

**Exploring the Challenges in the Curriculum Responsiveness of Articulation
Between Technical Vocational Education and Training National Diploma and
Universities**

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Declaration

I, **Lethiwe Nokwethemba Biyela**, Student No: **214580825**, declare that the study, “Exploring the challenges in the Curriculum Responsiveness of Articulation Between Technical Vocational Education and Training National Diploma and Universities” is my work and has never been submitted by anyone or me to any other university for any degree. The sources used in the study were paraphrased, quoted, and acknowledged using APA 7th referencing.



Lethiwe N Biyela

14/11/2025

Date

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Dedication

I dedicate my work to the son of the living God (JESUS CHRIST) for the strength and wisdom throughout my studies. Indeed, He said “I will never leave you nor forsake you” (Hebrews 13:5)

I dedicate my thesis to my supportive family and a special appreciation to my mother (MaNxumalo) for showing me love, support through it all and not forgetting your prayers and words of wisdom. I honor you ZWIDE. I sometimes may not be available emotional but your support pushed me to finish.

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I also dedicate it to my colleagues for an unwavering support, church and all the support structure I received in this journey, it is true that it takes a community to raise a child, I felt that in my study.

Referencing Style

I wish to orient the reader to the referencing style used in this dissertation. In this thesis, I have followed the American Psychological Association (APA) 7th edition style for referencing, which is a requirement of the University of KwaZulu-Natal. I have adhered to the Publication Manual of the American Psychological Association (7th ed.). (American Psychological Association, 2020).

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List of Abbreviations

ATSA – Accounting Technician South Africa
BQA - Botswana Qualifications Assurance
BTEP - Botswana Technical Education Programme
CAT - Credit Accumulation and Transfer
CDS – Curriculum Division Staff
CET - Community Education and Training
CHE – Council on Higher Education
DHET – Department of Higher Education and Training
HEI – Higher Education Institution
HEQC - Higher Education Quality Committee
HEQSF – Higher Education Qualification Sub-Framework
HSSREC – Humanities Social Science Ethics Council
MoA – Memorandum of Agreement
MoU – Memorandum of Understanding
NATED – National Accredited Technical Diploma
NC (V) – National Certificate Vocational
NQF – National Qualifications Framework
NSFAS – National Student Financial Aid Scheme
POPIA – Protection of Personal Information Act
PSET - Post-School Education and Training
QCs - Quality Councils
QTCO - Quality Council for Trades and Occupations
RPL - Recognition of Prior Learning
SAQA – South African Qualifications Act
SETA – Sector Education and Training Authority
TAFE - Technical and Further Education
TVET – Technical and Vocational Education and Training College
UAT - University Aptitude Test
VET - Vocational Education and Training
WIL - Work Integrated Learning

Abstract

Curriculum responsiveness is critical for supporting effective teaching, learning, and academic progression in a changing education and skills landscape. This study examines challenges affecting curriculum responsiveness in the articulation between Technical and Vocational Education and Training (TVET) colleges and universities. The primary objective was to analyse the curricular systems of TVET and universities to determine how articulation supports or constrains student progression between the two sectors. Using a qualitative research approach, data were collected through semi-structured questionnaires administered to lecturers, Curriculum Division staff, and TVET alumni at selected TVET colleges in Northern KwaZulu-Natal. Purposive and snowball sampling techniques were employed, and data were analysed thematically. The findings indicate that curriculum misalignment stems largely from inconsistent interpretations of the National Qualifications Framework (NQF) across the two sectors, resulting in curriculum gaps that undermine articulation principles. Limited collaboration between TVET colleges and universities further exacerbates these challenges due to divergent policies and practices. The study recommends strengthening policies within the Post-School Education and Training (PSET) system and ensuring their consistent implementation through improved inter-institutional cooperation and regular policy review.

Keywords: Articulation; Curriculum Misalignment; Curriculum Responsiveness; TVET; Universities.

Table of Contents

Declaration.....	ii
Acknowledgements.....	iii
Referencing Style	v
List of Abbreviations.....	vii
Abstract.....	viii
Table of Contents	ix
Chapter One.....	1
Introduction and Background	1
1.1 Background and Context of the Study	1
1.2 Introduction	3
1.3 Problem Statement	3
1.4 Purpose of the Study	4
1.5 Objectives of the Study	5
1.6 Critical Research Questions	5
1.7 Researcher Positionality	6
1.8 Concepts Clarification.....	6
1.9 Literature Consulted.....	7
1.10 Methodology	8
1.11 Limitations of the Study.....	9
1.12 Research Setting and Sampling	9
1.13 Ethical Considerations	10
1.14 Delimitations of the Study	10
1.15 Outline of the Dissertation.....	11
Chapter Two	12
Review of Literature	12
2.1 Introduction.....	12
2.2 Background Areas of Articulation in the Education Context.....	13
2.3 Curriculum Aspects in Higher Education	14
2.3.1 Unpacking Curriculum.....	14
2.3.2 Curriculum Alignment Between TVET and Universities.....	15
2.3.3 Curriculum Responsiveness and Curriculum Transition	16
2.3.4 Curriculum Design and Development	16
2.4 International TVET System	17
2.4.1 Australia.....	18
2.4.2 Switzerland	19
2.4.3 Ghana	24
2.4.4 Botswana.....	24
2.5 Policy Frameworks and Governance Structure.....	26
2.5.1 National Accredited Technical Education Diploma (NATED).....	27
2.5.2 Post-School Education and Training (PSET)	28
2.5.3 South African Qualifications Authority (SAQA)	30
2.5.4 Qualifications Council for Trades and Occupations (QCTO)	30
2.6 Existing Articulation Enablers and Arrangements	30

2.6.1 National Qualifications Framework (NQF)	31
2.6.2 Recognition of Prior Learning (RPL)	33
2.6.3 Credit Accumulation and Transfer (CAT)	35
2.7 Challenges Hindering Successful Articulation from TVET to HEIS	37
2.7.1 Curriculum Misalignment	38
2.7.2 Limited Collaboration Between TVET and Universities	39
2.7.3 Funding and Resources Challenges	40
2.7.4 Qualification Framework Incompatibility	41
2.8 Theoretical Framework	42
2.9 Conclusion	46
Chapter Three	48
Research Design and Methodology	48
3.1 Introduction	48
3.2 Research Design	49
3.2.1 Research Paradigm	49
3.2.2 Research Orientation: Qualitative Approach	51
3.2.3 Research Strategy: Case Study	53
3.2.4 Research Context	54
3.2.5 Sampling and Sampling Procedure	54
3.2.6 Sample/Participants (Sample Size, Number of Participants, Inclusion and Exclusion Criteria)	56
3.2.7 Recruitment Process of Participants	56
3.2.8 The Sample	57
3.2.9 Data Generation Tools	57
3.3 Trustworthiness	59
3.3.1 Credibility	59
3.3.2 Dependability	60
3.3.3 Confirmability	60
3.3.4 Transferability	60
3.3.5 Confidentiality vs Anonymity	61
3.4 Data Analysis	61
3.5 Ethical Considerations	64
Chapter Four	66
Findings and Discussion	66
4.1 Introduction	66
4.2 Background Information	66
4.3 Themes and Categories Responding to the Critical Questions of the Study	67
4.3.1 Theme 1: Key Challenges in Curriculum Responsiveness	68
4.3.2 Theme 2: Potential Benefits of a Well-aligned Pathway	79
4.3.3 Theme 3: Enhancing Curriculum Responsiveness for Quality Education	85
4.3.4 Theme 4: Why Current Articulation is Applied this Way	96
4.3.5 Theme 5: Actionable Recommendations	105
4.4 Conclusion	113
Chapter Five	114
Summary, Implications of the Study and Conclusions	114
5.1 Introduction	114

5.2 Summary of Research Study.....	114
5.2.1 Challenges in Curriculum Responsiveness.....	114
5.2.2 Potential Benefits of a Well-Aligned Pathway	116
5.2.3 Enhancing Curriculum Responsiveness for Quality Education.....	118
5.2.4 Why Current Articulation is Applied This Way	119
5.2.5 Actionable Recommendations	120
5.3 Implications of the Study	121
5.4 Suggestions for Further Research	126
5.5 Dissemination of the Research.....	126
5.6 Limitations of the Study.....	127
5.7 Conclusion	127
References.....	128
Appendices.....	145
Appendix A – Ethical Clearance.....	145
Appendix B – Participant’s Consent Form	146
Appendix C – Gatekeeper’s Consent Form	147
Appendix D - Gatekeeper’s Permission.....	149
Appendix E – Data Generation Tool-Semi-structured questionnaire	150
Appendix F - Data Analysis Sheet.....	154
Appendix G – Language Editor’s Letter.....	157
Appendix H – Turn-it-in Report	158

List of Figures

Figure 2.1 – VET System Structure.....	23
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List of Tables

Table 2.1 National Qualifications Framework	32
Table 3.1 The Study Sample	57
Table 4.1. Themes and Categories Responding to the Study Questions.....	67

Chapter One

Introduction and Background

1.1 Background and Context of the Study

In South Africa, the Post-School Education and Training (PSET) system encompasses all education beyond basic or secondary schooling. The Department of Higher Education and Training (DHET) has a government mandate to deliver an integrated PSET system for citizens, enabling them to improve their lives. The DHET describes PSET in the White Paper as an education system that includes an integrated PSET framework for citizens, enabling them to improve their lives. It states that PSET encompasses all education and training options for individuals who have finished school, those who did not complete school, and those who have never attended school. Those who have completed their schooling typically attend university or pursue TVET National Accredited Technical Education Diploma (NATED) programmes, ranging from N4 to N6. Individuals who did not finish secondary education but passed Grade 9 can progress to TVET National Certificate Vocational (NCV) and NATED programmes at Levels 2 to 4 and N1 to N3, respectively. Those who never attended school or dropped out before completing Grade 9 attend CET colleges. All these routes depend on meeting specific admission requirements, and there is no automatic entry.

The system enables learners to transition between PSET education and training entities without forfeiting credits or repeating content previously completed elsewhere. Accordingly, the DHET has developed strategic documents and policies to support this goal. These include the White Paper for PSET, which outlines DHET's vision for PSET,

and the National Plan for PSET, which provides a framework to align and coordinate efforts to implement the PSET White Paper and its related initiatives and policy goals.

The aim of Technical and Vocational Education and Training (TVET) is to develop students' knowledge, skills, and competence to enhance productivity and improve their quality of life. Practical experience combined with theoretical knowledge enhances students' performance in the workplace. The main goal of TVET colleges is to provide knowledge and skills and to improve employment opportunities (Ezekiel, 2015). Supporting this, Denhere and Moloi (2021) describe a TVET institution as a non-academic body that offers technical education and practical training to develop apprentices' skills and knowledge.

The study highlights the slow responsiveness of the curriculum concerning the articulation between TVET and universities for career development. Therefore, it is the responsibility of Higher Education to develop a curriculum that clearly defines planning and implementation, and that represents the objectives to be achieved within a specific programme (Elmarie & Eli, 2019). Conversely, Ezekiel (2015) indicates that the TVET curriculum is redundant, as it offers outdated programmes and attracts a large number of students to development and skills training. The curriculum is a critical issue that has received little effort to improve. On the other hand, Mohammad and Laurie (2015) emphasise that the curriculum is the foundation of the teaching-learning process.

Some students from TVET colleges often struggle to find employment in their field of study. Moreover, pursuing further studies at universities presents numerous challenges, as many programmes require TVET graduates to start afresh, meaning their previous experience in TVET colleges is not recognised. Msibi (2021) emphasises that

the articulation of college programmes between schools, colleges, and universities' curricula must be based on shared values to help students continue their studies. However, in the South African context, the relationship between TVETs and universities remains unresolved.

1.2 Introduction

The primary goal of this study is to explore the challenges in curriculum responsiveness between Technical and Vocational Education and Training (TVET) National Diploma programmes and universities. This chapter provides an overview of the study. It includes the study's background, problem statement, research question, research objectives, significance, brief methodology, study limitations, and delimitations. The chapter concludes with an outline of the organisation of the subsequent chapters of the thesis.

1.3 Problem Statement

According to the draft Articulation Policy (2020), institutions recognise articulation occurs when students' previous studies across educational pathways, and study outcomes are granted appropriate credit for further studies. CHE (2020) reports that poor articulation between qualifications, as well as programmes that extend beyond the sub-qualification framework, results in dead ends for TVET college students.

A seamless articulation program should include horizontal, vertical, and diagonal sequences to ensure a promising future in education (CHE, 2013). Therefore, DHET (2012) suggests that curriculum articulation between TVET and Universities is vital for those who have initially chosen a vocational route and wish to further their studies at the

university level. The collaboration between TVET curriculum and universities advances development, especially for marginalised youth and adults (Motala & Vally, 2014).

TVET graduates face increasing challenges. When students graduate, they are eager to share their skills and knowledge with the world and look forward to joining the labour market. However, a mismatch between labour market demands and educational qualifications can make finding employment difficult (HSRC, 2023). Consequently, many graduates find that upskilling and further development are crucial to enhancing their employment prospects and career growth (OECD, 2015). TVET college graduates face a dual challenge: unemployment and the need for ongoing upskilling. While graduates with national diplomas from universities can easily register and pursue postgraduate studies to enhance their employability, those with National Diplomas from the TVET sector may face delays in accessing further education due to issues with curriculum articulation between TVET and university curricula. There are emerging studies examining the challenges of curriculum responsiveness in articulating between Vocational Education and Training, National Diplomas and universities. Some authors who have addressed this previously include Blom (2016), Elmarie and Eli (2019), Fomonyan and Teferra (2017), Mantashe (2024), and Nkonki (2017). However, challenges persist regarding curriculum responsiveness, as some courses are difficult to pursue at universities using the TVET national diploma.

1.4 Purpose of the Study

The study explores the challenges in curriculum responsiveness between Technical and Vocational Education and Training (TVET) National Diploma programmes and universities within the Department of Higher Education and Training

(DHET) to improve curriculum articulation. The study addresses current issues in the TVET sector curriculum that prevent students from attaining academic success. The concerns include the curricular system between TVET and universities, with a focus on articulation to support academic progression.

Furthermore, this study aims to contribute to DHET policies that address issues of curriculum responsiveness and articulation within the TVET system. It also seeks to understand how the curriculum responds to development and reform. TVET graduates can receive guidance on advancing their education and career.

1.5 Objectives of the Study

1. To identify and analyse the primary challenges in the curriculum responsiveness in the articulation between TVET National Diploma programmes and universities.
2. To assess the potential benefits and implications of a continuous TVET-to-university pathway for the education system and the labour market.
3. To examine the factors influencing how TVET National Diploma programmes and universities implement curriculum responsiveness in articulation.
4. To propose strategies for enhancing curriculum responsiveness in the articulation between TVET National Diploma programmes and universities to support quality education.

1.6 Critical Research Questions

1. What are the primary challenges in ensuring curriculum responsiveness between TVET National Diploma programmes and universities?

2. What are the potential advantages of a well-aligned TVET-to-university pathway for the broader education system and the labour market?
3. Why is the way the curriculum responds through articulation between TVET and universities applied as it is?
4. How can the articulation of curriculum responsiveness be improved to attain quality education?

1.7 Researcher Positionality

Having worked as a TVET lecturer at a TVET college for over 13 years, I observed challenges in articulation and curriculum responsiveness between TVET National Diplomas and universities. Studying and working as a lecturer in the TVET sector has also provided me with valuable insights into articulation and the issues related to curriculum responsiveness. Students face challenges in pursuing further studies with the national diploma from TVET. My engagement with the TVET National Diploma curriculum and its development has highlighted the difficulties TVET students face due to articulation issues. Although policies exist addressing articulation and the NQF framework, universities do not typically consider TVET students for vertical articulation, which discourages and demotivates them from advancing their studies.

1.8 Concepts Clarification

CHE (2023) discusses articulation as a process that links different qualifications, providing students with greater opportunities to progress vertically, horizontally, and diagonally within the education system, while also offering clear pathways into the workforce. Meanwhile, Blom (2016) mentions that it refers to the process of connecting

two or more educational institutions or programmes so that students can move between them smoothly. Nkonki (2017) adds that articulation relates to mechanisms that facilitate student mobility within and among institutions. Therefore, this study employs the articulation concepts discussed by the Council of Higher Education (CHE), which describe the process of student progression from one level to another.

National diploma

A national diploma is occupation-focused and based on applying skills within the framework of the occupation programme (Block, 2024). Parker (2017) notes that the National Diploma curriculum prepares practitioners to work in early childhood settings. This qualification primarily aims to provide students with the technical, theoretical, practical, and workplace knowledge and skills required in their chosen occupational field (DHET, undated).

University

A university is a source of universal knowledge and highly skilled human power for the profession (Alemu, 2018). Lalu (2019) defines a university as the most important institution that preserves the best of what we have learned for greater achievement. Therefore, in this study, the university has been identified as a higher learning institution that fosters intellectual development and promotes the sharing of knowledge to introduce new skills.

1.9 Literature Consulted

The study utilises the Epistemic Injustice Theory to analyse the data, as it examines setbacks and unfairness in students' progression to higher academic levels (for more details, see Chapter 2). The founder of the theory, Miranda Fricker, argues that injustice

occurs when others mistreat them because they lack privilege. Muzanenhano and Chowdhury (2023) discuss epistemic injustice as a theory that highlights unfairness between students from TVET national Diploma institutions and universities in terms of knowledge, understanding, and participation. This study actively addresses challenges in curriculum responsiveness—specifically articulation—by linking them to the theory, as these challenges create unfavourable barriers and setbacks for TVET students seeking to further their studies in universities.

Furthermore, the themes and sub-themes used to discuss challenges in the curriculum's responsiveness to articulation (refer to Chapter Four), along with participants' responses, provide a more detailed examination of the study's impact on TVET students and its influence on their progress. The literature reviewed related to the study was based on *Challenges of Curriculum Responsiveness in South African Higher Education* by Ogude et al. (2014); *Leading Curriculum Change in South African Technical and Vocational Education and Training Colleges* by Terblanche (2017); and *An Exploration of Articulation from TVET Colleges to Universities and the World of Work* by Needham (2018).

1.10 Methodology

This study is designed as a qualitative investigation, employing an explanatory case study methodology within the interpretivist paradigm. The interview method provides an in-depth narrative and clarification of the intervention's impact within its contemporary real-world context. A qualitative study can be textual or visual. Priya (2020) defines an explanatory case study as one that addresses questions such as

‘what’ and ‘why’ about a phenomenon and explains why specific sequences of events occur or do not occur. Therefore, this study focuses on the relationship between the TVET National Diploma and universities, exploring the challenges of curriculum responsiveness.

A case study methodology offers a framework for assessing and exploring complex subjects (Heale & Twycross, 2018). Assessing and exploring complex subjects may involve experiments, action research, surveys, naturalistic research, participatory research, and historical research, thereby developing new theories and reinforcing existing research (Krusenvik, 2016). Case study research utilises multiple methods for data collection and analysis. In other words, it functions similarly to many other research types and case studies, aiming to understand a specific issue over time through various sources of information. An explanatory case study and a thematic analysis are employed.

1.11 Limitations of the Study

Time was a limiting factor as interviews require more time, and I am working both full-time and part-time. The participants also have limited time due to their various commitments.

1.12 Research Setting and Sampling

I used purposive sampling to focus on specific characteristics of the population of interest, and snowball sampling to address potential challenges to participant access arising from the POPIA Act.

1.13 Ethical Considerations

In accordance with UKZN's ethical standards, I applied for ethical approval through the Humanities and Social Sciences Research Ethics Committee (HSSREC). I contacted the relevant gatekeepers to obtain participants' consent and reassured them that their anonymity would be maintained when reporting the study's results. Following ethical guidelines is essential for safeguarding participants' privacy. Ethical research practices also enhance the validity of the study by ensuring that data is collected ethically and responsibly. Moreover, ethical considerations are vital in establishing trustworthiness. Demonstrating ethical conduct fosters trust with participants and the broader research community.

1.14 Delimitations of the Study

Delimitations serve as significant boundaries for a study, within which findings may lack generalisability (Miles, 2019). Theofanidis and Fountouki (2018) concur that researchers set up boundaries or limits to control their work, ensuring that their study's aims and goals do not lead to impossibilities. Therefore, I propose a clear plan, based on the study's methodology, participants, and/or phenomenon, to narrow the study's specific focus.

This study emphasises the importance of curriculum responsiveness in the connection between Technical and Vocational Education and Training (TVET) National Diploma and universities. It does not aim to develop a new curriculum but instead provides solutions to the challenges the DHET faces in articulating between the two curricula. The research is geographically limited to the province of KwaZulu-Natal, specifically the Northern Natal TVET colleges.

1.15 Outline of the Dissertation

The first chapter offers an overview of the study's background. It explores challenges in curriculum responsiveness, particularly regarding the link between Technical and Vocational Education and Training, National Diplomas, and universities; describes the study's motivation and significance; and clarifies the terms and ethical considerations.

The second chapter reviews the literature on curricular responsiveness and the alignment between TVET and universities. It also examines the factors affecting articulation in higher education, including how other countries have developed their TVET systems and articulation curricula.

The third chapter details the research design and methodology, provides a comprehensive description of the research approach, research paradigm, and recruitment process. The chapter also delineates the procedures I use to analyse the data.

The fourth chapter presents and discusses the study's findings. I present the findings in detail, along with a discussion of the challenges of curriculum responsiveness between TVET and universities. I also outline the study's findings and discuss how these challenges may impact articulation.

The fifth chapter provides a summary of the study, its conclusion, and suggestions for further research to improve the TVET curriculum. It also explores how to enhance articulation to help TVET students' progress to university studies. The recommendations will help higher education institutions align their curricula for TVET and universities, facilitating more seamless articulation.

