders' perspectives on employability of technical and vocational education and training civil engineering graduates.
Degree: PhD

Approval Notification – Expedited Application

This letter serves to notify you that your application received on 08 November 2023 in connection with the above, was reviewed by the Humanities and Social Sciences Research Ethics Committee (HSSREC) 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.

This approval is valid until 02 December 2024.
To ensure uninterrupted approval of this study beyond the approval expiry date, a progress report must be submitted to the Research Office on the appropriate form 2 - 3 months before the expiry date. A close-out report to be submitted when study is finished.

HSSREC is registered with the South African National Health Research Ethics Council (REC-040414-040).

Yours sincerely,



Professor Dipane Hlalele (Chair)

/dd

Humanities and Social Sciences Research Ethics Committee
Postal Address: Private Bag X54001, Durban, 4000, South Africa
Telephone: +27 (0)31 260 8350/4557/3587 Email: hssrec@ukzn.ac.za Website: <http://research.ukzn.ac.za/Research/Ethics/>

Founding Campuses:  Edgewood  Howard College  Medical School  Pietermaritzburg  Westville

INSPIRING GREATNESS

Appendix B: Permission letters from the college and municipalities



**higher education
& training**
Department of Higher Education and Training
REPUBLIC OF SOUTH AFRICA

Central Office
P O Box 2364
Port Shepstone
4240
Tel (039) 684 0110
Fax (039) 684 0280
Email: migochi.cc@esayidivet.edu.za



**ESAYIDI
TVET COLLEGE**
SOUTHERN KZN REGION

10 October 2023

To: Bubela Nogcantsi

Dear Mr Nogcantsi

RE: PERMISSION TO CONDUCT RESEARCH AT ESAYIDI TVET COLLEGE

This letter serves to inform you have been granted permission to undertake research in “Understanding the stakeholders’ perspective on Employability of TVET Civil Engineering Graduates” towards your Doctoral Degree in Higher Education at the University of Kwazulu Natal, Edgewood Campus.

All the necessary support will be given subject to ethical consideration and the law.

Mr CC Migochi
Deputy Principal Academic

Ehlayeni Campus	Gamalake Campus	Port Shepstone Campus	Kokstad Campus	Umzinkhulu Campus
Tel: (039) 685 5482/3	Tel: 039 318 1092	Tel: 039 685 4824/5	Tel: 039 727 3062	Tel: 074 426 4240
Fax: (039) 685 4135	Fax: 039 318 1184	Fax: 039 685 4848	Fax: 086 548 353	
Community Development Centres:	Sisoni Campus Umtwalume Campus	Tel/Fax: 039 318 1825 Tel/Fax: 039 318 1139	Clydesdale Campus Ngqamuzi Campus	Tel: 074 465 6475 Tel/Fax: 039 319 1525
			Gcinangempu Campus Gamalakhe Campus	Tel/Fax: 039 514 1268 Tel/Fax: 039 318 1092

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**GREATER
KOKSTAD
MUNICIPALITY**

INDEPENDENT OF KwaZulu-Natal

Adam Kok III, Building, 75 Hope Street
P O Box 8, Kokstad, 4700
Tel. +27 39 787 6601/6604
Fax. + 27 39 727 2187
Email. mm@kokstad.gov.za
www.kokstad.gov.za

OFFICE OF THE MUNICIPAL MANAGER

Our Ref.: OMM/MBD/SRZ/cv/03/10/23

DATE: 03 October 2023

Enquiries: Municipal Manager, Sipho Zwane mm@kokstad.gov.za

University of KwaZulu Natal
Edgewood College Campus

Per email

2

Dear Sir/Madam

**RE: PERMISSION TO CONDUCT RESEARCH ON "UNDERSTAND THE
STAKEHOLDERS' PERSPECTIVES ON EMPLOYABILITY OF TVET CIVIL
ENGINEERING GRADUATE: GREATER KOKSTAD MUNICIPALITY**

The above subject matter has reference.

This letter serves to grant permission to Mr. Bubele Nogcantsi to conduct research at the Greater Kokstad Municipality.

Kindly note that all information that will be provided to your good self shall never be distributed to anyone except the University of KwaZulu-Natal for no other reasons but academic purposes

For any further enquiries feel free to contact the Executive Manager, Economic Development and Spatial Planning: Mrs. C D Vezi at [REDACTED] via email canesia.vezi@kokstad.gov.za

Yours Sincerely,

[REDACTED]
MR S R ZWANE

MUNICIPAL MANAGER

Date: 03/10/2023

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109 Main Street
Private Bag 53
Umtshakulu
3297



Umtshakulu Municipality
Tel: (033) 259 8000/2100
Fax: (033) 259 8427

OFFICE OF THE MUNICIPAL MANAGER

PRINCIPAL OF KWAZULU-NATAL
SCHOOL OF EDUCATION

29 September 2023

Mr. Bubele Nogcantsi

Dear Sir

**RE: REQUEST FOR CONDUCT RESEARCH STUDY AS PART OF A DOCTORAL DEGREE IN
HIGHER EDUCATION IN SCHOOL OF EDUCATION AT THE UNIVERSITY OF KWAZULU-
NATAL**

The above caption has reference.