Chapter Two

Review of Literature

2.1 Introduction

The previous chapter provided an overview and orientation to the study. In this chapter, I present a synthesised critical review of the literature on studies investigating the challenges in curriculum responsiveness concerning the articulation between Technical and Vocational Education and Training (TVET) national diplomas and universities. I discuss the topics thematically, beginning with an introduction to the chapter's content. Next, I outline key background areas of articulation within the educational context, followed by an examination of curriculum aspects in higher education. The overview highlights four subthemes: defining curriculum, curriculum alignment between TVET and universities, curriculum responsiveness and transition, and curriculum design and development. I also review international and local literature, analysing their TVET structures to compare whether the application and principles behind each country's approaches aim to enhance economic development.

Additionally, I examine the quality and skills development in terms of TVET curriculum responsiveness to improve the economy and provide pathways for students to progress to university. Towards the end of the chapter, I discuss issues such as the misalignment of access between TVET and higher education institutions, non-compliance with policies, and structural blockages within the TVET sector, and conclude by summarising the key points to be addressed in the next chapter.

2.2 Background Areas of Articulation in the Education Context

UNESCO (1999) defines articulation in the curriculum as a broad framework that provides pathways for advancement. Educational articulation between levels is crucial for implementing policies and curriculum mapping as advanced tools to improve and enhance higher education institutions. The articulation process involves specific administrative steps for educational institutions (Fernando et al., 2022). Articulation, as a term, helps clarify the relationship between educational levels, stages, programmes, or qualification types (Scott, 2013). Vertical, horizontal, and diagonal articulation mainly refer to educational continuity across sequential levels or stages.

A recommended approach to articulation within DHET institutions should be both systematic and specific. Systematic articulation focuses more on legislation, national policy, and formal requirements, whereas specific articulation pertains more to the education and training subsystems between two or more institutions. According to the Articulation Policy (2014), it can be a formal or informal agreement. Blom (2023) describes articulation as facilitating learners' mobility along learning and career pathways. Therefore, curriculum articulation promotes implementation and reform that support students in advancing their career paths.

Universities and TVET share a common goal of facilitating upskilling and providing knowledge to prepare for future goals. However, Makura (2017) argues that universities and TVET lack cooperation on articulation due to unclear policies. Most developed countries have applauded TVET for its role in improving the economy and developing young people's skills and knowledge. South Africa established Technical and Vocational Education and Training (TVET) in 1999 (UNESCO, 1999). Vocational

education prepares young people for work (Taylor & Bijl, 2018). TVET comprises three educational concepts: National Certificate Vocational (NCV), National Accredited Technical Education Diploma (NATED), and vocational studies. NCV was established in 2007 to address the priority skills gap, which was inadequate for students who had completed Grade Nine (SAQA, 2017), and to phase out NATED. NATED programmes are theory-based mainly, with a minimum period of 18 months required to qualify for a national diploma (QTCO, 2020). Accreditation formally recognises a qualification (Badat, 2011). Therefore, from the background and policies in place, it is apparent that there is no clear policy which safeguards the formal recognition for the transition from TVETs to universities

2.3 Curriculum Aspects in Higher Education

This section commences with the unpacking of the curriculum as a concept, followed by a critical discussion of the alignment between TVET and universities' curricula. The discussion also encompasses curriculum responsiveness, curriculum transition, and curriculum design and development.

2.3.1 Unpacking Curriculum

Curriculum refers to the content and standards that must be covered and taught in order to progress from one grade level to another. A curriculum represents the intentions of education (Ashari et al., 2023). In a curriculum, beliefs, values, attitudes, skills, and knowledge are integral to the educational context. Mulenga (2018) defines curriculum as a set of performance objectives or student learning outcomes, emphasising its practical orientation, as it outlines the objectives that students must achieve. Curriculum may also refer to categorising the learning needs and determining

the training the students must receive (Kirior, 2017). Therefore, the above explains that the curriculum in TVET colleges must offer guidance on how to progress from one level to another. The curriculum must embody the culture and values of the next level in articulation, in a way that when a student completes a qualification from TVET and is willing to pursue further studies in universities, they should not encounter difficulties in the same faculty or course, promoting smooth transferability in articulation between universities and TVET in higher institutions.

2.3.2 Curriculum Alignment Between TVET and Universities

Mendy and Madiope (2020) note that curriculum alignment enhances educational quality and standards, both nationally and internationally, while also identifying challenges and gaps in the educational landscape. Yang (2022) suggests that curriculum alignment involves a beneficial coherence among teaching, learning, and assessment, facilitating a clear understanding of learning objectives. It serves as a means of measuring what pedagogical materials demand of students. Essentially, curriculum alignment ensures that the content and skills are sufficient to achieve objectives across different educational programs (Albashirya et al., 2015). Its purpose is to harmonise core content and competencies acquired by students across various educational levels, such as Technical and Vocational Education and Training (TVET) and universities, thereby promoting transferable skills and knowledge. Meeting curricular expectations and the overall directive to maintain and enhance the quality and relevance of TVET programmes rely on alignment (Albashirya et al., 2015).

2.3.3 Curriculum Responsiveness and Curriculum Transition

Curriculum responsiveness has become a central focus of policy, as South Africa strives to meet its economic needs within a global context. Moll (2004) defines curriculum responsiveness as the process by which teaching and learning can meet changing needs within a higher education institution. A restructured curriculum may respond significantly to market needs.

The restructured curriculum changes the way things are done (Ogude et al., 2014), whereas Fomonyan and Teferra (2017) emphasise that a developed curriculum brings significant change within the context of employability and students' social needs. The responsiveness of TVET NATED's curriculum to students' needs can be a highlight of economic progress in South African education. Maphosa et al. (2014) agree that changes in the curriculum influence students' performance and shape their expectations for the next level.

Terblanche and Bitzer (2019) state that introducing effective leaders drives the development of curriculum changes in the TVET sector. Marie and Eli (2019) suggest that a change in curriculum promotes diversification in access, curriculum, and qualification structures. Curriculum change explores the significant role of education while meeting labour market demand. Oksiutycz and Azionya (2017) support the notion that curriculum change aims to connect students' knowledge development to real-world economic crises and contexts.

2.3.4 Curriculum Design and Development

Curriculum design refers to the various components that address different philosophies in supporting teaching and learning (Mohanasundaram, 2018). The

primary objective of the curriculum is to advance a student to a higher level within an organised knowledge structure (Terblanche, 2017). Additionally, a significant consideration in designing the TVET curriculum is the extent to which it aligns with stakeholders' needs (Albashirya et al., 2015). The core of developing a relational curriculum lies in thorough collaboration and discussions between the design team and program stakeholders throughout the design phase. The curriculum must be designed to improve the academic performance of specific individuals and close the gap between the TVET curriculum and NATED, as well as university curricula, to avoid wasteful expenditure where students are funded twice by NSFAS in the same program. According to Msibi (2021), the viewing, interpretation, and implementation of curricula within the same field in different ways are thus quite prevalent among academics at higher education institutions. TVET institutions and universities collaboratively design curricula guided by the common language established in the National Qualifications Framework (NQF) for National Diplomas. The focus should be on what students will do rather than on what lecturers do (Zhu et al., 2021).

2.4 International TVET System

Worldwide, countries use the TVET system to improve their economies. Most countries have developed policies on how this system should operate, and programs differ from those in the higher education system. Generally, vocational training focuses on the short-term improvement of specific skills and competencies. The emphasis in articulation is essentially on industrialised countries (UNESCO, 1999).

2.4.1 Australia

In Australia, policymakers and educators refer to technical and vocational education as Vocational Education and Training (VET). It covers preparation and ongoing training, as well as operations, under the Technical and Further Education (TAFE) colleges. This program supports Australian youth by equipping them with relevant skills and boosting the economy. However, it has recently been affected by acute issues that paint the VET system as unprogressive, including redundant programs, insufficient funding, low completion rates, and a lack of industry interest in training (Rouch, 2023). In Australia, the distinction between vocational and tertiary education is increasingly blurring, as numerous vocational training institutions now offer specialised Bachelor's degrees in fields not sufficiently covered by universities (Olumide, 2015). In this country, the theoretical content covered in the curriculum is defined by industry, rather than by the government or training providers, as is the case in other countries (Olumide, 2015). Therefore, this indicates that the articulation between TVET and universities is blurred. The Australian government initiates VET policies to improve the quality and standards of education, making the VET system more relevant to industry, enhancing competitiveness with other countries, and improving the quality of life for everyone. Initially, apprenticeships were limited to specific trades such as manufacturing, construction, printing, and hairdressing. However, there is now a push to expand formal training opportunities across diverse industries, including agriculture, horticulture, manufacturing, utilities, transport, and storage.

2.4.2 Switzerland

Globally, skills programmes have taken a new direction and shape, gaining recognition as key drivers of economic growth. Switzerland is internationally acclaimed for its robust skills development and the effectiveness of its high-performance skills programme. A system called 'Swiss dual VET' is in place. The Vocational Education and Training (VET) is a broad concept understood differently across countries and by leading international organisations in European nations. It requires integrating evidence-based insights and bridging the gap between knowledge gained through practical community involvement and knowledge generated via focused research efforts (Hoffman & Schwartz, 2015). This approach aims to build, serve, and contribute to the economy, characterised by a high degree of vocational specificity (Gronning, 2021). The Swiss dual system combines formal education in schools with on-the-job training. The training process is managed by students rather than lecturers, promoting apprenticeships that span three learning sites: the workplace, intercompany courses, and school. Students typically rotate across these sites over a two to four-year period to obtain a VET federal diploma (Hoffman & Schwartz, 2015).

Apprenticeship is a method by which an individual earns while learning to acquire valuable skills and knowledge in a specific role. Helper et al. (2016) define apprenticeship as a means of providing workers with specific occupational skills and a solid foundation of applied knowledge. The primary feature of the VET system is the 'earn and learn' model, which encourages individuals to receive education while working. Ertelt et al. (2021) also note that apprenticeship is considered the source of an occupational career, involving a lifelong development process. Apprenticeship deepens

the practical knowledge gained through workplace institutions that impart basic and specialised vocational education. Apprenticeship offers numerous benefits for enhancing the country's economy, with an estimated 70 per cent of young students opting for TVET programmes rather than universities (Hoffman & Schwartz, 2015). These benefits include opportunities for companies to build their workforce, the chance for young professionals to start their careers with practical skills, and costs covered by companies under the 'earn while learning' principle. A successful educational pathway with a clear career route allows students to pursue further studies in higher education. Apprentices bring significant effort, knowledgeable insights, and inspiration to participating companies, which can lead to new, innovative ideas (Hunziker, 2016). However, it also has some disadvantages, such as job security concerns—while it provides valuable training, there is no guarantee of employment upon completion; limited career options since it focuses solely on a specific trade or skill, which restricts career versatility, especially if the trade becomes obsolete or if the apprentice seeks a career change; and limited availability of apprenticeship opportunities in specific industries or regions, making it challenging for interested individuals, particularly those in rural areas or industries with few positions, to find suitable opportunities.

However, apprenticeships in the Swiss dual system have been proven highly successful in easing young people's transition into work and reducing youth unemployment (Markowitsch et al., 2019). Apprentices' learning is highly personalised, their interests and talents are at the core of their training and options to change the course are encouraged and open. Employer associations, together with the Federal government, ensure that there are enough courses each year to match students'

apprenticeship contracts. After completing their apprenticeship, students receive the national qualification and either enter full-time employment or pursue their studies with a VET diploma, leading to an academic diploma (Hoffman & Schwartz, 2015).

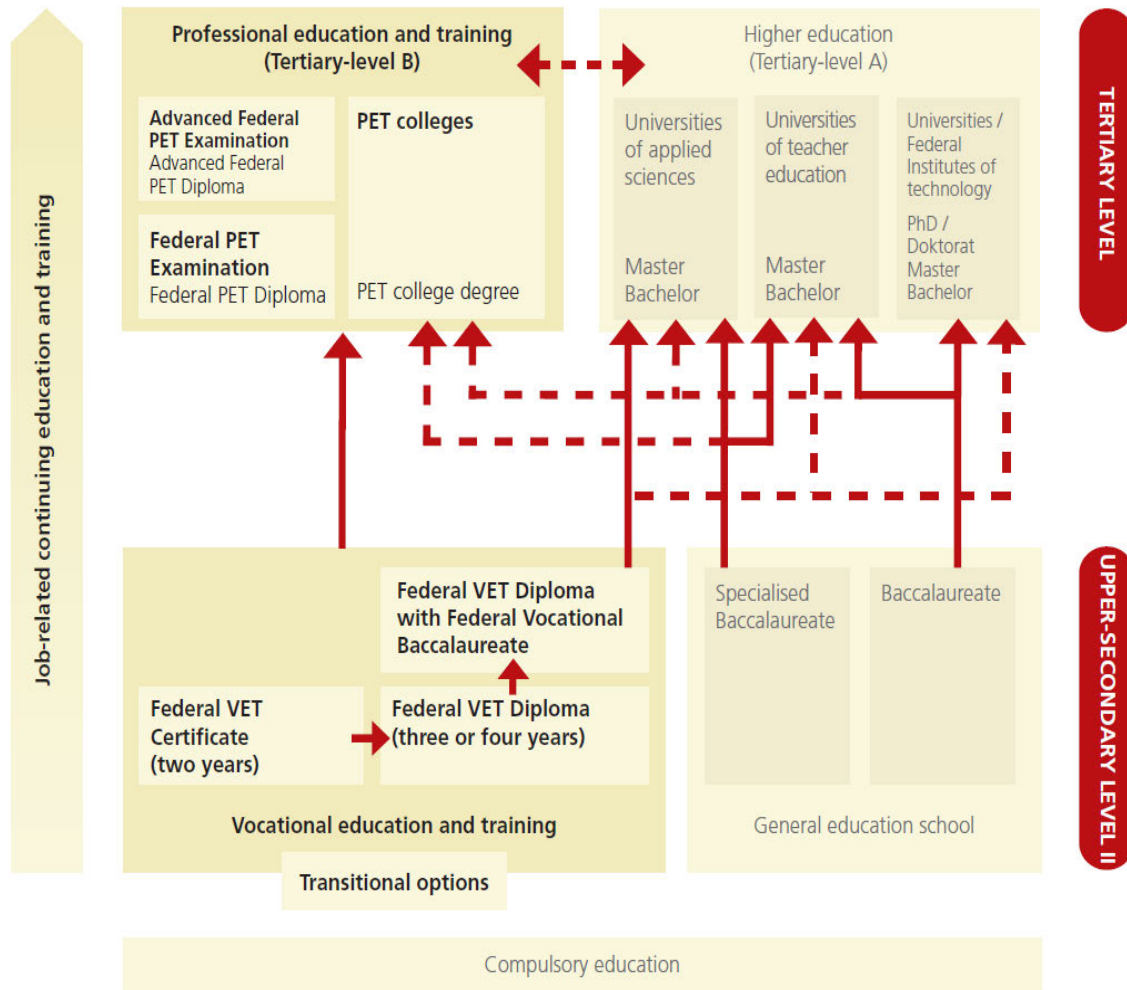
There are approaches in the Swiss dual system of VET qualifications in which one perspective views apprenticeship as a specialised program designed to prepare individuals for skilled employment, with the program essentially the sole avenue for attaining the qualification it offers. In contrast, another perspective views apprenticeship as a learning method that integrates hands-on experience with classroom instruction, making it adaptable across educational programs and levels (Markowitsch et al., 2019). VET qualification can only be achieved through traditional school settings, by apprenticeships or by accreditation of prior learning and skills examination, in addition Hoffman and Schwartz (2015) point out that that the Swiss system intentionally provides numerous crosswalks and transfer points to enable students to transition smoothly between academic and vocational studies, facilitating a seamless progression from VET to higher education at a university of applied sciences. This aspect serves to inspire students to continue their educational journey and attain higher qualifications.

According to Bonoli and Gonon (2022) and Markus (2022), the VET Swiss dual system was established in 1880, marking the emergence and development of educational aims aligned with VET. Then, in 1930, the federal government enacted the first law establishing the VET system and recognising it nationwide. Under this act, adults with work experience who complete a specific task in a field are eligible to take the final VET examination, thereby exempting them from the requirement to register as apprentices and attend preparatory classes at vocational schools. The country's

qualified and recognised associations played a key role in shaping the VET law (Egg et al., 2015). Following significant improvements to the Swiss VET system in 1963, the Act was amended to accommodate the growing number of apprentices and changes in technology, production, and sector composition (Egg et al., 2015). Moreover, the system improved year by year, and the purpose of the VET system came to be recognised as fostering economic growth and ensuring the employability of young people (Bonoli & Gonon, 2022).

The Swiss VET dual system has three recognised and accepted routes for degrees. Two-year Vocational Education and Training (VET) programs are available for attaining the Federal VET Certificate (Level 1). These concise programs cater to basic occupations, allowing apprentices to progress to higher levels by continuing their apprenticeship. For the Federal VET Diploma (Level 2), apprentices undergo three to four years of training in specialised and intricate occupations. Upon completion, they receive the Federal VET Diploma, qualifying them for entry into the Federal Vocational Baccalaureate. The Federal Vocational Baccalaureate (Level 3) offers courses in general subjects. It equips apprentices with the credentials to pursue further education at a university of applied sciences or to undertake a University Aptitude Test (UAT) for broader academic opportunities (Egg et al., 2015; Hoffman & Schwartz, 2015).

Figure 2.1

VET System Structure

2.4.3 Ghana

The Ghanaian government acknowledges the importance of strengthening Technical and Vocational Education and Training (TVET) as a vital means of cultivating the urgently needed technical and skilled workforce in the country. Ghana sees the cultivation of a technical and skilled workforce as a key strategy for achieving rapid economic and industrial growth, aligning with the goals outlined in the Ghana Vision 2020 plan (UNESCO, 1999). In this regard, Ghana has implemented policies to mainstream the education system (Ezekiel, 2015). The evolution of Polytechnic Education into Tertiary TVET has played a crucial role in human resource development, contributing to the creation of a skilled workforce, enhancing industrial productivity, and improving overall quality of life, as emphasised in the Ghana report (Adutwum, 2021).

Furthermore, Ghana has adopted Recognition of Prior Learning (RPL) as part of its approach. RPL provides individuals with the opportunity to attain qualifications, earn credits towards a qualification, or receive exemptions (either from specific parts of the curriculum or from academic prerequisites for formal study programs) without the need for formal education or training programs. Adutwum (2021) outlines this approach in a report that emphasises Ghana's commitment to fostering a more inclusive and flexible education and training system (Adutwum, 2021).

2.4.4 Botswana

The support of the TVET system has significantly impacted Botswana's economic growth. The Botswana Qualifications Authority (BQA) encourages TVET institutions to operate thoroughly. The Botswana Qualifications Authority (BQA) promotes the functioning of TVET institutions within a robust financial, material,

physical, and human resource framework that fosters quality assurance (Chanaiwa, 2018). Vocational programme development in Botswana depends on private-sector employers to meet labour market demands and provide skills and training in programmes such as engineering, building construction, and other essential fields. The TVET system offers training opportunities through a combination of theory, practical exercises, and on-the-job training, as well as the Botswana Technical Education Programme (BTEP), which promotes work-based learning through collaboration with employers and industry stakeholders. Both programmes range from level three to six, with levels three to five corresponding to different certificate levels, while level six represents a diploma level, according to Koobonye (2020). The Botswana TVET system has declined due to a lack of positive engagement from young people in secondary education, resulting from a mismatch between the skills offered and labour market needs.

There is a low secondary-to-tertiary transition rate due to how TVET is perceived in society, which weakens the intense focus on the university pathway. Nkosana et al. (2020) argue that vocational programmes have been in decline because more individuals with vocational education skills tend to drop out due to a lack of practical applications in industry, compared to individuals with degrees from registered universities. As a result, the number of vocational education graduates who have completed their training yet remain unemployed is increasing, while a growing debate about the future of the vocational education system is emerging (Nkosana et al., 2020).

2.5 Policy Frameworks and Governance Structure

The South African government developed a policy framework for education and training to provide the core values and vision for establishing the new education and training system. Government policy is introduced in various ways to articulate curriculum matters through documentation, departmental circulars, policy papers, ministerial committees, and green and white papers. According to Brand (2021), some policies may narrow the range of creative responses more than others. Therefore, society should benefit from state policymakers' decisions on matters at hand. Nkonki and Makura (2017) suggest that whenever institutional policies are revised and aligned, they should promote articulation.

The National Qualifications Framework Amendment Act 67 of 2008 has the responsibility to register, establish, declare, or merge an accredited educational institution or skills development provider in terms of this Act or any other applicable law. In terms of section 29(1) (b) of the Constitution of the Republic of South Africa, 1996 (Act No. 108 of 1996), education must be accessible and available to make progress through reasonable measures without suppressing the rights of the individual. The South African Qualifications Authority (SAQA) and the Quality Councils' (QCs) primary purpose in achieving the NQF objectives is to ensure that South African qualifications meet appropriate criteria, determined by the Minister as contemplated in section 8 [of the NQF Act], and are internationally comparable (Articulation Policy, 2014).

Current TVET policies, as outlined in the NQF, have shown limited participation in the economy and a limited ability to determine youth career and learning pathways (Nkonki & Makura, 2017). Sebola (2022) argues that NATED programs are unlikely to

articulate to University programs because of their promotional marks to the next level or graduation, as the NATED program's pass percentage is 40%, while the university's is 50%. This means the TVET policy development system needs to introduce new policy directions and approaches to reverse the delayed progress.

2.5.1 National Accredited Technical Education Diploma (NATED)

The National Accredited Technical Education Diploma (NATED) was introduced in 1996 in South Africa and offers a range of programmes in the TVET sector, accredited by the Quality Council for Trades and Occupations (QCTO). The primary purpose of this curriculum is to equip students with the skills, knowledge, and practical experience necessary for better opportunities, whether in further studies or employment. According to the SAQA NATED system, students can achieve their qualification step by step by completing courses corresponding to levels N4, N5, and N6 in a specific field, either individually with intervals between them or in a continuous study period of one year or 18 months. Afterwards, they can then apply the knowledge and skills acquired in the workplace for an extended period. A practical part begins after 18 months of theoretical knowledge, during which a student must complete in-service training to receive a vocational diploma. Partnerships between vocational education institutions and businesses create hands-on learning experiences, such as internships and apprenticeships (Dang & Nguyen, 2023). Industry relationships with TVET actively participate in quality assurance procedures, including the development of occupational standards, student assessment, and programme accreditation.

In the National Qualifications Framework (NQF), the vocational diploma is in category 6, with 360 credits. The NATED programmes are available on a tri-semester or

semester basis, comprising four subjects with a pass mark of 40% per subject (Sebola, 2022).

2.5.2 Post-School Education and Training (PSET)

Educational and instructional establishments, such as universities, private colleges, technical and vocational education and training (TVET) institutions, community education facilities, and private skill development providers, are officially declared and registered by law and assigned to the Minister of Higher Education and Training. DHET (2013) supports the view that the PSET system encompasses all education and training provision for individuals who have completed school, those who did not finish their schooling, and those who never attended school, thereby promoting skills development priorities in higher education institutions. The PSET system offers support to school leavers with a certificate under the programme of community education and training (CET) college, previously known as Public Adult Learning Centres, enabling them to study near their homes, take vocational, skills, or community education modules that empower them to start their own businesses, serve their communities, and improve their lives. CET provides them with the knowledge and skills necessary for adults, those with lower levels of education, and unemployed youth to enhance job opportunities (DHET, 2023). Moreover, CET faces challenges in fully functioning because of an excessive focus on broad educational initiatives rather than skill-based programmes, insufficient alignment with the demands of the job market and local communities, predominantly employing part-time and under-skilled personnel, lacking specific facilities, scarce educational resources, and inadequate financial support (DHET, 2023).

In a PSET system, the TVET sector programme (both private and public) has recently become the cornerstone, offering more opportunities in vocational education. It aims to provide technical and vocational knowledge, skills, and characteristics vital for national social and economic development, with a large number of registrations each year. The TVET sector prepares students for the world of work – that is, for employment, business opportunities, and sustainable livelihoods. Some challenges facing this programme include the availability of industries to provide training, misalignment between programmes, inexperienced staff, and articulation opportunities for students (DHET, 2023).

Moreover, the PSET system accommodates higher education institutions, including universities of all types — both private and public — as well as traditional, comprehensive, and technology universities. In a PSET system, universities collaborate with all institutions within the system, both individually and in partnership, to expand equitable access, enhance the quality of post-school learning, and foster stronger relationships between education and training institutions and the workplace. Institutions are recognised as a significant factor in economic and social growth (Bolton et al., 2020).

SETAs' providers include both public and private learning institutions approved by one or multiple SETAs. These include public universities, colleges, educational and training facilities, and workplace-based providers. The primary responsibility of SETAs is to fund and organise the development of work-integrated learning platforms. These platforms support structured work experiences, including mentoring and assessment (DHET, 2023).

2.5.3 South African Qualifications Authority (SAQA)

In a white paper (DHET, 2013), the South African Qualifications Authority (SAQA) is described as a professional body constituted to represent and/or regulate a recognised community of expert practitioners. This body establishes an incorporated national system for recognising learning accomplishments, making it easier to move between educational, training, and career pathways. It aims to improve the quality of education and training while also addressing historical inequalities in access to education, training, and employment.

2.5.4 Qualifications Council for Trades and Occupations (QCTO)

The Quality Council for Trades and Occupations (QCTO) was founded in 2010 under the provisions of the Skills Development Act (Act 97 of 1998), as updated in 2008. It provides direction to both private and public skills development providers and assessment centres, requiring accreditation by the QCTO for the execution of occupational qualifications. Its primary objective is to administer the Occupational Qualification Sub-framework (OQSF), accredit skills development providers, and certify assessment centres.

2.6 Existing Articulation Enablers and Arrangements

This section discusses the existing articulation enablers and arrangements. It commences with the National Qualifications Framework (NQF), continues with Recognition of Prior Learning (RPL), and lastly discusses Credit Accumulation and Transfer (CAT).

2.6.1 National Qualifications Framework (NQF)

The National Qualifications Framework (NQF) is a single, integrated system for the classification, registration, publication, and articulation of quality-assured national qualifications, as outlined in section 4 of the NQF Act, 2008 (Act 67 of 2008). The academic levels of the NQF have been increased from 8 to 10 levels, and three sub-qualification frameworks established: the General and Further Education and Training Sub-Qualification Framework for school and college-based qualifications led by Umalusi (Act, 1997, Act 101 of 1997); the Occupational Qualifications Sub-Framework, which encompasses all outcomes-based qualifications developed through SAQA processes and based on SETA qualifications, led by the Quality Council for Trades and Occupations (QCTO) (Act, 1998, Act 97 of 1998), as amended in 2010; and the Higher Education Sub-Qualifications Framework for tertiary qualifications, led by the Higher Education Quality Committee (HEQC). Institutional qualifications are quality assured by Umalusi at NQF Levels 1-4 and by the HEQC at Levels 5-10. Outcomes-based occupational programmes, quality-assured by SETAs and the QCTO, cover NQF Levels 1-8. Each of these sub-qualification frameworks has distinct processes for qualification development and quality assurance.

The NQF identifies several objectives, including facilitating access, improving the quality of education and training, and enhancing flexibility and development in education and training career paths to accelerate the redress of past imbalances in perceptions of education, training, and employment opportunities (Policy, 2014).

Table 2.1***The National Qualifications Framework***

LEVELS	DESIGNATION
1	General Certificate
2	Elementary Certificate
3	Intermediate Certificate
4	Grade 12 (National Certificate)and National (vocational) Certificate level 4
5	Higher Certificates and Advanced National (vocational) Cert.
6	National Diploma and Advanced certificates
7	Bachelor's degree, Advanced Diplomas and Postgraduate Certificate
8	Honours' Degree, Post Graduate Diploma and Professional Qualifications
9	Master's Degree
10	Doctoral Degree

Therefore, on the NQF, the TVET national diploma compass ranges from level six (National Diploma and Advanced Certificates), where all PSET institutions' certificates are registered and recognised. Now, the question is why TVET graduates struggle to articulate to other institutions in line with the NQF guidelines, both vertically and horizontally. Many countries commonly view the NQF as a potential means to enhance articulation pathways for TVET graduates into universities (Field, 2017). It provides clear objectives and transparency in support of the credit recognition process,

although institutions have significant discrepancies in implementing it. The collaboration between SAQA and NQF promotes equality, redress, articulation, access, progression, and transparency within PSET entities. Bolton et al. (2020) add that the NQF plays a crucial role in addressing qualifications that lead to limited opportunities and in encouraging seamless progression. Matshoba (2019) supports the notion that NQF ensures that qualifications registered on the framework have comparable standards.

2.6.2 Recognition of Prior Learning (RPL)

The South African national policy refers to the Recognition of Prior Learning (RPL) as “the principles and processes through which the prior knowledge and skills of a person are made visible, mediated and assessed, for alternative access and admission, recognition and certification, or further learning and development” (SAQA, 2015c: Clause 26). Hlongwane (2019) concurs that RPL is a globally recognised phenomenon that provides non-formal education with access to learning programs in the Higher Education and Training sector by assigning credit value as applicable in the academic or formal education realm. RPL addresses the inequalities within Higher Education and Training in terms of professional development and promotional opportunities. In South Africa, RPL is multi-contextual, as its purpose and procedures differ across contexts (Bolton et al., 2018). It is well established and published by SAQA, as it addresses problems such as under-qualified adult learners who want to upskill and improve their qualifications, and candidates who want to pursue studies but lack the minimum requirements for entry into a formal learning program. Therefore, accreditation is awarded based on experience, skills, and knowledge to address

imbalances and inequalities (Bolton et al., 2018), as it focuses on what has been learned rather than the institution's status.

2.6.2.1. Application and Requirements of RPL

The application of RPL in higher education institutions depends on the institution's policy and criteria, as well as its needs and principles. Martin (2021) and Mantashe and Nkonki (2019) add that three restrictions guide RPL: the concept of exemption, the residency requirement, and the ten per cent (10%) of cohort students in a programme. It is eligible for approval across various levels of the NQF and can result in the allocation of credits toward partial or complete qualifications. To obtain accreditation, a student must receive guidance and support and prepare assessments to provide evidence of their learning. An institution will not exempt a student from more than 50% of the modules/courses required for any particular qualification (CHE, 2016).

According to CHE (2016), RPL closes the gap between formal and non-formal knowledge, addressing potential obstacles to admission or registration in higher education for individuals without the necessary formal qualifications. To avoid epistemic injustice for students interested in further studies in higher education institutions, RPL advances workers who have invested over the years and possess the relevant skills and experience for a particular job. However, RPL may cover only a narrow set of qualifications (ILO, 2018). Therefore, RPL only works for those with experience and a job, rather than merely on formal qualifications from recognised institutions (Masoabi, 2023). Thus, RPL cannot assist unemployed TVET graduates who are interested in developing themselves to increase their opportunities. In contrast, Masoabi (2023) notes that universities may appear to lack structured policies and procedures for

admitting students from TVET colleges, acknowledging challenges in interpreting institutions' policies versus RPL policies.

2.6.3 Credit Accumulation and Transfer (CAT)

Credit Accumulation and Transfer (CAT) refers to an arrangement whereby students receive formal recognition and certification of learning achievement, acknowledging credits acquired from previous qualifications as prescribed by SAQA (SAQA, 2014). CAT enables articulation across the sub-frameworks of the NQF, facilitating lifelong education, providing students with opportunities to complete their qualifications, and promoting student mobility. The recognition of credits can determine a transfer from one qualification to another, as well as the nature of the qualifications, the collaboration of qualifications, density, and the extent of the curricula associated with the specific subjects to be recognised for exemption (CHE, 2016). In addition, credits measure the volume of learning required for a qualification and specify the minimum total number of credits required (Nkonki, 2017).

The CHE, as the Quality Council for Higher Education, has the responsibility to implement CAT policies in promoting articulation between qualifications within a sub-framework of the NQF. To avoid policy denial, the admission and/or governance committees need to proactively discuss the allocation of credits through CAT to ensure the institution's process is transparent, valid, and reliable (CHE, 2016). Credit accumulation occurs when credits are recognised and accumulated across all institutions in South Africa and awarded towards the same learning program in another institution.

2.6.3.1. Application and Requirements of CAT

Credit Accumulation and Transfer (CAT) is one of the available systems promoting vertical and horizontal articulation in South Africa. Vertical articulation in CAT occurs when a student is allowed to register for a higher NQF level. Horizontal articulation allows a student to receive credit for a specific module in a similar qualification from another institution, provided the institution does not already offer the module. The nature of the qualifications determines recognition of credits, the relationship between them, the nature, complexity, and extent of the curricula associated with the specific subjects recognised for exemption and/or inclusion, and the nature of the assessment used (UMALUSI, 2010).

However, CAT practices in the South African system remain somewhat limited. While there is evident mutual acceptance of credit among public institutions, particularly within the HEQSF framework, there is minimal recognition between the NQF Sub-Frameworks in this aspect (Bolton et al., 2020). According to DHET (2013b), CAT can secure entry into higher education institutions, obtain advanced standing, or earn credits, all aimed at furthering one's studies and facilitating transitions between Technical and Vocational Education and Training programs. Admission and/or governance committees need to proactively address credit allocation through CAT, ensuring the institution's process is transparent, valid, and reliable. The institution should establish a system for appealing decisions on the accumulation and transfer of credits (CHE, 2016).

2.7 Challenges Hindering Successful Articulation from TVET to HEIS

The articulation gap is a widespread phenomenon affecting the vast majority of South African TVET students, as institutions have not addressed it in ways that foster effective articulation development. It has not lived up to the anticipation of becoming an institution of choice geared towards addressing the skills shortage. A challenge concerning articulation between the TVET sector and higher education is predominantly embedded in the current state of the TVET sector (CHE, 2020). A report from CHE (2020) states that a lack of policy clarity regarding the appropriate boundaries between universities and TVET colleges, in terms of their operations, governance, curricula, and programs, has led to a two-way drift that has proceeded unencumbered. Nkonki (2017) concurs that universities must strengthen and restructure their admission policies and registration guidelines to include TVET College qualifications. CHE (2020) argues that universities must do this because the articulation system across all levels of education, including basic schools, TVET, and higher education institutions, is still not at satisfactory levels.

Challenges for TVET graduates to join the university system increase the misalignment between access to higher education and the different levels of the education system. This generally means that TVET graduates have a significantly poorer fit with prior formal learning for higher education programs than do academic school graduates (UNESCO, 2021). According to CHE (2020), the challenge of dealing with the inadequate performance of students in TVET colleges, as the student pass rate at TVET is 40% whereas in universities is 50 %, and with such a poor state of the sector, it is conventional that higher education institutions do not have high regard for

certificates or subject credits obtained by students from the TVET sector. Nkonki (2017) notes that TVET colleges occupy a low status within the education sector because higher education institutions do not have entry-level programs for TVET students. TVET education aims for professional and practical employability, whereas higher education emphasises scientific employability, which adds to articulation challenges (NACI, 2021).

2.7.1 Curriculum Misalignment

Some other TVET College programmes, such as the National Accredited Technical Education Diploma (NATED) programmes, are often not recognised by universities because they do not meet the prerequisite curriculum, according to research by Ansen (2023). TVET curricula place greater emphasis on practical skills than on theoretical knowledge, whereas universities tend to focus more on theoretical knowledge. Stephen (2015) supports the notion that curriculum misalignment may be influenced by excessive political involvement, as politics remains a significant part of education and curriculum decision-making. Policies influence the articulation and responsiveness of curriculum, which are initiated through politics and promote change in the education context within TVET and universities. The irrelevance of policies results in mismatches in qualifications, limited employment opportunities, and academic shortfalls (Shah et al., 2024).

Curriculum mapping presents a significant challenge in South African education, as it reveals a mismatch between secondary and higher education. Although this discrepancy may manifest in different forms and follow various systems according to policy, it remains a notable issue. Mbandlwa (2020) supports the idea that a disconnect between secondary schools and tertiary institutions limits academic opportunities for

young people seeking to pursue their education. For example, the pass mark for secondary school in some subjects starts at 30%. In the TVET sector, NATED programmes require a pass mark of 40%, while universities require a pass mark of 50%. Consequently, this curriculum disconnects between TVET and universities hampers students' growth and access to better opportunities in TVET colleges. The majority of students enrolling in TVET colleges do so as an alternative pathway when they do not meet university requirements (Groener & Andrews, 2019). These students come to TVET with the hope of increasing their academic points to gain acceptance into universities, as TVET colleges offer prior learning and practical experiences rather than ensuring a direct link between the TVET curriculum and university access (Groener & Andrews, 2019).

2.7.2 Limited Collaboration Between TVET and Universities

Differences in educational philosophy and goals between TVET and universities increase pressure on TVET students due to limited collaboration and fewer requirements. Collaboration occurs across various settings in higher education. It aims to assist students by sharing information and resources among staff, institutions, students, administrators, and the wider community (Ndzoyiya & Matsiliza, 2022).

The PSET system allows HEI institutions to set their own admission requirements based on their philosophies and goals; however, the post-school sector has struggled to meet the needs of TVET students interested in HEIs (Ansen, 2023). The universities' expectations for student admission remain unclear as they receive different responses when applying. Most universities primarily serve students coming from secondary school (matric).

Makole et al. (2023) argue that TVET colleges in South Africa should actively manage and pursue collaborative partnerships with businesses, industries, and HEIs, and take responsibility for improving institutional performance to promote equality in education. Additionally, Ndzoyiya and Matsilza (2022) concur that collaborative enable increased transition opportunities and pathways from TVET to higher education. Naziz (2019) indicates that TVET specialists have noted a lack of sufficient, trustworthy information on credit transfer, the prospects of TVET, and the equivalency of TVET certificates with those in the general education stream. Furthermore, these issues hinder effective communication between TVET and HEIs, delaying economic progress, restricting access to better employment opportunities, and impeding smooth accreditation for college alumni.

2.7.3 Funding and Resources Challenges

Ayoola (2023) defines funding as the cornerstone of sustainability for any organisation, particularly in Technical and Vocational Education. It involves providing resources to support a need, programme, or initiative. According to Grijpstra (2015), stable and adequate funding is essential for achieving policy objectives, such as providing accessible, high-quality, and relevant education in higher education.

The process of transforming curriculum development in South Africa will undoubtedly remain challenging due to insufficient government funding for higher education institutions (Ramonyai et al., 2022). Furthermore, inadequate funding has been recognised as an obstacle to the growth of TVET institutions, as it can delay the implementation of policies that promote articulation and curricular transitions between TVET and HEIs. Ayoba (2023) suggests introducing a requirement that compels private

organisations to fund TVET institutions through partnerships. The allocation of resources is a critical factor that influences the quality of any TVET system, and inconsistent resource input limits development opportunities (Grijpstra, 2015).

2.7.4 Qualification Framework Incompatibility

National qualification frameworks are not well-integrated, leading to challenges in recognising TVET qualifications in higher education institutions (HEIs). This lack of standardised qualification frameworks can hinder credit transfer and recognition. Qualification frameworks, created to clarify learning outcomes, competence statements, or occupational standards, continue to be introduced by governments aiming to raise skill levels and improve the relationships between education, training, and work—particularly in ensuring that training systems meet industry needs (Allais, 2017). The NQF recognises the NATED TVET qualifications diploma as level five, but fails to recognise it for articulation. Allais (2018) argues that policymakers seem to support qualifications frameworks; however, there is little evidence that they are successful as intended by NQF policies and objectives. The scope of these frameworks may be widespread, covering all learning attainment and pathways, or confined to specific sectors such as initial education, adult education and training, or particular occupational areas (Tuck, 2007). The incompatibility of the NQF varies according to the entry requirements of different education institutions, as each sets its own expectations, especially for TVET qualifications. According to Allais (2018), qualifications frameworks have often been limited to TVET systems.

Many TVET qualifications are not easily transferable to university degree programmes due to differences in credit systems and assessment methods, as the

unclear structure of the TVET qualification contradicts the understanding of the framework, which supports and focuses more on education between schools and universities (Stops et al., 2022). The provisions tend to be relatively straightforward regarding the qualifications available between schools and universities (Allais, 2017). This may result from a gap between these sectors in education; for instance, TVET primarily follows competency-based education, which emphasises practical skills, whereas universities tend to follow theory-based learning and academic research. Therefore, this may pose numerous challenges in the system, leading students from TVET to become confused about their placement and start from scratch (Ibrahim & Nashir, 2022).

2.8 Theoretical Framework

According to Grant and Osanloo (2014), a theoretical framework serves as the foundation for building knowledge. It provides a strong base for the entire study and guides both the literature review and methods of analysis. The theoretical framework for the thesis is not merely a summary of individual ideas about the research; rather, it is a synthesis of the thoughts of leading figures in the specific field, as it explains a proposed research or thesis to understand or interpret the data (Kivunja, 2018). For a study to be understandable, the theoretical framework is a vital part of the research process. A researcher must employ relevant theories that support the study and align with the research's perspective and epistemology. Passey (2020) notes that a theoretical framework develops from outcomes beyond a single study, based on one or multiple theories, which may be complemented by additional theories. These theories often link to methodological approaches that should relate to the ontological and

epistemological stance. The selection and application of models, frameworks, and theories can significantly shape a study through its epistemological and ontological viewpoints.

Some benefits of a theoretical framework in research include establishing a structure for explaining how a researcher defines the study philosophically, epistemologically, methodologically, and logically (Grant & Osanloo, 2014). Therefore, it provides a focal point for approaching unknown research within a specific field of study. Adom et al. (2018) agree that the theoretical framework helps readers understand that the study is not based on the researcher's personal justification but is firmly grounded in an established and well-developed theory. Furthermore, it helps to discuss findings more clearly and to connect the abstract and concrete elements the researcher observes in the data (Kivunja, 2018). The theoretical framework supports the substantiation of arguments to justify the researcher's findings and recommendations.

In this study, Miranda Fricker's epistemic injustice theory, developed in 2007, guides the research. Epistemic injustice refers to wrongs related to knowledge, including segregation and silencing, organised misrepresentation of an individual's contributions, undervaluing their position in communicative practices, discriminatory distinctions in authority, and unjustified distrust. Fricker (2007) further describes epistemic injustice as a specific type of wrong that harms someone, particularly in their capacity as a knower. Epistemic injustice is harm done to a person in her capacity as an epistemic subject by undermining her ability to participate in epistemic practices such as providing knowledge to others, testifying, or making sense of one's experiences. It also refers to recognising how credibility is transferred to knowledge bearers, particularly individuals

from marginalised groups who deserve to be seen as credible sources of knowledge but often lack recognition.

Cummings et al. (2023) note that many knowledge sources and stakeholders see epistemic injustice as a barrier to collaboration and coordination. Fricker (2007) identified two types of epistemic injustice: testimonial and hermeneutical injustice, both rooted in social and political inequalities. Testimonial injustice involves giving too little (or too much) credibility to a testimony because of identity prejudice from the hearer. This occurs when the speaker faces a credibility deficit due to prejudice related to their physical features (Boni & Velasco, 2019). Additionally, Fricker (2010) explains that testimonial injustice occurs when powerful entities discredit an individual's account by assigning a credibility deficit based on their social identity. Hermeneutical injustices are often committed in and through interpersonal interactions (Boni & Velasco, 2019). According to Tanswell and Rittberg (2020), hermeneutical injustice occurs when a lack of shared interpretative categories within societal knowledge prevents marginalised individuals from expressing their social experiences meaningfully to others (Fricker, 2010). It is always structural because it involves groups rather than individuals, occurring when a gap in interpretive resources puts someone at a disadvantage in understanding their social experiences. Hermeneutical injustices are also frequently committed within and through interpersonal dynamics (Boni & Velasco, 2019). As Tanswell and Rittberg (2020) state, hermeneutical injustice occurs when a significant aspect of an individual's or group's social experience remains obscured due to prejudicial flaws in shared interpretive resources.