The uMzimkhulu Municipality hereby grants permission that Mr. Bubele Nogcantsi (Student No. 213570732) conducts research study on the project entitled: "Understand the Stakeholders' Perspectives on Employability of TVET Civil Engineering Graduates"

Please note that this approval is granted based on conditions stipulated in your written request.

For further clarities regarding the above please do not hesitate to contact the writer on [REDACTED]

Yours Sincerely

[REDACTED]

Mr. C. A. Ngcobo
Municipal Manager

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HARRY GWALA DISTRICT MUNICIPALITY
"Together We Deliver and Grow"
OFFICE OF THE MUNICIPAL MANAGER
40 Main Street, Private Bag X501, IXOPO 3276
Tel: (039) 834 8707 Fax: (039) 834 1701

TO : MR. B. NOGCANTSI

**FROM : MUNICIPAL MANAGER
MR. G.M. SINEKE**

DATE : 10TH OCTOBER 2023

SUBJECT: REQUEST TO CONDUCT RESEARCH AT HARRY GWALA DISTRICT MUNICIPALITY.

The above matter bears reference

Your correspondence sent on the 21st September 2023 was received by my office, I have read your request letter, and upon careful consideration I do grant you permission to conduct research at Harry Gwala Municipality.

In hopes this will assist in the completion of your PHD.

Yours faithfully,

**MR.G. M. SINEKE
MUNICIPAL MANAGER
HARRY GWALA DISTRICT**

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UBUHLEBEZWE

Telephone: 039 – 834 7700
Fax: 039 834 1168
E-mail: mmm@ubuhlebezwe.gov.za
Website: www.ubuhlebezwe.gov.za



PO Box 132
29 Margaret Street, Ixopo
KwaZulu Natal, 3276
South Africa

MUNICIPALITY Office of the Municipal Manager

05 October 2023

To : Bubele Nogeantsi
From : The Municipal Manager

Dear Mr Nogeantsi,

**RE: PERMISSION TO CONDUCT RESEARCH IN THE UBUHLEBEZWE
MUNICIPAL AREA**

This letter serves to inform you that you have been granted permission to undertake research in "Understanding the Stakeholders' Perspective on Employability of TVET Civil Engineering Graduates" towards your Doctoral Degree in Higher Education at the University of KwaZulu Natal, Edgewood Campus.

All the necessary support will be given subject to ethical consideration and the law.

Yours faithfully,

ME Mkhize
Municipal Manager



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H&I Construction (Pty) Ltd

Our Ref: 328/ak/031/2023
02 October 23

via e-mail

Mr. Bubule Nogcantsi

Dear Sir

CONTRACT N.002-210-2020/1: CONSTRUCTION OF THE KOKSTAD INTERCHANGE AND TRAFFIC CONTROL CENTRE ON NATIONAL ROUTE 2 SECTION 21 – REQUEST FOR CONDUCT RESEARCH STUDY AS PART OF A DOCTORAL DEGREE IN HIGHER EDUCATION IN SCHOOL OF EDUCATION AT THE UNIVERSITY OF KWAZULU-NATAL

Dear Mr. Nogcantsi

The above caption has reference

In my capacity as Site Manager on the above mention project, H&I Construction hereby grants permission that Mr. Bubule Nogcantsi (Student No. 213570732) conducts research study on the project entitled: **"Understand the Stakeholders' Perspectives on Employability of TVET Civil Engineering Graduates"**

Please note that this approval is granted based on conditions stipulated in your written request.

Feel free to contact me should there be any queries.

Yours faithfully,
For H&I CONSTRUCTION (PTY) LTD

H Beyers
Construction Manager

CONTACT DETAILS

☎ +27 (0)21 926 1110
☎ +27 (0)861 444 768
✉ mail@hiconstruction.co.za
🌐 www.hiconstruction.co.za

BUSINESS DETAILS

BIDEE LEVEL 1
Company Reg: 2010/024402/07
VAT Reg: 4650259639

POSTAL ADDRESS

Private Bag X3
Durbanville, 7551
Hilcrest Estate
Tygerberg Valley Road

Registered in the Register of Companies of the Companies and Intellectual Property Commission (CIPC) as a company with no shareholders.

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Appendix C: Consent letters

SCHOOL OF EDUCATION

Informed Consent Form

Dear Participant

My name is Bubele Nogcantsi, Student ID: 213570732. I am a Doctoral candidate studying at the University of KwaZulu-Natal. My research study entitled *Stakeholders' Perspectives on Employability of TVET Civil Engineering Graduates* intends to review and analyse stakeholders' perspectives on the employability of TVET civil engineering graduates. As part of this study, I am conducting an interview and accordingly, I am writing to kindly request you to share your perspectives and observations on the subject matter.