I will use the concept of epistemic injustice to analyse the unfairness and setbacks TVET graduates face, especially the lack of recognition of their TVET qualifications by universities. It is viewed as a philosophical framework that highlights the ethical obligation to address challenges in the articulation of HEIs (Tanswell & Rittberg, 2020). The non-recognition of their qualifications might force them to repeat what they have already studied and been accredited for in TVET. Such forms of injustice result in a credibility gap for the individual or organisation, undermining their status as a knowledge holder (Cummings et al., 2023).

I used this theoretical perspective to explain the challenges TVET college graduates face in progressing to universities. This occurs despite strategic and policy efforts, which are often presented systematically. The systemic articulation initiatives by the DHET and its quality entities do not seem to ensure or facilitate specific articulation automatically. Government legislation, in the form of gazettes, aims to create pathways for specific articulation through agreements like MoUs and MoAs. However, it appears that TVET colleges face epistemic injustices, leading to a lack of credibility. Higher Education Institutions (HEIs), as social entities, have significant potential to address injustices caused by epistemic imbalances. The authors further state that the primary role of HEIs is to enhance human development for social well-being and equality, and to have a responsibility to positively transform society through training highly competent and principled citizens and by finding solutions to public or social problems, among other things.

Elmarie and El (2019) noted that TVET colleges' National Diploma curricula and universities must follow a progressive process in constructing knowledge, as it needs to

accommodate students applying knowledge from TVET in construction to universities. The articulation of TVET graduates to HEIs is one of the longstanding public issues where HEIs should lead in finding solutions. It remains to be seen whether the autonomous status of HEIs contributes to epistemic injustices that could limit or even block their epistemic capabilities and articulation, as the DHET-gazetted agreements facilitate easy articulation. However, admission requirements are solely determined by HEIs (Lortan et al., 2017). The National Baseline Study Report (2017) also noted that broken relationships could result in epistemic injustices, which involve a lack of recognition and respect for different kinds of knowledge and include HEIs' misunderstanding of TVET qualifications and standards. Learning and understanding occur when knowledge is assimilated by and incorporated into a student's existing mental frameworks (Petrović, 2021), thereby avoiding epistemic injustice. Therefore, a student from TVET colleges who possesses knowledge and experience may collaborate with the university.

2.9 Conclusion

This chapter reviewed the study's literature, focusing on the challenges in curriculum responsiveness and the articulation between TVET and universities. The purpose was to explore how other researchers have addressed these issues and what their findings reveal in relation to this study. The discussion covered background areas of articulation within the education sector, curriculum aspects in higher education, the international TVET system, existing enablers and arrangements for articulation, and the obstacles that hinder effective collaboration between TVET and HEIs. The chapter highlighted that some policies had been introduced to promote articulation, along with

guidelines for their implementation. The literature also showed how other countries established relationships between the two sectors and implemented policies; this comparison helps in understanding the barriers to successful articulation. The next chapter presents the research design and methodology.

Chapter Three

Research Design and Methodology

3.1 Introduction

In the previous chapter, I discussed the literature review, examined challenges in the articulation between TVET National Diploma and universities, and presented the theoretical framework. I also explored how other countries, both in Africa and internationally, have implemented curriculum responsiveness and articulation policies to boost their economies. This chapter describes the study's design and research methodology. I started by analysing the use of a qualitative approach and outlining the case study technique. The final section discusses the limitations of the methodology and its ethical implications. The research aimed to understand the following: to explore the challenges related to curriculum responsiveness and articulation between the TVET National Diploma and universities. I investigated how the recognition of TVET college qualifications has affected higher education institutions and whether this recognition enhances individuals' prospects concerning articulation. The study aimed to answer the key research questions listed below.

1. What are the primary challenges in ensuring curriculum responsiveness in the articulation between TVET National Diploma programmes and universities?
2. What are the potential advantages of a well-aligned TVET-to-university pathway for the wider education system and the labour market?
3. Why is the way the curriculum responds through articulation between TVET and universities applied as it is?

4. How can the articulation of curriculum responsiveness be improved to attain quality education?

3.2 Research Design

This section outlines the research methods used in this study. The main factors influencing the research design were the research questions and the epistemological stance. In this section, I discuss the decision to adopt a qualitative methodology and describe the data-generation methods, sampling strategies, and study population.

3.2.1 Research Paradigm

A research paradigm includes specific philosophical assumptions that guide researchers' reasoning and actions. According to Cohen et al. (2018), a paradigm is a construct that shapes the way a researcher views research phenomena and perceives the world. Paradigms hold different assumptions about how the world appears and how it can be understood (Kivunja & Kuyini, 2017). Paradigms clarify and organise thinking about the research, making them important drivers of good research. There are various paradigms used in educational research, namely the positivist approach (prediction), the interpretivist approach (understanding), the critical approach (emancipatory), and the pragmatic approach, which focuses on 'what works' (Cohen et al., 2018).

I adopted the interpretivist paradigm, as it enabled me to collect diverse perspectives from participants to achieve a comprehensive understanding of the phenomenon. According to Cohen et al. (2018), in an interpretivist approach, there is an emphasis on human experiences and understanding the subjective meanings individuals assign to the world from their personal viewpoints. Creswell (2018) notes that interpretivist researchers focus on the interaction process among individuals; in

other words, they gather human experiences and viewpoints, shaping them with their own knowledge to achieve a shared understanding and develop a worldview. This study aims to understand the social world of the participants and relate their experiences to curriculum responsiveness, specifically the connection between TVET curricula and universities. Interpretivism powerfully highlights the subjective meanings individuals assign to their experiences (Junjie & Yingxin, 2022).

The foundation of interpretivism is the ontological belief that reality is socially constructed (Turyahikayo, 2021). This view suggests that individuals can have diverse perceptions and interpretations of a given event or situation, and different viewpoints may arise from a single reality (Junjie & Yingxin, 2022). In other words, depending on how people perceive the same experience, researchers might identify multiple realities. In interpretivism, researchers often cite participants' words, stories, experiences, and opinions to illustrate and depict a range of viewpoints. Alharahsheh and Pius (2020) and Turyahikayo (2021) point out that, based on the assumptions and ideas of the interpretive researcher, interpretivism allows researchers to consider various characteristics, such as behavioural aspects grounded in participants' experiences, which help explain reality. Furthermore, the interpretivist paradigm enables researchers to see the research context and conditions as unique, taking into account both participants' involvement and the surrounding circumstances (Cohen et al., 2018). Additionally, this paradigm encourages researchers to stay focused on the specific subject, preventing it from shifting towards broader generalisations. Therefore, this study, which aims to understand the curriculum responsiveness of articulation in higher education institutions, adopted an interpretivist qualitative

approach to enable researchers to gain deeper insights by exploring the experiences and perceptions within a specific social context and among the individuals affected by it.

3.2.2 Research Orientation: Qualitative Approach

A researcher determines the type of method used in the study based on the research questions. They must decide on the method accordingly. There are three main approaches: qualitative, quantitative, and mixed-methods. I selected the qualitative approach in this study. Conroy (2010) argues that qualitative research is an inductive process that gathers data through different concepts and theories. A qualitative approach is better suited to collecting detailed data, as it provides greater depth and understanding of participants' experiences (Creswell, 2018). Furthermore, Cohen et al. (2018) note that the qualitative approach captures participants' voices and investigates topics beneath the surface of observable behaviours and actions.

Therefore, the qualitative approach assists the research in constructing people's views and beliefs about a specific issue, providing a deeper understanding of the issue, and offering a better understanding of the world's knowledge. The qualitative research method is more adaptable and flexible, allowing for more spontaneous interactions between participants and researchers (Oranga & Matere, 2023). Qualitative research responds to questions such as "how," "why," and "what" about a phenomenon (Green & Thorogood, 2014). In addition, the qualitative approach proved suitable and relevant for this study, as it aims to gain a deeper understanding and greater insight into the participants' experiences.

A student may enroll at the same institution and receive the same instruction, but different conversion factors can influence each student's experience regarding university acceptance for further studies and recognition of their TVET diploma. These varying experiences led to the research questions above, which sought descriptive information about the individual experiences of national diploma recipients; this necessitated a qualitative approach to capture these unique experiences.

Humanities and social sciences employ the qualitative approach due to the active nature of teaching and learning in the classroom and the behavioral changes that education and curriculum induce. Consequently, qualitative research is especially suitable for studies conducted within educational environments (Mohajan, 2018). This is because these developments underpin the qualitative method for investigating educational problems.

The use of a qualitative approach generally allows researchers to engage in a recurring process of data collection and analysis, as qualitative research inherently embraces subjectivity (Haven & Grootel, 2019). The researcher can sample new participants and return to the field if saturation has not been reached. Furthermore, the flexibility of the qualitative research design enables the researcher to respond to new, unexpected findings that require further exploration (Busetto et al., 2020). The qualitative approach often reframes a complex problem into a limited number of variables, thereby simplifying it and testing theories or hypotheses (Mohajan, 2018). For these reasons and for the nature of this research, I have chosen to focus on the benefits of qualitative research.

3.2.3 Research Strategy: Case Study

I employed the case study approach because this study aimed to provide an in-depth narrative and clarification of the impact of intervention within its contemporary real-world context. A case study methodology offers a framework for evaluating and investigating complex subjects (Heale & Twycross, 2018). Case studies explain, describe, and investigate occurrences or phenomena in the contexts in which they occur; this may include experiments, action research, surveys, naturalistic research, participatory research, or historical research, among others, thereby constructing new theories and strengthening previous research (Krusenvik, 2016). A case study thoroughly examines the development of a specific event, individual, or circumstance over time in a real-world setting, employing multiple methods for data collection and analysis (Oranga & Matere, 2023). Case studies aim to understand a particular issue over time by using various sources of information.

The case study employs both single-case and multi-case designs, making this approach particularly suitable for researching educational interventions, as it provides detailed descriptions of all related aspects. Therefore, when selecting a single case, there are five possible bases for analysis: critical, unique, familiar, revelatory, and longitudinal (Tomaszewski et al., 2020). In contrast, a multi-case study replicates an intervention and provides various contexts for analysis. Multiple case studies share standard features, enabling researchers to identify differences that can be replicated or applied to similar situations (Busetto et al., 2020). Based on the dynamics of this study, I opted for a multi-case study design because it examined more than one research area to collect data, aiming to gain deeper insights and gather additional information on the

curriculum responsiveness of articulation between TVET national diplomas and universities. This study highlights the shared challenges among three colleges in northern KwaZulu-Natal regarding the articulation between TVET and universities.

3.2.4 Research Context

The research site for this study is in South Africa, specifically in the province of KwaZulu-Natal. The study is at Northern Natal Colleges, which is home to three TVET Colleges. The study participants were from the three colleges, comprising lecturers, curriculum division staff members, and college alumni.

3.2.5 Sampling and Sampling Procedure

Sampling involves selecting a group from the population to gather observations and draw statistical conclusions about the entire population (Oranga & Matere, 2023). Islam and Aldaihani (2022) agree that sampling involves selecting items, individuals or research subjects for questioning, surveys, or observations. Therefore, there are two primary methods for conducting sampling: probability and non-probability sampling. In probability sampling, the researcher can use every individual in the sample group. Some standard probability sampling techniques include simple random sampling, systematic sampling, stratified sampling, cluster sampling, and double sampling (Naderifar et al., 2017). Conversely, non-probability sampling involves the researcher using their judgment to select cases without assigning a probability to each. Examples of non-probability sampling techniques include judgmental, quota, purposive, snowball, and convenience sampling (Naderifar et al., 2017).

This study employed purposive and snowball sampling. The primary aim of purposive sampling is to focus on specific characteristics of a population of interest,

thereby enabling the most effective response to the research questions. Purposive sampling is well-suited to serve a definite need or purpose (Cohen et al., 2018). Choosing purposive sampling may offer benefits such as lower cost, shorter time requirements, and easier management of data collection tools; it usually ensures a high level of participant involvement. According to Etikan and Bala (2017), the researcher focuses on individuals who share the same judgment and are willing to provide the required information, which is ideal for qualitative studies. For this study, I purposively selected lecturers and curriculum division staff, as they possess the necessary knowledge and insights to inform the research, which aimed to understand the curriculum and articulation dynamics in the TVET sector.

Snowball sampling targets participants who are difficult to reach due to stigma or other reasons, and it is particularly valuable in qualitative research. Researchers also call it 'chain-referral methods,' used where participants may harbour suspicions towards researchers or where establishing contact proves challenging. According to Naderifar et al. (2017), this sampling approach is ideal when members of the population are not easily accessible and always considers participants' privacy and rights. However, I may be consider using the college's database to access alumni contacts. Under the Protection of Personal Information Act (POPIA), I used snowball sampling to address potential challenges related to participant access. This study utilised snowball sampling, a strategy that proved to be more effective. The participants helped connect with knowledgeable individuals, such as those with comprehensive data on a particular articulation issue. Nikolopoulou (2023) supports the idea that snowball sampling is more beneficial when recruiting from a population that is difficult to locate or may be reluctant

to identify themselves to a researcher before a peer can vouch for the study's legitimacy.

3.2.6 Sample/Participants (Sample Size, Number of Participants, Inclusion and Exclusion Criteria)

I selected participants for this study from TVET College lecturers, the curriculum division within the colleges, and college alumni. Although KwaZulu-Natal has nine TVET colleges, I chose only three due to financial constraints that prevented me from contacting all institutions. Based on experience and knowledge in the TVET college sector, I deliberately chose one campus from each of the three selected colleges. The inclusion criteria were lecturers, staff from the college's curriculum division, and college alumni. By applying these criteria, I ensured that the selected participants provided relevant and detailed insights into the challenges related to curriculum responsiveness and articulation between TVET National Diploma programmes and universities. This helped me understand the TVET curriculum and its impact on articulation. Participation in the study was voluntary and confidential. Exclusion criteria included college staff (including executive management) who are not regularly involved in curriculum development, and college alumni who are not currently studying at universities and have never been registered at universities, as they lack experience with articulation between TVET diplomas and higher education institutions.

3.2.7 Recruitment Process of Participants

According to Chalder et al. (2020), participants are unlikely to join a study that feels difficult or uncomfortable. Therefore, a researcher must select topics or questions that are relevant and understandable to participants. Successful recruitment also

depends on the researcher's ability to build relationships with potential volunteers by establishing trust, showing confidence and respect, and demonstrating credibility (Negrin et al., 2022).

I invited the participants to join the study via email. Additionally, participants received phone calls to reconfirm their involvement closer to the interview date. Negrin et al. (2022) define participants as those with whom the researcher begins to negotiate complex connections in both the real world and the research context.

3.2.8 The Sample

The information below reflects the study participants.

Table 3.1

The Study Sample

Category	Participants
TVET Lecturers	7
TVET Curriculum Division Staff	4
TVET Alumni	6

3.2.9 Data Generation Tools

In this study, I used semi-structured interviews as the primary data collection method. This approach enables flexible yet focused conversations, allowing me to explore key themes while adapting to new topics that emerge during the discussion (Canals, 2017). The semi-structured format ensures that essential questions are covered while allowing participants to share their thoughts openly (Ruslin et al., 2022).

This method supports the study's aim of gathering rich, contextualised data that would be difficult to obtain with strictly structured techniques. The study adopted a qualitative research approach to examine the curriculum's responsiveness to articulation, aiming to gain in-depth insights into participants' experiences and perspectives. Consequently, I chose interviews as the data collection method because they effectively complement the research approach.

3.2.9.1. Interviews

I employed interviews as a qualitative method to collect data from participants. An interview is a deliberate dialogue between a researcher and a participant designed to gather in-depth information. Ruslin et al. (2022) describe an interview as a tool for collecting data from a specific individual. The reason for using interviews in this study was to obtain direct insights into people's sentiments, views, and attitudes, as well as potential reactions to the study's findings. A successful qualitative interview requires the researcher to effectively build rapport with participants, encouraging them to share details, emotions, and evidence that provide comprehensive accounts of events or experiences (Mirick & Wladkowski, 2019).

I employed semi-structured interviews in the study, and, as Ruslin et al. (2022) explain, they are more common because they enable the researcher(s) to obtain more detailed information from informants than structured interviews. Semi-structured interviews allow an interviewer to be more flexible when adding questions or seeking clarifications (Canals, 2017), as this method permits follow-up questions to gain a comprehensive understanding of the context. I invited the participants to the interviews

on a set date. I asked the participants a prepared set of semi-structured questions (Appendix E) and they provided answers.

Additionally, participants were given copies of the questions for better understanding. I requested that the participants sign a consent form (Appendix B) before the interviews commenced. The interview lasted for an hour, and participants had enough time to answer the questions.

3.3 Trustworthiness

Creswell (2020), Negrin et al. (2022), and Stahl and King (2020) describe trustworthiness as the authenticity and accuracy of findings in qualitative research, which in turn enhances the quality of the work. Trustworthiness refers to the level of trust or confidence readers have in the results. According to Cypress (2017), a researcher achieves trustworthiness through methodological rigour and transparency. There are four constructs of trustworthiness: credibility, transferability, dependability, and confirmability (Stahl & King, 2020). In this study, providing detailed descriptions of the research methods established trustworthiness. Additionally, transparency was maintained in data collection by documenting the process, including any potential biases or limitations, and utilising measurable tools, such as conducting interviews, to enhance data quality and trustworthiness.

3.3.1 Credibility

The key element in credibility is for the researcher to persuade the audience that the study's findings align with reality. Credibility relies on measuring and interpreting data quality to ensure the research is accurate. To enhance the credibility of this study, I obtained participants' permission to audio-record interviews, ensuring that all shared

data was captured verbatim, with no alteration of participants' words. Additionally, I took notes during the interviews to record the participants' gestures and expressions.

3.3.2 Dependability

According to Kivunja and Kuyin (2017), data must be reliable and consistent over time, regardless of circumstances. Dependability is characterised as the extent to which outcomes stay consistent across different periods. A researcher outlines a detailed methodology that ensures the study's reliability within the interpretive inquiry framework. In this study, I followed the steps of thematic analysis to ensure that participants clearly accounted for all the data collected.

3.3.3 Confirmability

Transparency in data analysis is crucial because it determines how well fellow researchers can validate your research findings (Kivunja & Kuyin, 2017). Confirmability involves ensuring that both the data and interpretations genuinely originate in the data and are not influenced by the researcher's imagination (Korstjens & Albine, 2018). In this study, I prepared a set of questions and used Appendix C to answer them. It served to record all data, and by using verbatim transcripts, I listened to audio recordings while reading them to ensure accurate interpretation. I based the study's findings directly on the data. To minimise subjectivity, I employed direct quotations from participants to support the identified themes and categories.

3.3.4 Transferability

Transferability refers to a study's findings being applicable in other contexts and settings (Bryman, 2016). Another researcher can utilise the data gathered from this study to contextualise the phenomenon under investigation. In this study, providing data

on TVET policies and practices that can serve as a foundation for reform and improvement provided transferability (Korstjens & Albine, 2018). Forero et al. (2018) add that transferability enhances the applicability of the findings by increasing their generalisability to diverse contexts and settings.

3.3.5 Confidentiality vs Anonymity

To safeguard participants' anonymity in this study, I used pseudonyms instead of their real names. I stored the data in a password-protected file in accordance with university regulations. I will delete the data by burning and shredding it after five years. Additionally, I used code names rather than participants' actual names when presenting qualitative interview data.

3.4 Data Analysis

Data analysis involves converting raw data into meaningful information (Nowell et al., 2017). Its main aim is to address specific research questions. To achieve this, I carefully designed a questionnaire to effectively gather, analyse, and present the perspectives of students, lecturers, and curriculum division staff on the challenges of ensuring curriculum responsiveness in the connection between Technical and Vocational Education and Training national diplomas and universities. This qualitative study used thematic analysis as its primary method of data analysis. Thematic analysis is a common approach in qualitative research that helps identify, analyse, and interpret recurring themes within data (Saraswati, 2020). As suggested by Jowsey et al. (2021), after collecting all questionnaires, data reduction was carried out by summarising and simplifying the information, focusing selectively on key aspects. The next step involved categorising and segmenting the data for further analysis. This included the following:

Step 1: Familiarisation with the data to gain an overall understanding

The first step in the thematic analysis was to gather data through interviews. I audio-recorded the interviews and transcribed them verbatim to ensure accuracy and maintain the integrity of the content. According to Tomaszewski et al. (2020), the initial step involves the researcher reading all transcripts multiple times to gain a comprehensive understanding, focusing on both what is said and the context in which it is expressed. I familiarised myself with the data by taking notes to capture all insights. I accomplished this by repeatedly reviewing the interview transcripts to become thoroughly acquainted with the data.

Step 2: Generating initial codes

Step 2 emphasises identifying data features related to challenges in curriculum responsiveness. It also underlines the importance of organising data systematically. I began by organising the data in a clear and structured manner. Maguire and Delahunt (2017) note that this step involves the researcher recognising relevant data segments and assigning them brief labels (codes) to ensure consistency across different data sources. Coding condenses a large amount of data into small, manageable chunks of information. I used different coloured markers to highlight the codes generated with them.

Step 3: Identify potential themes and categorise similar ones together.

After generating the initial codes, the next step in thematic analysis is to identify potential themes by grouping related codes into meaningful categories. Identifying and categorising the themes helps to turn fragmented data into a precise, interpretable analysis (Nowell et al., 2017). I therefore analysed recurring ideas across different responses by identifying patterns through grouping codes that relate to the same issue.

At the end of this step, I merged overlapping codes and categorised them into broader themes to ensure that the themes accurately reflected the data and aligned with the research question. The following are examples of themes developed:

- **Theme 1:** Key Challenges in Curriculum Responsiveness
- **Theme 2:** Potential Benefits of a Well-Aligned Pathway
- **Theme 3:** Enhancing Curriculum Responsiveness for Quality Education
- **Theme 4:** Why Current Articulation is Applied This Way
- **Theme 5:** Actionable Recommendations

Step 4: List all emerging themes and organise those with commonalities into groups.

In step 4, I reviewed, modified, and developed the preliminary themes identified in step 3 to determine whether these themes were logical. Following Jowsey et al. (2021), I combined closely related themes into broader categories (parent themes) to ensure themes remained distinct and did not overlap.

Step 5: Assign codes to the identified themes and mark relevant sections of the text accordingly.

In Step 5, I assigned codes to the themes and systematically marked relevant sections of the text. This process ensured that data were well organised and provided strong evidence for each theme (Maguire & Delahunt, 2017). I reviewed previously generated codes, mapped them to themes to ensure each theme has a set of related codes, and highlighted relevant excerpts in transcripts to demonstrate that each theme has a corresponding set of related codes. I linked each highlighted excerpt to its assigned code. This ensured that multiple excerpts supported each code, maintaining consistency across all transcripts.

Step 6: Arrange themes into broader categories and consolidate related groups.

Step 6 involved organising themes into broader categories and consolidating similar or related groups. This step helped create a structured framework for reporting findings clearly and meaningfully (Saraswati, 2020). The finalisation of a thematic analysis should produce a concise, coherent, logical, non-repetitive, and engaging account of the data within and across themes (Nowell et al., 2017), ensuring each category represents a key aspect of the research questions, with themes flowing logically in the analysis by including direct quotes from participants to deepen understanding and elaboration. This method provided an organised yet flexible framework for data analysis, allowing a detailed examination of individual cases while also identifying broader patterns among participants.

3.5 Ethical Considerations

Ethical considerations are essential for every research project. In this study, I adhered to the University of KwaZulu-Natal HSSREC guidelines. I obtained ethical approval from UKZN (Appendix A), accessed participants through gatekeepers, sought their consent, and guaranteed their anonymity. Consequently, I submitted a request to the gatekeepers for permission to conduct the study in the selected colleges. I provided complete information to the college principals and the participants. I informed the participants of the following factors: all information about the study would remain confidential, I would not use the information provided against them; participation was voluntary; the data from the interview was solely for academic purposes; participants had the right to refuse being interviewed or recorded; and they could choose not to answer specific questions. Following ethical guidelines is essential to protecting

participants' privacy by obtaining informed consent. Ethical research practices also enhance the study's validity by ensuring responsible data collection. Additionally, researchers verify the reliability of the results by applying the measuring instrument to the same sample group at different times (Noble & Smith, 2015).

3.6 Conclusion

This chapter described the methodological approach, sampling, data collection, and data analysis employed in the research. It also clarified the strategies for improving credibility, validity, and trustworthiness. Lastly, it examined ethical considerations to shed light on the issues influencing curricular responsiveness in the TVET sector. The next chapter outlines the findings related to case studies.

Chapter Four

Findings and Discussion

4.1 Introduction

Chapter three outlined the research methodology, design, and data collection strategies used in this study. Chapter Four focuses on the findings and discussion of the collected data. The data from individual interviews with TVET College participants and alumni are presented separately for clarity. I separated the interview data to help readers clearly understand the type of data being analysed. I conducted the analysis using codes derived from the interview data and developed them into themes that formed the research findings. The following subsection provides background information.

4.2 Background Information

I conducted the study across three different colleges in Northern KwaZulu-Natal. I selected participants from TVET College lecturers, members of the curriculum division within the colleges, and college alumni. According to the study's plan, the aim was to interview three lecturers per college, two members of the curriculum division per college, and two alumni per college. I interviewed 17 of 21 participants; however, 2 withdrew from the interview, and the others did not respond to the invitations. Attached is Appendix F (analysis sample).

4.3 Themes and Categories Responding to the Critical Questions of the Study

Table 4.1

Themes and Challenges: Responding to Critical Questions of the Study

The themes and sub-themes responding to the first question: What are the key challenges in curriculum responsiveness of articulation between TVET National Diploma programs and universities?	
<u>Themes</u>	<u>Categories</u>
Key Challenges in Curriculum Responsiveness	Lack of Accreditation ➤ Curriculum Misalignment ➤ Insufficient Academic Preparation ➤ Poor Collaboration ➤ Outdated Materials
The themes and sub-themes responding to the second question: What are the potential benefits of a well-aligned TVET-to-university pathway for the broader education system and the labour market?	
<u>Themes</u>	<u>Categories</u>
Potential Benefits of a Well-Aligned Pathway	➤ Smoother Transitions ➤ Holistic Graduates ➤ Labor Market Alignment ➤ Increased Enrolment
Themes and sub-themes responding to the third question: How can the curriculum responsiveness articulation be enhanced in order to achieve quality education?	
<u>Themes</u>	<u>Categories</u>
Enhancing Curriculum Responsiveness for Quality Education	➤ Standardize Accreditation Criteria ➤ Curriculum Harmonization ➤ Bridge Programs ➤ Collaborative Committees ➤ Industry-Academia Partnerships ➤ Extend TVET Duration
Themes and sub-themes responding to the fourth question: Why is the curriculum responsiveness of articulation between TVET and universities applied the way it is?	
<u>Themes</u>	<u>Categories</u>
	➤ Institutional Competition

Why Current Articulation Is Applied This Way	➤ Outdated Policies ➤ Philosophical Differences ➤ Lack of Advocacy
The themes and sub-themes responding to the recommendation that enhance articulation between TVET and universities.	
<u>Themes</u> Actionable Recommendations	<u>Categories</u> ➤ Mandate Collaboration ➤ Modernise TVET Syllabi ➤ Create Transition Portals ➤ Lecturer Training ➤ Policy Reform ➤ Student Guidance

4.3.1 Theme 1: Key Challenges in Curriculum Responsiveness

Theme and sub-themes addressing the first question: What are the main challenges in the curriculum responsiveness of articulation between TVET National Diploma programmes and universities?

4.3.1.1. Lack of Accreditation

Accreditation is a process that guarantees educational institutions and their programmes meet established standards of quality and relevance (Adamu, 2015). However, the responses from participants in this study highlight a significant challenge in accrediting TVET qualifications, especially when students seek to continue their studies at universities. Most participants responded as follows, as shown in the following discussion.

The first alumnus stated that his qualifications were not accredited and said, “It was not accredited, and I had to start from scratch” (Alumni 1). This suggests that the absence of accreditation disrupts established articulation pathways and undermines the

principle of progression within the National Qualifications Framework (NQF). Rather than enabling mobility, the system appears to reproduce institutional silos between TVET colleges and universities. The next alumnus agreed, “Yes, it was not accredited” (Alumni 2). A lecturer also concurred with the above participants and said, “I don't know of any recognition when it comes to diplomas. I have never heard or seen anyone who is being recognised” (Lecturer 1).

Some participants recognised that RPL offers an alternative route for credit recognition, although most focused on the issue of non-accreditation. One alumnus mentioned that their qualification was not accredited, but they received prior learning credit instead. Another participant stated, “My qualification is not accredited. So they used prior learning” (Alumni 3), this statement suggests a shift from structured articulation mechanisms to discretionary institutional practices. From a policy perspective, this indicates a misalignment between the intended standardisation of articulation processes and their inconsistent implementation at institutional level. A CDS, who observed that some universities offer accreditation, supported this view by stating, “There is accreditation with RPL for students” (CDS 1). However, relying on RPL rather than official accreditation raises concerns about inconsistent recognition of TVET credentials, which can complicate students' choices regarding their academic and professional trajectories.

The responses from all participants confirmed that a challenge existed at the TVET colleges. More alumni also mentioned that, even though they held a National Diploma from TVET, it could not help them gain entry into university because, as one said, “there was no accreditation, although I had the national diploma from the TVET

college” (Alumni 4). Another mentioned, “My TVET qualification was not recognised because the credits were not aligned with the degree that they offer” (Alumni 5). A lecturer lamented that this was a sad situation for the participants and for the education sector, stating, “The saddest thing of all is that we are members of the same department, but we are not getting any recognition for that” (Lecturer 3). More alumni reinforced this sentiment by saying, “There is no credit from any qualifications obtained from the TVET” (Alumni 6). One of the participants, however, took a different view and responded by saying, “I don’t think it is enough for articulation, but it is enough in terms of ensuring that we train people to go and work in the industry” (CDS 2).

A lecturer viewed this as a challenge for the TVET sector, particularly for students eager to pursue higher education. The lecturer said, “It is a struggle because it was like they did not recognise these credits as a full credit” (Lecturer 4).

Most participants' responses confirm that students pursuing higher education face significant barriers due to the lack of accreditation for TVET qualifications. Formal articulation pathways remain essential, even though RPL offers a partial solution. Many graduates remain without viable options for academic progression due to misaligned credit systems between TVET and university programmes. RPL can be used for up-skilling (Hlongwane, 2019), but not all TVET diploma qualifications are eligible for RPL in articulation, and it does not accommodate every graduate.

4.3.1.2 Curriculum Misalignment

Curriculum misalignment often affects students who struggle to align their expectations, especially when trying to articulate and develop themselves for both academic and employment pursuits (Chew, 2021). Participants recognised curriculum

misalignment as a challenge to curriculum responsiveness, given that the curricula of the sectors differ. The TVET sector concentrates on practical skills with shorter, often outdated syllabi, whereas universities emphasise theory and research. Participants noted a gap between TVET and universities in their curricula. When responding to questions about the curriculum, one lecturer said:

Mm-hmm. The content varies between universities and colleges.

You'll find that a university diploma typically includes 12 modules within one year, unlike at technical colleges. It's 04 at N4, 4 at N5, and 4 at N6, totalling 12. This might explain why universities do not recognise it.

(Lecturer 3)

This was supported by Lecturer 4, who said, "It can be the same NQF level, but I think if you look into the university curriculum, it's more intense, with more modules and content compared to what is taught at the colleges" (Lecturer 1).

Expanding on the topic, a CDS explained, "When you talk about the content, it is not the same, and at the same time, maybe one of the things that you can look at is the TVET side. We're trying to focus more on the practicality for students rather than just the theory" (CDS 3). This distinction suggests that curriculum design in the two sectors is guided by different epistemological orientations, which complicates efforts to align qualifications for articulation purposes. Expanding further, another CDS added, "TVET college is a lot more practical where the university is more theory-based" (CDS 1), and (CDS 3) confirmed this by stating that "the challenge is only the rating, TVET students have to obtain knowledge and do practicals, whereas in the university they focus on theory."

The reasons why TVET graduates face challenges when pursuing further studies are outlined above. Alumni 1 pointed out that, “at the college, there is a certain number of modules or a certain amount of content that is broader compared to university,” and another alumnus noted that, “there is a gap in learning style and the duration of the modules in terms of what has been covered between TVET and university.” Alumni 2 also emphasised this difficulty. For instance, Alumni 3 stated, “TVET is more focused on hands-on and practical skills of work, rather than other universities, which require more in-depth knowledge and understanding, especially in terms of research and methodologies.” Further elaborating, another alumnus mentioned, “The curriculum in the TVET college requires students to rely more on textbooks, whereas universities rely more on conducting research” (Alumni 4).

Participants consistently discussed how curriculum misalignment hampers articulation between TVET and universities. Several confirmed this, with one saying, “You know that degrees at universities hold much theoretical knowledge, two weeks in services-training at the University of Technology and with TVET on theory, and then the practical component comes after you have completed 18 months” (Alumni 5). Another added, “The TVETs are doing theoretical and hands-on skills while the universities demand academic writing and research, which need more effort for the gap to be bridged” (Alumni, 6). A lecturer explained:

TVET colleges do not have a curriculum of their own; it is the FET curriculum from the apartheid era, so it is hard to know what its purpose was. I cannot say whether there is a challenge, as it was not designed for TVET.

(Lecturer 1)

Together, the responses indicate that curriculum misalignment hinders the clear communication of ideas and makes the transition from TVET to university education less seamless. Policy changes are necessary to bridge this gap and ensure that TVET graduates are better equipped for college studies and professional careers, while accounting for variations in content, depth, learning methodologies, and curricular evolution. The misalignments identified through our syllabus analysis emphasise the importance of an organisation's suitability for curriculum responsiveness or articulation (Wotring et al., 2021). Importantly, this misalignment reflects not only curricular differences but also historical and systemic factors shaping the TVET sector. The reference to outdated curricula, as noted by one lecturer, suggests that current TVET programmes may not have evolved sufficiently to align with contemporary higher education expectations. This highlights a lack of curriculum renewal and responsiveness to changing educational and articulation demands.

4.3.1.3. Insufficient Academic Preparation

The sub-theme discussed above indicates a misalignment of curricula between the two sectors, posing a challenge to curriculum responsiveness due to an imbalance in content, resulting in insufficient academic preparation for students transitioning from TVET to universities. Participants continued to discuss key challenges in curriculum responsiveness. A lecturer answered in an interview that, “In terms of content, we have got a few new modules this side, whereas universities are offering more. The weight is not the same as with universities” (Lecturer 3). Another lecturer added that, “TVET

colleges offer more skills programmes, which means there is less content and more practicals” (Lecturer 4).

The above statements indicate that both sectors have not integrated their curricula to prepare students for articulation, thereby limiting the comparability and transferability of knowledge. An alumnus confirmed the lack of integration, stating, “The TVET curriculum lacks academic writing, academic research, comprehensive theory, and critical thinking and analysis” (Alumni 3) and this highlights a critical gap in the development of higher-order cognitive skills, which are essential for success in university environments. CDS 2 responded that, “Initially, TVET colleges are not there to train academics, but instead to give students practical skills which means this position underscores a fundamental tension between vocational training and academic progression within the articulation framework.” Alumni 4 mentioned that “You have to apply the knowledge based on what the assessment is asking you to write, so that one is limiting the students; they are not given many opportunities and concerns about limited syllabus depth reflect a curriculum that may not sufficiently support critical engagement or independent learning. This suggests that the challenge is not only what is taught, but how knowledge is structured and assessed within the TVET sector.” Lecturer 7 mentioned that “TVET college curriculum does not have rich knowledge,” and with that, CDS 1 asked, “How do you expect them to give you credits when you have got a one-page syllabus?” This creates many issues at TVET colleges, and one lecturer highlighted that, “Students at TVET struggle with the subjects they studied at matric, but now universities do not consider TVET students” (Lecturer 5).

Therefore, the findings indicate that TVET institutions fail to make their curricula responsive in preparing students for higher education, such as university, and do not adequately train graduates for career advancement opportunities (Ndzoyiya & Matsiliza, 2022).

Alumni 5 stated that “The employer is going to struggle with TVET students because at TVET they teach students; they do not teach you how to stand up, instead they stand you up,” and Alumni 6 confirmed that we were never taught academic and research writing, which was my biggest challenge.” A CDS summarised their responses by noting that “The qualification for TVET lacks the modules that universities require” (CDS 3). There is a perception that TVET colleges offer a lower standard of education (Akoojee, 2016).

4.3.1.4. Poor Collaboration

Stakeholders, including the government, businesses, colleges, universities, and quality assurance bodies, should collaborate and actively participate in the curriculum development process (Mantashe, 2024). However, participant responses indicate that poor collaboration between TVET institutions and universities remains a significant challenge, which discourages students from articulating, as the following participants stated. The participants blame the government for failing to facilitate collaboration among these institutions. A lecturer noted, “I think the government has to play that role to team up these institutions because there is no communication between the two; each institution runs things separately, whereas they are coming from the same department with the same minister” (Lecturer 7). This suggests that, despite being governed within a unified policy framework, institutions operate in silos, reflecting a disconnect between

structural alignment and actual practice. Alumni 4 also agrees that there is a lack of collaboration, saying, “So I really think I don’t understand the competition between the two because these industries are both in education, why don’t they sit together and design a curriculum as early as Grade 12?” Another alumnus added, “The issue is that both sectors are competing and don’t care” (Alumni 5). Poor collaboration hampers communication and understanding of the curriculum for both sectors, affecting efforts to improve articulation. As Lecturer 6 remarked, “That’s also a stigmatisation, they are not sending them to TVET, which says they don’t believe in TVET studies, that causes a lack of communication between TVET and university,” while Lecturer 3 added that there is “the stigma of thinking that universities are better, which all hinders progress”. One participant, CDS 2, believes that there is no collaboration at all. “There is no collaboration yet. I know there was an attempt in 2020, but it did not materialise with a certain university of technology; they wanted TVET colleges to offer a higher certificate,” whereas CDS 1 expressed her view by saying, “I also want to say that the universities are stubborn; they don’t always want to bend to accept which creates fierce competition between the two.” Lecturer 5 summed it up by saying, “So I think in universities, the main issue is the consideration.”

The lack of coordination between TVET institutions and universities creates systemic barriers to student articulation, encouraging competition rather than collaboration. Addressing this issue requires official government-led programmes to bridge communication gaps, align curricula, and foster a more cooperative approach to education, ensuring students can access seamless pathways between TVET and university (Mantashe, 2024).

4.3.1.5. Outdated Materials

Outdated curriculum materials in TVET institutions reinforce the perception that TVET education is substandard and disconnected from modern academic and industry standards, severely hindering students' ability to communicate their ideas to universities. Participants emphasised that the TVET curriculum remains outdated; CDS 1 pointed out that "the TVET syllabus is ancient, dating back to 1996". This was confirmed by Lecturer 2, who stated, "Then our syllabus is so outdated and then also there's this perception about TVET. You know that we are lower. In the educational hierarchy, we take the dropouts, those who do not make it to university." These responses suggest that curriculum review processes may be uncommon or insufficiently responsive to changing knowledge demands. From a curriculum responsiveness perspective, this indicates a failure to ensure that curricula remain current, relevant, and aligned with both academic and labour market expectations.

A key issue raised was the gap between TVET curricula and university standards, especially concerning course content. Alumni 1 pointed out that, "TVETs should also update the syllabus because, for now, a tax module, if you go to universities, they are using rates for 2024 in the calculations, whereas in college, they are using the old one from the old syllabus." Another participant mentioned clashes in the curriculum, with basic education covering some of the same topics. Lecturer 7 said, "It seems as if TVET has taken some of the topics from high school and only the basics, that's why now high schools seem as if they have the better curriculum. I would say the high school syllabus is better than that from the TVET." Alumni 2 agreed, saying, "At TVET you only receive textbooks, whereas at university you get study material."

Another alumnus noted that, “TVET colleges, if they can just get some weight and they need more, maybe two topics on each level. The syllabus is too short” (Alumni 5).

However, other participants see hope in addressing these issues, as CDS 4 stated, “They are responding, but yes, they are also introducing new courses as much as they are not swift. They're slow in doing it.” Conversely, Lecturer 5 remarked, “They don't recognise that, and that's why I'm saying. It's their criteria versus us, but at TVET, our content is not zero content, and they do qualify.” The participant believes universities are insensitive to the development and improvement of TVET curricula.

Meanwhile, CDS 2 mentioned that at TVET, “We don't really develop any curriculum now. It is prescribed. it comes from the department as the document”.

The continued use of obsolete materials hinders TVET institutions' capacity to deliver relevant, industry-aligned education, making it more difficult for them to communicate effectively with universities. While centralisation may ensure standardisation, it can also constrain responsiveness by limiting institutions' ability to adapt curricula to emerging academic, industry, and articulation needs. This suggests a structural constraint on curriculum innovation, where responsiveness is dependent on slow, top-down processes. TVET students would continue to face barriers to their academic development and employment without comprehensive curriculum revisions and strengthened university partnerships. Education authorities must collaborate to address this issue and ensure that TVET courses remain comprehensive, competitive, and up to date (Ndzoyiya & Matsiliza, 2022).

4.3.2 Theme 2: Potential Benefits of a Well-aligned Pathway

Themes and sub-themes addressing the second question: What are the potential benefits of a well-aligned TVET-to-university pathway for the wider education system and labour market?

4.3.2.1. *Smoother Transitions*

The study revealed that achieving a change in curriculum responsiveness requires well-aligned articulation pathways. This can be achieved through a smooth transition, as some participants mentioned, when both institutions permit it. One of the participants alluded to this, stating that articulation will be easier and said, “It can be easier for them to switch between the college and the university, if there was articulation” (Lecturer 1). Other participants also highlighted some benefits gained when there is articulation with curriculum responsiveness and said, “It’s going to be easy to climb the ladder for the students” (Lecturer 4). These responses suggest that articulation is not only a structural mechanism but also a pathway for social and academic mobility, enabling students to progress within the education system without unnecessary barriers. Another participant agreed with the statement:

It will also help you become a better person, as studying is something we all need to do. It is within the hierarchy of needs that you should continue moving up. Make yourself better. I would say it would be beneficial for you to study further. (CDS 2)

The articulation with curriculum responsiveness benefits TVET graduates, as evidenced by more participants who possess knowledge from both TVET and university settings. Alumni 1 affirmed that a smooth transition is attainable, “I remember I did the

pastel system, and at the university, I also did the pastel, but it was more advanced. So, the knowledge I gained from TVET assisted me in coping.” This was further confirmed by Alumni 2, who mentioned that there would be more benefits if there could be articulation between TVET and universities. This suggests that articulation is most effective when there is curriculum continuity, where foundational knowledge acquired in one sector is recognised and built upon in another. Such continuity reduces duplication of learning and enhances the efficiency of the education system. The participant highlighted that when saying, “Because of the knowledge gained from TVET, I gained more knowledge and skills at the university.” The following participants, Alumni 5 and Alumni 6, confirmed that it was vital for there to be an understanding between the institutions. They argued that a better understanding and communication between the sectors can facilitate a smooth transition between TVET and university, as they responded, “I think maybe if you get a TVET diploma and be allowed for the entrance at universities of technology with credits, you have a smooth transition” (Alumni 5). Alumni 6 suggested that “both sectors must hold a meeting or workshop restructuring to discuss how the TVET curriculum can allow articulation for them to get better quality.” According to Lecturer 2, “In this way you get a better quality of graduate.” In higher education and industry, smooth transitions ensure that students or employees remain engaged and progress through the system, eliminating redundant steps and allowing individuals and organisations to move forward without unnecessary delays. Lecturer 5 said, “If more people are educated, more minds educated together, I believe they can come up with great things”, and (CDS 2) stated that, “With a well-aligned pathway, there

will be a deeper understanding of the career that you have chosen. You know, it will also minimise the failure rate at the university level.”