Please note that:

- The information that you provide will be used for scholarly research only.
- Your participation is entirely voluntary. You have a choice to participate, not to participate or stop participating in the research. You will not be penalized for taking such an action.
- Your views in this interview will be presented anonymously. Neither your name nor identity will be disclosed in any form in the study.
- The interview will take about an hour.
- The record as well as other items associated with the interview will be held in a password-protected file accessible only to myself and my supervisor. After a period of 5 years, in line with the rules of the university, it will be appropriately disposed.
- If you agree to participate, please sign the declaration attached to this statement (a separate sheet will be provided for signatures).

I can be contacted at School of Education, University of KwaZulu-Natal, Edgewood

College Campus, Durban. [REDACTED]
[REDACTED]

My supervisor is Professor Damtew Teferra who is located at the School of Education, University of KwaZulu-Natal, Edgewood College Campus. Contact details: Email: teferra@ukzn.ac.za; Phone number: 031 260 8578.

The Humanities and Social Sciences Research Ethics Committee (HSSREC) contact details are as follows: Prem Mohun, University of KwaZulu-Natal, Research Office. Email: HSSREC@ukzn.ac.za; Phone number: 031 260 4557.

Thank you for your contribution to this research.

Yours faithfully

Bubele Nogcantsi

DECLARATION

I..... *(full names of participant)* hereby confirm that I understand the contents of this document and the nature of the research project, and I consent to participating in the research project.

I understand that I am at liberty to withdraw from the project at any time, should I so desire. I understand the intention of the research. I hereby agree to participate.

I consent / do not consent to have this interview recorded (if applicable)

SIGNATURE OF PARTICIPANT

DATE

.....

Appendix D: Interview questions

RESEARCH TITLE;

Stakeholder's Perspectives on Employability of TVET Civil Engineering Graduates.

RESEARCH MAIN QUESTIONS;

1. What are the perspectives of college stakeholders on the employability of TVET college civil engineering graduates?
2. How and why such perspectives manifesting/prevaling among the college stakeholders?
3. How can the college stakeholders effectively contribute towards enhancing the employability of TVET college civil engineering graduates?

INTERVIEW QUESTIONS DIVIDED INTO CATEGORIES FOR EACH STAKEHOLDER GROUP:

TVET College Senior Managers;

1. What do you think of the state of employability in South Africa? State of graduate employability? State of graduate employability of TVET college graduates especially civil engineers?
2. How do you perceive employability? What is your opinion on the importance of employability skills for TVET civil engineering graduates in South Africa?
3. What strategies or initiatives does your college currently have in place to enhance the employability of graduates in general, TVET civil engineers in particular?
4. How do you identify and prioritise the specific employability skills needed for civil engineering programs offered at the college?
5. What challenges do you encounter in preparing civil engineering graduates for the job market, and how do you address them?
6. How do you establish and maintain industry partnerships to facilitate workplace integrated learning and employability skills development of civil engineering?
7. Is there any tool that you use to keep the employment status of your TVET civil engineering graduates? Please explain.

TVET College Student Employers;

1. Tell me about your views in terms of TVET college graduates in civil engineering
2. What employability skills do you consider essential for TVET civil engineering graduates in your industry or sector?
3. How well do you think TVET colleges are currently meeting the skill requirements of the job market of their civil engineering graduates?
4. Are there any specific challenges you face in hiring TVET college civil engineering graduates? What do you think could be the course of these challenges?
5. What do you suggest could colleges need to do to address these challenges?
6. How do you view the level of industry-college collaboration in preparing civil engineering graduates for employment?
7. What potential improvements or changes would enhance the employability of TVET college civil engineering graduates in your industry?
8. In retrospect, is there anything you wish the college had done differently to better prepare for the TVET civil engineering graduates' employment?

Document Review The following documents will be reviewed to analyse and understand the perspectives of stakeholders' employability of TVET civil engineering graduates

1. Placement, and employment of TVET engineering graduate data policy in the college.
2. Recruitment policies from the employers.
3. Strategic plans for the college and employers on employability.
4. Recruitment data from the employers.
5. Advertisement on the job requirement from the employers.

These interview questions aim to gather valuable insights from each stakeholder group to better understand their perspectives, experiences, and suggestions on the employability of TVET college civil engineering graduates in South Africa.

Appendix E: Editor's letter

[REDACTED]
[REDACTED]

Mrs G C Hannant
[REDACTED]
CRAIGHALL PARK
2196

25 November 2025

TO WHOM IT MAY CONCERN

I certify that I have edited the PhD thesis:

**Stakeholder perspectives on the employability of TVET civil engineering
graduates in South Africa.**

by

Bubele Nogcantsi

However, the correction of all errors/missing information remains the responsibility of the author.

[REDACTED]

G. C. HANNANT (BA HED)

Appendix F: Turnitin certificate

Bubele Nogcantsi thesis 22.08.2025.docx

ORIGINALITY REPORT

23%	21%	6%	13%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	researchspace.ukzn.ac.za Internet Source	6%
2	Submitted to University of KwaZulu-Natal Student Paper	4%
3	trepo.tuni.fi Internet Source	1%
4	hdl.handle.net Internet Source	1%
5	media.neliti.com Internet Source	1%
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