Additionally, CDS 4 mentioned that “A smooth transition will help to adjust this situation of people studying something that they are not even sure about.” In contrast, Lecturer 6 confirmed that:

It will eliminate the stigmatisation associated with TVET and the way society looks down on those who studied at TVET, as if it is something not relevant. A smooth transition enables individuals and systems to adapt quickly to changes, reducing stress and uncertainty. Whether students are navigating an academic journey, employees are advancing in their careers, or businesses are adapting their strategies, a smooth transition leads to a more positive experience for all involved.

Therefore, Lecturer 7 said, “TVET must consider how to prepare a student for that, and they must have a proper plan on how to accredit and allow transition.” In addition to improving the calibre of graduates, an organised approach to articulation will help create a more vibrant and inclusive educational system. Ultimately, encouraging more seamless transfers between TVET and universities will enhance learning opportunities, reduce duplication, and position students for success in both the classroom and the workplace (Chew, 2021).

4.3.2.2. Holistic Graduates

It is interesting to note that some participants applauded the articulation when a student gains more knowledge and performs better with experience from both sectors. Alumni 1 mentioned the experience gained by saying, “After TVET, because of the

experience gained, the industry believes in us more, hence I was already working with a TVET qualification.” Alumni 3 supported this by adding that, “I think the employers may value those graduates given the facts of their background and their blend of practical skills.” However, Alumni 4 disagreed with the aforementioned, stating that “I will say currently with TVET college, as old as the syllabus is, they do get experience, even though the curriculum is not teaching what is needed by the industries.”

This discussion continued with other participants emphasising that both sector knowledge and skills are important for improving performance. One alumnus responded by saying, “We know the world of TVET, and the good thing about TVET is that the practical training you receive in those 18 months equips you for the workplace” (Alumni 5). Another alumnus supported this by stating, “the TVET-to-university graduates have strong practical skills and experience, hence they are seen as well prepared for work by employers even though a holistic graduate is not just academically competent but also emotionally intelligent, socially aware, and career-ready” (Alumni 5). While Lecturer 4 felt that, “There are careers that require intense training compared to being more academic in nature.” This statement contradicts the idea of transitions, as the participants believe that TVET serves its purpose by offering more skills than theory, especially academic skills, which universities also provide.

Meanwhile, Lecturer 5 mentioned that students from TVET should have the chance to pursue further studies at universities, as both knowledge and skills can help reduce unemployment and said, “Yes, we have a high percentage of unemployment, and our students contribute to that because when they finish their studies, they often struggle to find jobs. However, perhaps, they can transit to universities” (Lecturer 5).

CDS 1 confirmed that this transition will “increase and improve employment opportunities for the TVET graduates.”

Exposure to diverse subjects and experiences fosters creativity, problem-solving skills, and the ability to connect ideas across different fields. In agreement with this CDS 2 mentioned that, “It will also minimise the failure rate at the university level”, while another participant added that:

It will make life very easy for everybody — everybody in the whole community, in the whole of South Africa, in the whole country — because a well-structured pathway encourages curiosity and a mindset for continuous learning, allowing graduates to adapt to evolving industries and personal challenges. (CDS 4)

4.3.2.3. Labour Market Alignment

Some participants expressed concerns about labour market alignment when there are well-aligned pathways of articulation between TVET and universities. For instance, one alumnus said, “Yeah, there is a difference at TVET. I think they do not cover everything; they want to cover in the practicals, you get to learn maybe half of what they are doing at universities” (Alumni 2). However, another alumnus diverged and insisted that “the practical skill and knowledge in TVET programs prepared me for the industry.” Dynamic, well-aligned pathways enable individuals to quickly reskill and upskill in response to evolving labour market trends. Lecturer 2 supported that by saying, “We must come out of that consultation and with the industry and with the student body as well”, and Lecturer 3 said, “Aligned pathways encourage teamwork for

subject committees; they do indicate trainings that need to be done so that one can be more relevant.”

Other participants disagreed that TVET students need articulation to perform better in the industry; they believe the TVET curriculum was designed to offer skills, as Lecturer 1 mentioned that “the purpose of TVET is not for students to complete TVET and go to university. The focus is on creating artisans, so students who attend TVET must complete their training and enter the industry. That’s their specialisation. Not for articulation.”

Another participant noted that achieving all this requires significant effort from the TVET side, as establishing strong relationships with industry is essential. This ensures students receive practical experience, enabling them to perform better and reducing redundancy. (CDS 2) elaborated on this by saying “we respond to our district and local municipalities in a way, for instance, if there is a mine here, it means that we offer programs that are related to mining.” Alignment between educational institutions and employers helps bridge the gap between what graduates know and what industries require, ensuring that students with both theoretical and practical skills receive better opportunities. Lecturer 4 mentioned that “TVET has a good reputation because they make sure that students are fully equipped in terms of skills.”

Employees with the right skills enhance business productivity, foster innovation, and contribute to national economic growth. Collaboration between businesses, policymakers, and educational institutions ensures that curricula stay relevant and that work-based learning opportunities are accessible. When updating policies, stakeholders must be informed and engaged, as their participation is vital for alignment. Many factors

influence how employers utilise qualifications in labour markets; for instance, some qualifications fail to encompass all required skills, and institutions often provide skills that do not align with industry expectations (Allais, 2017). The relationship between higher education institutions and the labour market is essential, as it boosts the country's economy and ensures that institutions offer relevant courses and in-demand skills (Nkwanyane et al., 2020). To accomplish this, Kruss and Petersen (2016) recommend that all relevant stakeholders in education develop a better understanding of how to respond swiftly to technological advancements and the skills required by the market. To support this, DHET will need revised policies and new strategies to meet employers' needs, promote teamwork, and strengthen relationships.

4.3.3 Theme 3: Enhancing Curriculum Responsiveness for Quality Education

Theme and sub-themes responding to the third question: How can curriculum responsiveness articulation be enhanced to achieve quality education?

4.3.3.1. Standardise Accreditation Criteria

A standardised criterion can foster clear communication and enhance students' perceptions of TVET, thereby reducing criticisms of TVET qualifications. Concerning how to improve curriculum responsiveness and articulation to achieve quality education, the participants expressed the following sentiments: “Universities need an accounting syllabus that considers the modules you have covered before the accreditation” (Alumni 1). Lecturer 2 also expressed hope for accounting students regarding curriculum responsiveness, stating, “At the moment, we are in negotiation with the body called ATSA (Accounting Technician South Africa). We are currently negotiating to align with the occupational programmes.” If the criteria are not standardised, it may affect TVET

students. Alumni 2 pointed out how they were affected by the lack of standardisation of the criteria, “As I have mentioned, I did financial management and business management, but I had to start again from scratch.”

The Council on Higher Education (CHE, 2021) also emphasises that a fragmented accreditation system restricts mobility, making it difficult for TVET graduates to progress into higher education. Therefore, Alumni 4 urges DHET that, “When they design curriculum they must accommodate students as early as grade 12 where students have the opportunity to either choose university or can choose the TVET,” and Alumni 5 comments, “I think maybe universities are far higher than the TVET,” while Alumni 6 recommends that better criteria could reduce students’ need to start from scratch. They also noted that, “Universities must also create the entry requirements for students coming from TVET with a diploma, not to be considered like someone from matric.”

In this sub-theme on standardised accreditation criteria, participants clearly stated that the new occupational programmes introduced by DHET, which can assist students with articulation, do not support students already holding National diplomas from TVET. The QTCO is phasing out diplomas in favour of occupational programmes. CDS 4 mentioned that, “We are now having QTCO also coming in to assist in order for the curriculum challenges to be addressed accordingly.” Lecturer 4 said, “You know, QTCO accreditation is different from the accreditation like NQF’s. You find that a person has done a three-year course, but the credits are lower.” However, it was also praised by (Lecturer 1) that, “Their credits are something closer or similar to what the university is offering.” While CDS 2 added more about the content saying “Introducing the QTCO

programmes, which they've got three components. It is theory, practical and work replacement." Additionally, CDS 3 mentioned that:

Progress was too slow because the QTCOs being introduced are slow to respond to challenges, which means that, with these occupational programmes, a student can be easily accredited to a university. Yes, it is a positive change for articulation, but it does not resolve the existing challenge of students completing diplomas at TVET institutions without receiving the required accreditation from universities under the NQF system.

Therefore, some other participants also appealed to the department and institutions to improve curriculum responsiveness by ensuring they monitor and provide support for both TVET and universities. Lecturer 7 said, "They must have a proper plan on how to accredit and allow transition", and Lecturer 5 said, "The University needs to check or needs to have criteria that will cater for TVET students." CDS 1 added, "Remember, any set about change has to be mandated." Lecturer 6 proposed that "There must be a link to assist articulation between TVET and universities." The DHET (2023) Articulation Policy addresses these concerns by recommending a well-structured framework for collaboration between TVET colleges and universities to ensure recognition of qualifications across the post-school education system.

The participants' responses indicate significant gaps in accreditation and curriculum alignment between TVET and universities. While initiatives such as QTCO programs aim to enhance articulation, problems persist, particularly in credit recognition and in delays in policy implementation. A unified accrediting system will not only

simplify student transitions but also enhance TVET's legitimacy, providing a viable pathway to further education and employment.

4.3.3.2. Curriculum Harmonisation

Curriculum harmonisation ensures that students can smoothly transition from TVET to higher education institutions, such as universities. The smooth transition from TVET to university may lead to alignment of course content across universities and TVET institutions. To align the TVET syllabus with university curricula, it is essential to update it to meet industry needs regularly.

Participants held varying views on this category. Lecturer 4 said, “There must be some implementing strategies as to how we are going to work together to ensure that these two sectors speak to each other.” Lecturer 3 came up with a strategy: “To do the research, update the syllabi and curriculum, update the curriculum, make them more relevant to ensure the TVET syllabus is updated and recognised by universities for accreditation.” Other participants suggested involving the industry to enhance the curriculum's responsiveness. A participant said, “We will have what we call a partnership with the industry when they decide on the curriculum” (CDS 1). To this, Alumni 1 responded that, “The first thing is to prepare study material, not rely on materials compiled by some other person, and have information that is not enough.” While Alumni 2 said, “Universities must be aligned with TVET colleges so that when we want to further our studies at universities to receive accreditation.” In order to align the two curricula to promote articulation, Alumni 3 encouraged partnership by saying, “What if we established a partnership that is not just between TVET and industry, but also between TVET and universities so that their curriculum will be aligned?” Establishing a

partnership that included the university, as well as TVET and industry, was supported by Alumni 5, who said, “The TVET curriculum must be at least uplifted; the weight of the curriculum, as I said, is too light.” In support of that, Alumni 6 mentioned that, “There must be credit transfer to some of the TVET modules, and it must be upgraded to include academic writing and conducting research.”

Meanwhile, Lecturer 7 alluded that they must “design a curriculum that will correlate with what is expected from the TVET syllabus.” Lecturer 6 suggested “Curriculum linking to assist in articulation, for instance, the exit level in TVET linked with the entry level in universities that will help students from TVET who want to further their studies at university.” The primary purpose of updating the syllabus must be to improve articulation, so that students starting at TVET are not perceived as wasting time when they wish to pursue further studies. Grijpstra (2015) highlights that building a solid structure to balance theory and practice will not only enhance student flexibility but also increase the employment rate and produce graduates who meet both academic and industry standards.

4.3.3.3. Bridge Programs

To enhance curriculum responsiveness, several initiatives are needed, such as offering short courses or workshops to promote articulation between TVET and universities. Bridge programs incorporate vocational training or real-world applications, preparing students for workforce demands while also enabling them to further their studies. The above statement is supported by Alumni 3, “I think it should be able to incorporate ...uh, both the theoretical content, which will force the academic writing and maybe a bit of research skills.” In contrast, other participants do not support

bridging the gap in TVET programmes because they seem to carry the same value as universities, but it is a matter of recognising them according to the NQF system.

Lecturer 5) said, “It is not that our curriculum causes the gap. It is caused by the universities not considering the TVET.”

The role of technical and vocational education and training colleges has become vital in developing countries like South Africa, where the government must invest in education and training intervention programmes to upskill youth and the workforce (Makole et al., 2023). Participants shared different views on bridging programmes to help TVET students integrate well into university syllabi. Lecturer 1 mentioned that there was a course specifically for TVET students who wanted to further their studies for lecturing at TVET colleges. “They simply did the NPDE” to qualify to teach at TVET colleges.” Lecturer 6 supports that “It is happening, I think TVET and the university of technology accommodate TVET students.”

Bridge programs help students acquire the foundational skills and knowledge needed to succeed in higher education or specialised training. Therefore, Alumni 4 believes that there is no need for universities to group TVET graduates with learners with matric in the requirement criteria and responded by saying, “Let them not be required to meet requirements, but let them accept this National diploma based on whether the student is taking the correct career route or what he was doing while at the TVET college.” Alumni 5 supported the previous alumnus by mentioning that, “They can start to redevelop the curriculum, and that is the only way to articulate.” Similarly, Alumni 6 stated that, “They must make the TVET qualification or curricula to align with the university by adding maybe research and academic writing methodology study.” To

see that happen, Lecturer 3 highlighted that “there should be meetings between stakeholders so that they engage on how to bridge the gap between the two.” CDS 2 mentioned an existing bridging program in which TVET lecturers and students visit industries to familiarise themselves with current developments.

Makole et al. (2023) suggested that SETAs must initiate programmes that promote articulation and curriculum responsiveness by ensuring that both employers and curriculum makers actively participate in the delivery of trades and occupations.

4.3.3.4. Collaborative Committees

Collaborative committees play a crucial role in ensuring that TVET and universities remain dynamic, relevant, and aligned with industry, promoting articulation for growth. These committees bring together key stakeholders to shape and refine curricula for better learning outcomes. Participants shared their sentiments about collaborative committees that establish joint TVET-university task forces to design integrated curricula and articulation pathways. Lecturer 6 said, “These two sectors must speak the same language because the main purpose is to assist the students,” whereas CDS 2 disagreed with collaboration and mentioned that, “We are not obliged even to have that collaboration, for those who are collaborating. It is just between themselves and the university.”

Collaborative committees provide a platform for diverse opinions to contribute to curriculum design, ensuring a comprehensive and inclusive approach. Therefore, CDS 4 supported this by saying, “So it needs to be progressive. So we need the experts to come and sit so that they will collaborate so that it will work.” The other participants mentioned that collaboration was already happening. Lecturer 4 said, “If you look into X

university, which is very much traditional, the university now has a course that they are offering to assist the curriculum.” Institutional partnerships and stakeholder collaboration provide more opportunities for the TVET sector to acquire new skills and stay up to date with trends and to advance in academic studies (Makole et al., 2023).

Educational institutions can collaborate to share best practices, resources, and innovative teaching strategies, promoting a more cohesive education system that enhances articulation. This was also mentioned by Alumni 1, who responded that, “To work together, maybe that will make it so different so that students are not disadvantaged.” In support of that, Alumni 3 stated, “Let the academic board from this institution sit together and find a possible way.” Hence, Alumni 5 alluded that “The top management must sit down with the university structure and check why the TVET students are not accredited.”

Enhancing the interaction between TVET and universities can help to remove barriers for TVET, as they still offer programmes with outdated curricula; some participants mentioned a gap that affects teaching and learning. TVET employs an antiquated rate for calculations, while universities use a more modern rate; this influences accreditation, provided that programmes are available to support students in improving articulation.

4.3.3.5. Industry-Academia Partnership

Industry-academia collaboration enhances recognition of TVET competencies within university programmes, promotes credit transfers, and reduces redundancy in learning pathways. Universities and industries must be involved in TVET syllabus development to ensure relevance. Participants covered this by mentioning a few points.

Lecturer 3 said, “To the department, they are the ones who need to sit with other stakeholders from higher institutions to check. How can they bridge the gap?” Followed by, “I think there must be meetings of stakeholders from the universities in TVET and the industry partners, you know, because these students come and go to the industry” (Lecturer 2).

The participants continued to share opinions on this sub-theme, expressing that they felt strong partnerships help develop standardised frameworks for credit recognition, qualifications, and competency-based education, ensuring smoother articulation between TVET and higher education. For instance, Alumni 3 said, “As far as I know, they wanted to meet the demand of the industries so the curriculum is more aligned,” and Lecturer 1 encouraged partnership, as and said, “We must form a partnership with the industry, to support lifelong career growth.”

However, Alumni 4 disagreed, arguing that the curriculum is not aligned, and said, “I will say currently with TVET college, as old as the syllabus is, at least the students do get experience, even though the curriculum is not teaching what is needed by the industries.” Conversely, Alumni 5 believes that TVET is aligned, stating, “I think TVET students are more ready to join the workforce than any other because we know different worlds- knowledge from TVET and knowledge from universities.” The participant was supported by another, who added, “The practical skills and knowledge in the TVET programme prepared me for the industry” (Alumni 6). However, (CDS 3) raised concerns about the government’s lack of resources and support for articulation, stating, “There are not enough industries to accommodate all students’ intake.”

Partnerships are always dynamic processes that advance over time in response to changing external conditions and internal dynamics (Njengele, 2024).

Partnerships between industry and academics are critical to ensuring that TVET qualifications meet both university and industry criteria. Although specific collaborations already exist, more effort is needed to standardise credit recognition and progress, align curriculum, and address resource constraints (Naziz, 2019). Supporting stakeholder participation, as well as government and industry involvement, is required to deepen these collaborations and establish a smoother articulation pathway between TVET and higher education institutions (Kruss & Petersen, 2016). Providing best practices through practical sessions, fieldwork, and internships can help students gain practical workplace knowledge. Without this, TVET education can lead to gaps between the skills acquired and labour market requirements (Nkunya & Mwila, 2024).

4.3.3.6. Extend TVET Duration

Enhancing curriculum responsiveness can be effectively promoted by extending TVET duration to meet university standards, enabling articulation and supporting seamless transitions between TVET institutions and universities. This approach equips graduates with both practical and academic competencies. Participants discussed this as follows:

Alumni 2 stated that, “At TVET, the theory is for 18 months and at universities you study for 3 years, and maybe if they can change the duration from TVET.” Lecturer 3 agreed, saying, “Yeah, and the duration is not the same here, it is for 18 months, getting training for 18 months, so unlike universities.” Alumni 3 suggested that to improve the curriculum, “There must be something on the curriculum that is going to

teach them about research and methodology.” These comments show that the relatively short duration of TVET programmes may not allow students to acquire the full range of knowledge needed for accreditation. Extending the programme could help TVET students meet university entry criteria more easily, reducing the need for additional bridging courses (Norodien-Fataar, 2024). In addition, Alumni 6 supported this by saying, “There must be a bridging course to foster articulation between TVET and universities.”

Extending the duration allows for greater integration of theoretical knowledge alongside practical training, ensuring that students meet university entry requirements while maintaining technical expertise. CDS 2 mentioned that, “Our curriculum must be driven by the industry and not by the department.” This response argues that an extended TVET duration should incorporate more academic subjects, while also utilising the additional time to blend skills and knowledge relevant to both universities and industries.

Other participants highlighted the differences in curriculum between TVET and universities that influence articulation and accreditation. CDS 3 noted that students from TVET seeking accreditation need to “increase the number of modules they do so that universities will accommodate TVET students.” At the same time, a lecturer emphasised that there must be clear communication regarding the number of credits received at each level of NATED courses to enable registration at universities:

Even more. In detail, as time passes, if the student completes N4, what credits will they gain? If he finishes in N4 and N5, what credits will they receive if he completes N4, N5, and N6 without an internship, having finished his studies?

Now, what will he gain if he completes an internship? What will they get?

(Lecturer 1)

CDS 1 suggested that at TVET, pass rates should increase because a longer TVET duration allows students to master technical skills, critical thinking, and problem-solving, making them more competent for both the workforce and higher education. A well-structured, extended TVET programme can include university-preparatory courses, allowing students to earn credits, transfer their qualifications, and continue their higher education without redundancy (Njengele, 2024).

4.3.4 Theme 4: Why Current Articulation is Applied this Way

Theme and sub-themes responding to the fourth question: Why is the curriculum responsiveness of articulation between TVET and universities applied the way it is?

4.3.4.1. Institutional Competition

Students, parents, and the broader community tend to pay less attention to TVET diplomas than to university degrees, primarily because of curriculum gaps that hinder articulation (Tamrat, 2019). As a result, this may discourage students at lower levels from developing a confident interest in joining TVET institutions, thereby affecting enrolment rates.

The study has revealed that most universities do not collaborate with TVET colleges, as participants indicated, suggesting that universities and TVET colleges often operate in silos. They prioritise their own agendas over student needs, which may prolong the process of curriculum responsiveness and impact the main objectives of articulation. Other participants have expressed concerns about how articulation is applied. Alumni 1 stated, “If you go to university, there is no assistance, no

accreditation, but what I have heard from other students is that if you go to a technical school, there is accreditation, they will accredit you.” This suggests that some universities consider diplomas from TVET, while others do not, indicating a competitive difference.

Universities may resist full integration with TVET institutions due to perceptions of differing academic standards, which can influence their reputation and rankings. According to Sebola (2022), higher education institutions have specific competency standards they follow to promote students to the next stage of knowledge, which are similar but notably different from the promotion standards of TVET colleges. Alumni 3 highlighted the disparity in curriculum design between the two sectors, which creates competition: universities prioritise theoretical and research-based learning, whereas TVET colleges focus more on practical skills. Alumni 3 said:

I would say there is a significant gap between TVET curricula and university programs. The reason I say this is that the curriculum at the TVET College where I studied was more focused on practical skills training. However, at university, I encountered challenges because I realised that university is more about theory and research. Therefore, there was a significant gap.

Alumni 5 also mentioned that, “Now the issue is that both sectors are competing and do not care, even if they could accredit TVET students with a diploma, at least with a year to further their studies, instead of starting from scratch.” Lecturer 6 concurred, stating, “I think what affects TVET students is the stigmatisation, and that goes a long way.”

Competition can lead to restrictive credit transfer policies, in which universities do not fully recognise TVET qualifications, forcing students to repeat a course or start from scratch rather than seamlessly transition. Some other participants mentioned the following: “It does not match in a matching stream in 100%. It is matching maybe halfway. They have got some percentages that match because you will find some students who have studied at the TVET level when you go there.” (CDS 4)

CDS 3 said, “At TVET, they have obtained knowledge and practical skills, whereas in the university, they obtain the theory part.”

In addition, Alumni 4 expressed the confusion by stating, “So I really think I do not understand the competition between the two”, and Lecturer 5 supported by stating, “The universities there are just ignorant about TVET because there is no specific reason not to credit them.” Institutions may hesitate to fully align their curricula with others due to concerns over losing academic independence or the ability to tailor programs to their specific strengths. This was confirmed by Lecturer 1, who noted that universities and TVET institutions operate on different dimensions. Lecturer 1 said:

We should not view it solely as a challenge, because we do need goats.

We also need sheep personalities. However, now the supply must be determined by consumer demand and the needs of these goats, so universities and colleges must provide.

CDS 2 mentioned that both sectors have different mandates and different curricula; therefore, “There is no need for articulation because the very existence of TVET colleges is to train artisans and to train skilled labour, not academics.”

The sub-theme discussed by participants suppresses articulation efforts, creating unnecessary obstacles for students seeking to transition from TVET to university. Resistance to credit transfers, curricular inequalities, and concerns about academic reputation all contribute to a lack of collaboration in these areas (Njengele, 2024). Addressing these difficulties would demand increased collaboration, standardisation of accrediting processes, and a shift in attitudes toward the value of TVET qualifications.

4.3.4.2. Outdated Policies

The fundamental policy for articulation is the NQF, which outlines the levels per qualification and the requirements to reach the next level, ensuring a clear vision for the qualification structure (Norodien-Fataar, 2024). However, this policy is not adequate for recognition by universities, as they also have their own policies, especially regarding course entry requirements. The research also examined potential barriers to curriculum responsiveness and articulation between TVET and universities, and investigated why transfer systems are not standardised and accreditation processes lack transparency. The following is what participants said: Alumni 1 said, “Universities are using rates for 2024 in the calculations, whereas in the colleges, they are using the old one from the syllabus,” and Alumni 3 shared the sentiment:

I think it begins with the policymakers, the developers of the curriculum.

There is a significant gap that needs to be addressed. This institution is part of the same department, yet the others cannot be accredited for university entry, which is unfair.

Alumni 4 mentioned that students who are sometimes not qualified with university entry requirements, “Will remain at the TVET colleges doing NATED courses,

which I really feel have an outdated curriculum.” Alumni 5’s advice to the department about the outdated policies was, “They need to improve the syllabus and other things that affect accreditation.” Thus, it affects articulation and curriculum responsiveness, resulting in a lack of information. Lecturer 6 attested to this, saying, “They lack information about the curriculum and what is going to happen after the qualification is obtained.” Lecturer 7 mentioned that TVET does not have its own curriculum; it inherited the FET curriculum. That curriculum served a different purpose or had a different vision of what it had to achieve. “This means TVET colleges do not have a curriculum of their own, but it is the curriculum from FET during apartheid.” Therefore, the TVET curriculum and the universities’ curricula do not correlate, as the TVET curriculum has an outdated syllabus. CDS 4 said, “TVET curriculum is outdated, our institutions are especially outdated because the systems are outdated. Whatever TVET is using is outdated.”

Outdated policies may lead to dysfunction within the entire department, resulting in the production of high-quality graduates who are unable to perform effectively in industries. As one participant mentioned, they use older rates for calculations, which affects performance. CDS 2 suggested that, “That is why they used to call it the vulnerable sector, because there is no proper bridging as mentioned by CDS 1. There is still no proper bridging, and it has fewer modules compared to universities.” CDS 3 said, “It is only the modules, and they are not enough.” Norodien-Fataar (2024) states that a significant issue is the gap between policy objectives and their implementation.

Ultimately, participants' responses highlighted that outdated policies create unnecessary challenges to curriculum adaptation and articulation. If authorities do not review

regulations and curricula to align with modern industry and academic requirements, and fail to implement policies, TVET college students will continue to face difficulties in achieving university accreditation and securing suitable employment prospects (Khumalo, 2022). Creating policies that authorities will not implement is pointless because it defeats the purpose.

4.3.4.3. *Philosophical Difference*

The philosophical differences between TVET institutions and universities significantly impact the articulation process, shaping how students transfer between the two sectors.

TVET's vocational approach clashes with universities' academic/research-oriented approach: TVET offers a practical curriculum, while universities offer a theoretical one, and there are also clashes in the period of study. Participants shared their views and, as Lecturer 4 said, "They are offering skills programs which are less content and more skill, more practical." Makola et al. (2023) agree that TVET colleges are perceived as offering less advanced education.

Similarly, Lecturer 3 mentioned that, "They have got a different weighting of a particular subject." In addition, Sebola (2022) argues that although TVET colleges do not qualify as higher education institutions, they also fail to advance as quickly as higher education institutions in terms of pass rates and entry requirements. The participants also mentioned that, although TVET and universities are part of the same department, they often operate as if there are no commonalities. Lecturer 6 mentioned that, "TVET colleges design their curriculum on their own, without referring to what is happening with articulation." On the contrary, Lecturer 5 compared TVET colleges, treating them like

orphans, saying no one cares about them and they are treated anyhow because there is less intervention to assist TVET with articulation and the struggle. Lecturer 5 said:

TVET is like a baby who lost both parents, sits in the corner, and the one that has parents is a basic department every time they are fed, and then they are dressed nicely, which makes it easier for universities to see that these are dressed nicely, and then they pick them because they are dressed nicely and fed right.

While CDS 1 said, “But you look at the gap between high school and especially University, that is why you've got so many dropouts”, and Lecturer 1 concurred, “In one year, the diploma is made of 12 modules, whereas in university that number of modules is completed in approximately one year.”

TVET emphasises hands-on, skills-based training for immediate employability, while universities focus on theoretical knowledge, research, and critical analysis. This difference affects how courses are designed and how credits are transferred between the two systems. CDS 2 concurs that, “There is a component that is lacking. The practical component, which would run concurrently with theoretical classes.” To this, CDS 3 added, “The qualification for TVET lacks only the modules.”

Moreover, TVET does not offer academics, while universities do. Universities are often perceived as more prestigious than TVET institutions. This philosophical divide influences the design of articulation pathways, sometimes limiting the full recognition of TVET qualifications in higher education. Alumni 5 mentioned that “TVET is supposed to promote the hard work of students, not push them to pass.”

The gap between TVET and university curricula underscores that they belong to the same department, despite universities often preferring the high school (Grade 12) curriculum over TVET graduates. This raises questions as to why there are so many differences. Some participants expressed concern that universities operate independently, applying articulation selectively in accordance with their own institutional policies, which may have a significant impact on accreditation. Others mentioned that universities are not obliged to form collaborations, which may also have a substantial impact on accreditation. Others mentioned that universities are not obliged to form collaborations, which may also have a substantial impact on accreditation. Others noted that universities are not obliged to collaborate with TVET colleges. According to Makola et al. (2023), many countries view TVET college lecturers as inferior.

4.3.4.4. Lack of Advocacy

The lack of advocacy for strong articulation between TVET and universities contributes to challenges in creating seamless student transitions. Without sufficient advocacy, systemic barriers remain unaddressed, limiting the effectiveness and recognition of TVET qualifications in higher education (Chiramba & Ndofirepi, 2023). Participants responded that a lack of advocacy results in limited communication between these two sectors, leaving many students and other stakeholders unaware of articulation opportunities between TVET and universities, thereby hindering the utilisation of existing pathways. Lecturer 6 said, “TVET is affected by stigma, which causes a lack of communication between TVET and the university.” Lecturer 7 pointed out that:

A lack of information about colleges and their offerings affects learners' careers from a young age. Even now, high schools are pushing for high performance rates and a mix of subjects that does not encourage students to choose better courses, making it difficult for them to meet university requirements. They then want to join TVET with the hope of moving to university, but when the time comes, the university will not accommodate them with a TVET qualification.

Advocacy plays a key role in fostering industry-academia partnerships. Without it, TVET graduates struggle to gain recognition for their skills in both universities and the labour market. Lecturer 4 suggested that to achieve communication and better understanding, "Both sectors need to be involved because students who are learners in high schools are their future students. So they need to be well informed."

Effective articulation requires collaboration between TVET institutions, universities, and industries. Without advocacy to promote stronger partnerships, these connections remain weak, thereby limiting curriculum alignment and credit recognition. To make changes, especially for the benefit of TVET lecturers, an upgrade is necessary. CDS 2 responded, "I will say maybe it will be the credentials of the staff that we have at TVET colleges. Look at basic education. You will no longer find a teacher with a diploma, as they have discontinued the diploma program."

Without sufficient advocacy, universities may resist recognising TVET credits, making transitions difficult and forcing students to repeat coursework unnecessarily due to content alignment between the two sectors. CDS 4 mentioned that even the book writers used at TVET sabotage the advocacy, as they do not follow the syllabus.

“Our bookmakers, they are not driven by giving content to a student, go out and perform there, they just give more on the theory part, more than the practical part.” (CDS 4).

CDS 1 added that it may be improved if changes are being made, and offers relevant knowledge and information for better opportunities, “So you know you have got to constantly change based on what is happening. Are we keeping up to date, or the syllabus kept up to date, or the students up-to-date or the universities?” Advocacy is crucial for fostering collaborations among TVET institutions, universities, and companies. Without a well-structured advocacy effort, these collaborations remain underdeveloped, leading to poor curricular alignment and credit transfer issues (Chiramba & Ndofirepi, 2023). The participants’ views demonstrate that higher education has neglected advocacy as a key role in improving education, promoting articulation, and forming partnerships. A good governance mechanism can facilitate transformation (Sebola, 2022), and for articulation to occur, two institutions must cooperate. Bolton et al. (2020) emphasised that institutions must actively cooperate to drive change. Better communication and advocacy practices increase the chances of better working conditions.

4.3.5 Theme 5: Actionable Recommendations

Theme and sub-themes responding to the recommendation to enhance articulation between TVET and universities.

4.3.5.1. Mandated Collaboration

Mandated collaboration between TVET colleges and universities is essential for establishing a well-planned, transparent, and seamless articulation system. Regulatory

bodies should require TVET institutions and universities to sign Memoranda of Understanding (MoUs) that clearly outline articulation terms, responsibilities, and student transition pathways. Participants discussed how this can be achieved and said: Lecturer 2, “I think to collaborate the communication, the meeting with the universities, but must not stop there, then it must be in policy and must be gazetted,” and Lecturer 3 added, “The training of the staff. Networking, creating networking opportunities for TVET, like collaboration between lecturers and identified universities.” A mandated collaboration may address past inequities (Simpson et al., 2024).

Some participants indicated what can contribute to TVET colleges' NATED qualification being recognised in articulation. Alumni 1 responded that “TVET must enquire from universities how students can be assisted in terms of articulation.” This promotes collaboration between the two sectors in order to strengthen the articulation, and Lecturer 1 supported that, saying, “I believe that we can combine and form one qualification. We need to work with universities to inform these qualifications, co-design curricula, and ensure alignment in capabilities, credit recognition, and skill requirements.” Participants agreed that for articulation to be effective, academic governing bodies from both TVET institutions and universities must collaborate to align curricula.

Lecturer 6 pointed out that improving institutional relationships is fundamental and said, “If they can first fix the relationship, then collaboration is going to take place automatically.” Alumni 4 agreed that, “Let the academic board from institutions come together and find a possible way.” While Alumni 5 responded, “Apparently, these people can sit together with whatever faculty to discuss the courses offered at TVET

and what can be done.” Additionally, Alumni 6 supports the notion that there must be an “accreditation transfer agreement between TVET and universities.”

Governments and educational authorities should establish clear policies that instruct partnerships between TVET institutions and universities to ensure structured articulation pathways. Lecturer 7 emphasised that, “Government has to play that role to collaborate with this institution because there is no communication between the two.” Whereas CDS 2 added that, “We need researchers now, people who will then go and speak to industry and so on. We do engage them, but not systematically.” Policies should mandate active industry involvement in TVET and university programs to ensure that curricula remain responsive to labour market needs and developing trends.

Mandated collaboration is vital to establishing a well-coordinated articulation framework between TVET institutions and universities (Naziz, 2019). Participants agreed that clear policies, MOUs, improved interaction, and established collaborations are essential to overcoming existing articulation challenges. Makgato and Moila (2019) agreed that clear collaboration ensures the rapid absorption of TVET graduates into the workforce and improves curriculum delivery.

4.3.5.2. Modernise the TVET Syllabus

The modernised TVET syllabus should be structured to facilitate smoother articulation with universities, allowing students to transfer credits seamlessly without unnecessary repetition. Regular collaboration among TVET institutions, universities, and industry should be mandated to ensure that the syllabus reflects current job-market demands and higher education requirements. Lecturer 2 highlighted that universities tend to undermine TVET content and that this leads to failed collaboration, and said:

It must be recognised because it is not a zero content, but if they can bridge the gap between TVET and universities, we can produce more engineers for our country. Content-wise, I am unsure what the university covers, but I know it is not entirely empty.

CDS 4 supported that and said, “So...whatever they will be doing, they will also check the TVET syllabus. They will use what they currently have and see how they can align the subjects.”

Participants shared what they believe will assist the DHET regarding the issue, as well as what can be done to ensure regular updates with input from universities, industries, and current lecturers. A few participants responded as follows: Alumni 1 said, “I think the college must actually allow or maybe take input from lecturers,” whereas Alumni 3 responded, “In TVET colleges, we have partnerships with industries that also assist with teacher development or lecturer development.” Alumni 4 mentioned that the two sectors can work together if they meet each other halfway. Alumni 5 concluded by suggesting that they need to “guide the TVET team on ways to improve the syllabus.” TVET programs should introduce interdisciplinary courses that blend technical skills with business, sustainability, and entrepreneurship, thereby broadening career and academic opportunities for graduates. Hence, participants mentioned a DHET course to improve articulation within TVET colleges.

Lecturer 1 stated, “These QCTO occupational programs, which are being introduced, can be aligned with what universities need for articulation.” Also, CDS 1 said, “I just think the QTCO coming in has been a big thing with the syllabus changes, you know, the syllabus has changed, there has been a big push from the industry.”

Strengthening partnerships with industry can help incorporate apprenticeships, internships, and real-world projects into the TVET curriculum, making TVET education more dynamic and relevant. Lecturer 7 said, “Our curriculum must be driven by the industry and not by the department.”

Modernising the TVET syllabus is crucial for enhancing articulation with universities, ensuring industrial relevance, and providing students with a comprehensive educational experience. According to Mantashe (2024), addressing current gaps in TVET and skills development is critical for greater alignment with changing sectors and future employment growth. Furthermore, Cai and Kosaka (2024) emphasise the importance of TVET in equipping individuals with technical skills and competencies, thereby enhancing employability and facilitating smoother transitions into higher education and the workforce.

4.3.5.3. Lecturer Training

Well-trained educators keep curricula relevant, apply effective teaching methods, and prepare students adequately for seamless transitions between TVET and university programs. By establishing minimum qualifications and competency-based certification requirements, lecturers across both sectors meet high teaching standards. These were confirmed by Lecturer 4 when indicating a relationship between university and TVET lecturers and how it is going to assist curriculum responsiveness “if they are studying like the ones that are always studying at the **** university, those one’s they have got full support from the professors and lecturers from the university, I felt like they understood what they are expected, you know, they understood the TVET sector.”

The Department of Higher Education participates in preparing lecturers by assisting with teaching aids and by allowing them to visit industries through the Workplace-Based Experience (WBE) programme, which aims to familiarise them with new developments in industry and to identify areas for improvement in the syllabus. CDS 2 said, “I know, especially coming from the department, what they give us is the teaching learning plan, which is a framework. Yes, that is a document to use.” Lecturer 7 supported this and said, “When they go to the industry, they have to perform better. Therefore, it pushes a lecturer to do research and find more information to expand the TVET curriculum.”

TVET and university lecturers should undergo regular training to stay up to date on industry trends, new teaching methodologies, and technological advancements. This was supported by CDS 4, “I think if it should be a committee, or the experts of TVET curriculum implementers and policies, who sit together with the universities. They can engage in sharing this information so that this can be easily accomplished.”

Lecturer training is crucial for enhancing articulation and ensuring curriculum responsiveness. Institutions should implement structured training programs, foster industry collaborations, and promote continuous professional development initiatives (Wedekind et al., 2024). By bridging knowledge gaps and aligning teaching practices with industry and university standards, lecturers can significantly improve student transition pathways, ensuring that TVET graduates are well-equipped for further education and career advancement.

4.3.5.4. Policy Reform

Governments and education authorities should develop formal policies that define pathways between TVET and university programs, ensuring that students can progress without unnecessary barriers. One participant mentioned a policy gazetted by the former Minister of Higher Education. CDS 4 said, “There is a policy that was a draft, which is called the draft articulation policy, that tried to adjust this gap and make sure that the situation is taken care of.”

Policymakers should implement a national or regional policy that mandates universities to recognise TVET qualifications, enabling students to transfer credits and reduce curriculum duplication. Lecturer 6 mentioned that, “While they put people in the right positions, development policies will speak to what you want to achieve.” A periodic review process should be recognised to ensure that articulation policies remain relevant, responsive to curriculum advancements, and aligned with developing industry needs.

4.3.5.5. Student Guidance

Student guidance is required to provide career counselling in TVET colleges, clarifying university pathways and accreditation requirements. In support of this statement, a participant alluded that if there were articulation guidance, articulation would be smoother. The Department should create a clear, step-by-step guide to help students understand how to transition from TVET to university programs, including credit transfer policies and the recognition of qualifications. A few participants mentioned that student guidance can significantly assist in articulation. Lecturer 4 said,

“Yeah, so I feel like they need to work together and organise workshops for students as early as Grade nine. The workshops will help students choose their career paths wisely when selecting subjects in Grade 10. They will also know which institutions to choose. Lecturer 7 added that, “Students must know their career paths from high school and prepare for TVET or the university. “This opinion highlights a recurring issue in South Africa's higher education system, as students often choose TVET as a last resort rather than a planned career choice. Without proper guidance, students may struggle with articulation processes, which can delay their academic progress. Lecturer 6 added that, “They must organise seminars to inform students about better opportunities when they want to transition, especially between TVET and the University of Technology.”

In addition to the technical skills they receive at TVET, students should receive guidance on communication, problem-solving, and adaptability to ensure a smooth transition into both university education and the workforce. Lecturer 1 alluded that, “Students should be informed before choosing their subjects to avoid this problem. If you choose to go to TVET, you should know that you are focusing on skills.” Although student guidance is available at registration, the process would be more effective if it occurred when students are still in high school. Because they have already begun approaching the tertiary level, they are under pressure, and their decisions can be compromised by their excitement about finding a space to study (Alnajjar & Hashish, 2024). In South African higher education, a lack of infrastructure poses a significant challenge for students transitioning from basic education, as there is insufficient space (Ayuk & Koma, 2019). Some students are high performers who excel academically and hope to gain admission to a university but end up enrolling at a TVET institution due to

limited space. They take the TVET offers with the hope of articulation after completion (Cloete, 2016).

4.4 Conclusion

This chapter presented data analysis and discussion supported by the literature. The data analysis, generated from the theme and sub-theme categories identified in the participants' data, captured their perspectives in the context of the research study. The next chapter will summarise the findings, draw conclusions, discuss the study's implications, provide recommendations for further research, outline the study's limitations, and conclude with a synthesis.

Chapter Five

Summary, Implications of the Study and Conclusions

5.1 Introduction

The previous chapter discussed the findings from the individual interviews. This chapter provides a summary of the study, based on the key questions that guided it. This chapter outlines the study's implications, focusing on the research data related to challenges in curriculum responsiveness regarding articulation between the Technical Vocational National Diploma and the university. This chapter also presents suggestions for future research, offering additional insights and possible solutions to address articulation in South Africa's higher education. The chapter discusses and presents the study's dissemination and limitations. Finally, the conclusion will summarise the entire study, highlighting what was expected and how the findings were grounded in acquired knowledge and experience.

5.2 Summary of Research Study

5.2.1 Challenges in Curriculum Responsiveness

The study's primary objective was to investigate the challenges in curriculum responsiveness between TVET and universities. The key finding regarding these challenges is that some national TVET certificates are not recognised by universities when graduates seek to further their education for their careers. Lack of accreditation is a barrier to communication between TVET and universities. It has been shown that some TVET graduates start their education from the beginning, like a matriculated

student, which can affect curriculum responsiveness and delay labour market entry and career advancement.

The study's findings clearly indicate that curriculum misalignment hinders the curriculum's responsiveness to articulation. TVET curricula are more practical than theoretical, unlike university curricula, which focus more on theory, thus further delaying progression in articulation. It is unlikely that institutions will admit TVET graduates for articulation, as the TVET national diploma curriculum covers 12 modules, whereas universities typically cover that number in a year. Therefore, this gap in the curriculum contradicts the NQF principles regarding the expectations for articulation at each level. The NQF system provides guidelines that structure the articulation of qualifications. The purpose of the NQF is to facilitate access and smooth mobility within education, thereby promoting better career development (Tuck, 2007).

The misalignment in the curriculum highlights the issue of misinterpretation of the NQF system between TVET and universities. Participants emphasise that the content is not the same; indeed, curricula can be designed differently due to the uniqueness of each institution. Nonetheless, they must align with the system of articulation's guidelines and principles to promote access and facilitate seamless movement within the qualification system (SAQA, 2017). Therefore, the lack of mobility in articulation results from insufficient academic preparation, creating a curriculum gap and inadequate academic pathways for students from TVET. The subsequent qualification level should build on the previous one, fostering curriculum responsiveness and articulation (Wotring et al., 2021). Currently, the duration of the TVET curriculum seems to hinder some programs from articulating smoothly, as the curriculum duration gap between sectors

worsens this issue. However, increased collaboration among all stakeholders can expedite the articulation process.

Stakeholders can be involved in many policies. Participants identified poor institutional collaboration that affects curriculum responsiveness, and the Department of Higher Education can rectify this entirely, as both institutions are part of the same department. Therefore, investing more in inter-institutional cooperation will enhance communication, improve performance, and facilitate better handling of matters for both institutions. Jalolov (2024) and Rai and Kulkarni (2023) define communication as a tool that brings order to the workplace and facilitates the application of policies in the education system. Poor collaboration may fail to achieve goals because communication does not occur during meetings or among stakeholders. The data provided in this study clarify all the tactics needed to address the articulation challenges identified.

Collaboration among all stakeholders can support the development of a national accreditation framework and the modernisation of curricula, thereby strengthening relationships among institutions and encouraging student support.

5.2.2 Potential Benefits of a Well-Aligned Pathway

The TVET-university pathway is a clear structure that can significantly contribute to education and the labour market. The labour market needs employees with relevant skills and knowledge to achieve better results. The connection between TVET and universities can make this possible, as the study's findings indicate that employees equipped with skills and knowledge from both institutions perform better. The link between education and work is complex, and different types of labour markets align with various educational approaches (Allais, 2017). A smooth transition provides a better

pathway for students from TVET, increasing access to higher education without forcing them to restart their academic journey. Better collaboration between TVET and universities leads to seamless articulation, which benefits from attracting high-performing students, especially those from universities.

The study has shown that addressing curriculum responsiveness challenges can reduce costs for the education system when a student repeats a course and decrease duplication of work. Seamless articulation might even help the NSFAS system save more money, for example, by allowing a TVET student to complete a national diploma and then progress to a bachelor's degree, the next level. This means there is no need to start from scratch, and both the education system and the labour market can save time and money.

In addition, the stigma associated with TVET performance can be diminished during a transition, thereby increasing labour-market productivity through both practical and theoretical factors. The findings show that articulation encourages gradual learning. Therefore, the well-rounded graduate can demonstrate both skills and knowledge valued by the labour market and potentially align with the curriculum. Curriculum responsiveness ensures alignment and prevents the implementation of outdated policies. As universities develop, educators anticipate that the TVET curriculum will adapt to support articulation. Curriculum alignment can help reduce the stigma and competitive nature surrounding TVET, fostering the skills and knowledge relevant to both the education system and the labour market (Wheelahan & Moodie, 2017).

The long-term advantages of a smooth transition and articulation will become clearer, potentially boosting student success, lowering dropout rates, enhancing employability, and promoting equity in access to higher education. This effort will make both articulation and curriculum responsiveness essential and valuable.

5.2.3 Enhancing Curriculum Responsiveness for Quality Education

The aim of improving curriculum responsiveness is to ensure that the education system offers programmes that are flexible and interconnected across all levels of education in South Africa. Participants suggested implementing bridging courses as a vital intervention to prepare TVET graduates for the academic challenges of university study. The inconsistency in how qualifications are structured between TVET and universities has led to a curriculum imbalance, which, in turn, contributes to a lack of accreditation. The various government bodies responsible for articulation, such as QTCO, CHE, SAQA, and NQF, may lead to fragmentation and hinder their collective implementation, resulting in curriculum misalignment with accreditation standards between TVET and universities, as noted by CHE (2023). Nevertheless, to meet accreditation standards, collaborative committees should be established to address issues of curriculum responsiveness. The lack of cooperation among these sectors presents a significant challenge, as participants noted that each institution operates differently despite utilising similar policies, thereby undermining the purpose of articulation. Additionally, to enable seamless articulation, both parties need to be involved in policy implementation and in the enforcement of guidelines to promote curriculum harmonisation.

There must be academic preparation to align knowledge and skills across levels; this will help close the gap in curriculum duration. The duration of TVET programmes should be revised to align with the university curriculum and meet the expectations of the next level. The duration gap influences curriculum responsiveness, making it comparable to a more intensive university curriculum, thereby undermining the aim of providing meaningful and seamless education pathways.

5.2.4 Why Current Articulation is Applied This Way

This study has revealed that curriculum responsiveness not only aligns the curriculum but also ensures it addresses articulation issues across the education system, both vertically and horizontally (CHE, 2023). Additionally, outdated syllabi in TVET programmes contribute to challenges in curriculum responsiveness. Apart from that, most TVET college programmes still use outdated syllabi. At the same time, universities update yearly according to economic trends and labour market demands then the outdated syllabus sidelines two important factors for graduates from TVET, i.e., seamless articulation for those who are willing to further studies and better employment opportunities, because according to participants, employers can invest more in those who have added a university qualification as they receive recent knowledge and skills compared to TVET graduates. Therefore, to close the gap, the introduction of a bridge programme is fundamental to support articulation (Black, 2024).

Participants continued to reveal that institutional competition exists. Stigma around TVET qualifications or studying at TVET institutions reduces enrolment figures, which, in turn, has a minimal impact on curriculum responsiveness in the articulation between TVET and universities. Stigma surrounding TVET qualifications or studying at

TVET institutions significantly reduces enrolment figures, which in turn affects the effectiveness of articulation (Langthaler et al., 2021). Moreover, universities compete with each other, intensifying competition for TVET. Without a strong relationship for collaboration and communication, it becomes challenging to create articulation pathways (Wheelahan & Moodie, 2017). The inconsistent recognition of TVET qualifications disrupts and undermines students' efforts to study at TVET, as well as university attitudes and rigid entry policies that require TVET graduates to repeat a level or content, thereby undermining articulation. Therefore, this perpetuates neglect of students' hardships and efforts, which, at a later stage, creates a stigma around the TVET system regarding authenticity and recognition within communities.

5.2.5 Actionable Recommendations

The primary aim of this study is to clarify the issue of articulation between TVET and universities in terms of curriculum responsiveness. Participants have shared their opinions on areas for improvement in this process, which has established a connection between the applications to support transformation. This work among these institutions can offer constructive guidance on how the articulation can be enhanced, which may help HET align and review its policies. Collaboration between these institutions fosters a partnership in applying policies to enhance the education system. This partnership can foster a strong relationship that will help close the gaps within curriculum policies, as participants have mentioned that some students occasionally do not have opportunities to further their studies in HEIs.

Lecturers at TVET must receive training to address the knowledge gaps identified by participants, and teaching practices will align between TVET and

universities. Career guidance plays a crucial role in helping students avoid poor articulation and course selections that could impede their progression to the next level when they seek to continue their studies. Such issues can delay a student's future and lead to higher costs. Furthermore, guiding students at lower levels of education can reduce the number of cases in which they are unlikely to gain accreditation and acceptance into specific university courses.

The findings reveal that the recommended action is for the government to strengthen the PSET system's policies, as they guide the implementation of articulation and transition. To promote the practical application of policies, all involved institutions should ensure their correct implementation, alongside regular policy review to identify gaps and facilitate amendments where necessary to address all educational needs.

5.3 Implications of the Study

The findings of this study highlighted many structural and policy-related challenges that hinder effective articulation between TVET colleges and universities. A standardised accreditation framework is one of the most vital recommendations urgently needed to update the curriculum to meet articulation requirements. Currently, there is an inconsistency in how universities recognise TVET qualifications from both traditional universities and universities of technology, which further frustrates TVET graduates and forces them to start their studies from scratch when transitioning to university. DHET, in collaboration with the CHE, the QCTO, and all other regulatory bodies involved in the PSET system, should implement national guidelines that ensure all qualifications, particularly TVET National Diplomas, receive full recognition and accreditation, and are

equally accepted by all universities in accordance with the NQF principle. This would enable clearer progression routes and reduce redundancy in learning.

Participants in the study highlighted differences in the depth, scope, and orientation of the content, which led to misalignment between the programmes. TVET institutions mainly focus on practical skills, while universities emphasise theoretical knowledge and research competencies. Therefore, institutions must prioritise harmonising their curricula to address differences between the two types of institutions. TVET colleges, universities, and industry authorities should equally represent stakeholders involved in curriculum responsiveness and academic review committees. This will strengthen collaboration to align key modules, ensure consistency in accreditation standards, and structure learning outcomes that support both vocational and academic progression. Additionally, workshops within the PSET system that include all institutions can encourage articulation frameworks, identify specific TVET curriculum gaps relative to university-level equivalents, and prioritise them to enhance curriculum responsiveness.

In response to the lack of preparedness among TVET students when transitioning to higher education, the bridging programmes offered in HEIs must also address the needs of TVET graduates for articulation, rather than prioritising learners with only a matric qualification. Designers should create these programmes to fill gaps identified in the TVET curriculum that hinder seamless accreditation, such as academic writing, research methodology, critical thinking, and theoretical knowledge—areas that universities mainly include in their curricula. Moreover, these programmes can be offered as short courses or as the final phase of a TVET diploma, completed by those

who wish to further their studies at universities to avoid starting from scratch, as participants expressed. This should be funded by the government and incorporated into the broader articulation strategy. Offering the bridging programmes as short courses at the end of the diploma would serve as a preparatory phase for students planning to transition to higher education institutions. The short courses would equip students with the necessary skills and knowledge to succeed in a more academically demanding environment.

Collaboration plays a crucial role in forming partnerships. Because TVET colleges and universities often fail to cooperate, policymakers should introduce mandated collaboration to foster partnerships and break down institutional silos. DHET policies ought to require Memoranda of Understanding (MoUs) between TVET colleges and universities to clearly define articulation pathways, curriculum alignment responsibilities, and credit recognition standards. These agreements should be overseen and supported by regular joint articulation committees and curriculum researchers, where institutions discuss challenges, share best practices, and revise strategies in response to emerging needs. Promoting collaboration will foster mutual respect and reduce the stigma currently associated with TVET qualifications.

Participants consistently highlighted the problem of outdated TVET syllabi, some of which date back to 1995. Even those that have been revised often fail to meet university requirements, as universities update their syllabi annually, for instance, in accounting modules. Consequently, this hampers graduates' improved performance and competitiveness. Establishing new systems to guide curriculum responsiveness practices is essential to cover key aspects of curriculum adaptability. To achieve this, a

nationwide curriculum modernisation initiative should be launched and overseen by the DHET, in collaboration with universities and industry bodies. Providing institutions with all necessary information about the articulation process, including regular reviews, updated policies, and alignment with current labour market demands, is crucial. Therefore, institutions should be allowed to modify and align curricula with economic activities and industry demands.

To better align the curriculum with university standards and more effectively prepare students, the extension of the TVET programme duration should be considered. The current structure, which typically spans 18 months and covers all essential aspects of academic and professional preparation, does not sufficiently encompass all necessary elements for further studies. Based on participants' suggestions, an extension of at least two years is recommended to enrich the modules and allow more time for students to engage with both practical and theoretical content. This extension would also facilitate work-integrated learning, academic writing training, and exposure to industry projects, resulting in a more balanced and well-rounded graduate, and thereby enhancing curriculum responsiveness and seamless articulation.

The study has revealed that the implementation of specific policies is inconsistent and often goes unnoticed by universities. Therefore, it must be reviewed and updated. The NQF system exists to provide guidelines for qualification levels and progression, as part of policy reform. Moreover, DHET should undertake a comprehensive review of articulation policies to ensure they are enforceable, transparent, and aligned with institutional practices. This will enable the practical implementation of these policies and

effective communication strategies that guide students and institutions through the articulation process.

The lack of advocacy and awareness noted by many participants in the findings on articulation pathways suggests that many students, and even educators, are unaware of the available options and processes for transitioning from TVET to university. This may impede the progress of articulation, potentially undermining the purpose of NQF and CAT guidelines. The DHET should develop a national awareness campaign to inform students about their choices and prevent them from being surprised when they seek to pursue further studies. The campaign should include career guidance, high school presentations, and digital platforms that clarify the articulation process, helping students understand their options and avoid being caught off guard when they decide to continue their education. This advocacy effort should aim to shift perceptions of TVET as a viable and respected route to higher education, rather than merely a last resort for students who do not meet university entry requirements or for those unable to secure space at universities. After completing TVET courses, students often hope to continue their studies rather than starting from scratch. Additionally, I recommend that DHET evaluate the infrastructure to identify areas needing improvement, as insufficient infrastructure significantly contributes to this issue. The DHET should consider measures to enhance infrastructure, recognising its key role in addressing these challenges.

Lecturer training and development must be prioritised as part of the curriculum responsiveness strategy because TVET lecturers often lack the same professional development opportunities as university staff. There is a need for structured training

programmes focused on curriculum delivery, learner support, and academic content development. Establishing partnerships with universities can effectively facilitate training and should be supported through bursaries, mentorship, and ongoing professional development initiatives. Such collaborations will enable lecturers to deliver content that is both relevant and academically rigorous.

5.4 Suggestions for Further Research

- Future research could examine the effectiveness of the QCTO occupational qualifications in light of new development programmes introduced to facilitate smoother transitions into university courses. This is especially pertinent, considering the recent implementation of these programmes and their planned alignment with industry and higher education standards.
- Researchers can examine policy-practice gaps, administrative capacity, and stakeholder alignment to understand why implementation often falls short.
- Further research on curriculum design, implementation, and outcomes for bridging or foundational programs for TVET graduates.

5.5 Dissemination of the Research

The study aimed to fulfil the requirements for a Master's in Education degree and investigates the challenges affecting curriculum responsiveness in the articulation between Technical and Vocational Education and Training (TVET) National Diplomas and university qualifications. I will disseminate the findings by submitting a copy of the research report to all participating colleges. I will also submit at least one article to

relevant journals for publication and share a copy with all stakeholders affected by the study.

5.6 Limitations of the Study

I faced limitations during the interviews: aiming to interview 21 participants from three colleges in Northern KwaZulu-Natal, I ultimately ended up with 17 due to time constraints and the unavailability of targeted participants. Additionally, some TVET alumni struggled to relate to the concepts of articulation and curriculum responsiveness. Therefore, I first familiarised them with these concepts to help them better understand the study and respond appropriately.

5.7 Conclusion

In conclusion, this chapter summarised the study, its implications, future research directions, dissemination plans, and limitations. Its purpose was to review the findings, which highlight the challenges in curriculum responsiveness between TVET National Diploma programmes and universities in South Africa. The study investigated various regulatory bodies and curriculum-related obstacles that hinder student progression. The results emphasised issues affecting the effectiveness of articulation and curriculum responsiveness within the PSET sector. These challenges not only restrict academic mobility but also undermine the credibility and efficiency of the TVET system. The chapter also presented recommendations and proposals for future research to enhance the performance of both institutions. Additionally, it offered suggestions on how DHET can support these institutions in addressing students' educational needs and promoting improved education.

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Appendices

Appendix A – Ethical Clearance



16 September 2024

Lethiwe Nokwethemba Biyela (214580825)

School of Education

Edgewood Campus

Dear LN Biyela,

Protocol reference number: HSSREC/00007218/2024

Project title: Exploring the challenges in the curriculum responsiveness of articulation between technical vocational education and training national diploma and universities

Degree: Masters

Approval Notification – Expedited Application

This letter serves to notify you that your application received on 14 June 2024 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.

Incidents of adverse events and serious adverse events (AEs and SAEs) should be reported in writing to HSSREC, the study sponsors, and any regulatory authority (where appropriate), within 7 working days of the occurrence for local sites and 14 days for all other South African sites.

This approval is valid until 16 September 2025.

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)
/nng

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 – Participant's Consent Form

CONSENT TO PARTICIPATE IN THIS STUDY

Research title: Exploring the Challenges in the Curriculum Responsiveness of Articulation between Technical Vocational Education and Training (TVET) National Diploma and Universities.

Researcher: Lethiwe N Biyela

I, _____ (participant name), confirm that the person asking my consent to take part in this research has told me about the nature, procedure, potential benefits and anticipated inconvenience of participation.

I have read and understood the study as explained in the information letter.

I am aware that:

- ✦ My confidentiality is guaranteed as my inputs will not be attributed to me in person, but reported only as a population member opinion.
- ✦ Any information given by me cannot be used against me, and the collected data will be used for purposes of this research only.
- ✦ Data will be stored in secure storage and destroyed after 5 years.
- ✦ I have a choice to participate, not participate or stop participating in the research. I will not be penalized for taking such an action.
- ✦ My involvement is purely for academic purposes only, and there are no financial benefits involved.
- ✦ The interview will not take more than 30 minutes and break in between will be granted and I agree to the recording of the interviews.

I understand that If I have any further questions or concerns about the research, I can contact the researcher via email _____

Alternatively, I can contact her supervisor, Dr T Mnisi, via email (mnisi@ukzn.ac.za) or any further concern I can contact the UKZN Humanities & Social Sciences Research Ethics Committee via Email: HSSREC@ukzn.ac.za

Participant Name & Surname..... (please print)

Participant Signature..... Date

Appendix C – Gatekeeper’s Consent Form



COLLEGE OF HUMANITIES
School of Education

REQUEST LETTER FOR INSTITUTIONAL PERMISSION

INSTITUTION NAME & ADDRESS: Uthukha TVET College Centre 1 Office
89 Allan Street, Morningside Central, Newcastle, 2940

INSTITUTION CONTACT PERSON: Mr. S. Mkhomo

INSTITUTION CONTACT NUMBER: (031) 320 4000

INSTITUTION EMAIL ADDRESS: Semuelmkhomo@mgjshs.co.za

TITLE OF RESEARCH PROJECT: Exploring the Challenges in the Curriculum Responsiveness of Articulation between Technical Vocational Education and Training (TVET) National Diploma and Universities.

RESEARCHER: Lethiwe Biyela

DEPT NAME & ADDRESS: HUMANITIES & SOCIAL SCIENCES RESEARCH ETHICS ADMINISTRATION
Research Office, Edgewood Campus
Private Bag X03
Ashwood
3605

CONTACT NUMBER: [REDACTED]

EMAIL ADDRESS: [REDACTED]

Ukholo lwemibuzo

Kindly note that I am studying towards Master of education in Higher education at University of KwaZulu-Natal, and I would appreciate your assistance with one facet of my research project.

Please take some time to read the information presented in the following points, which will explain the purpose of this letter as well as the purpose of my research project, and then feel free to contact me if you require any additional information.

A short introduction to the project:

This research project focuses on understanding the main obstacles in the curriculum responsiveness of the articulation between TVET National Diploma programs and universities. It aims to explore ways to

improve this articulation for the attainment of quality education. The insights obtained from lecturers and the curriculum division will guide the formulation of recommendations for enhancing articulation.

The purpose of the project:

1. The main aim of the research is to explore the challenges in the curriculum responsiveness of articulation between TVET National Diploma programs and universities.

1. Your assistance would be appreciated in the following regard:

I hereby request permission to conduct this research study at one of the campuses and in the curriculum division at central office. The study involves conducting face-to-face interviews with lecturers. Appointments will be scheduled with lecturers to coordinate their availability, ensuring minimal disruptions.

2. Confidentiality:

All information contributed by the lecturers and curriculum division staff including their identifying information will be treated with absolute confidentiality. The researcher and her experienced supervisor will have access to review all the research record and all phases of the research will be checked by the supervisor. Participation of the lecturers will be voluntary and will be kept confidential their identifying particulars will be protected by using pseudonyms. All participants will be informed that findings will be processed into a research report. This researcher will ensure that she conducts this research study in an ethical manner by abiding to all research ethics stipulated by the university of KwaZulu-Natal.

Timeframe of research project

Data collection will begin in 2024 once participants are available for interviews.

If you have any further questions or concerns about the research, please feel free to contact me via email [REDACTED]. Alternatively, feel free to contact my supervisor, Dr T Mnisi, via email (mnisi@ukzn.ac.za) or you may also contact the UKZN Humanities & Social Sciences Research Ethics Committee via Email: HSSREC@ukzn.ac.za

Thank you in advance for your assistance in this regard.

Kind regards,
Lethiwe Biyela

Appendix D - Gatekeeper's Permission



higher education
& training
Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA



Central Office

200 South Street, 3rd Floor, Private Bag X 9424, Johannesburg 2010

Enquiries: 2010 P1
Tel: 034 980 1010 / 081 015 5630
Fax: 034 980 1012
Email: central.office@edutrade.gov.za

Ms Lethiwe Nokwethemba Biyela
PO Box 01
HLOBANE
3145

Dear Ms Biyela

RE.: APPLICATION TO CONDUCT RESEARCH IN THE NAME OF THE TVET COLLEGE

Your application to conduct research in the name of the TVET College has been approved.

You are requested to provide a summary of your research report to the office of the college principal after completion of your research for information purposes.

Wishing you all the best.

Kind regards



PRINCIPAL

Date: 16 August 2024

Appendix E – Data Generation Tool-Semi-structured questionnaire

Interview Guides

Research Title: Exploring the Challenges in the Curriculum Responsiveness of Articulation between Technical Vocational Education and Training National Diploma and Universities.

What are your experiences in TVET sector?

What is your understanding about Articulation?

What is your understanding about curriculum responsiveness?

In your opinion, does department of Higher education responds to curriculum challenges in the TVET sector? If yes, please share policies in this regard

How do you perceive the articulation process between TVET National Diploma and universities in terms of curriculum responsiveness?

In your opinion, what improvements or modifications could enhance the articulation process and curriculum alignment between TVET and universities?

Can you share examples of successful experiences in bridging the gap between TVET National Diploma and university-level education within your courses?

CHALLENGES IN CURRICULUM RESPONSIVENESS OF ARTICULATION

What specific challenges have you observed or encountered in the articulation process between TVET National Diploma programs and universities, particularly in terms of curriculum alignment?

From your perspective, what are the key factors contributing to the challenges in ensuring a seamless articulation of curriculum between TVET National Diploma programs and universities?

What strategies or initiatives do you believe could be implemented to overcome the challenges in curriculum responsiveness during the articulation process between TVET National Diploma programs and universities?

In your experience, what role does the curriculum play in facilitating or hindering the successful transition of students from TVET National Diploma programs to university education?

How do you perceive the current level of collaboration between TVET institutions and universities in addressing curriculum-related challenges during the articulation process?

BENEFITS OF SEAMLESS ARTICULATION BETWEEN TVET-TO-UNIVERSITY

How do you anticipate that a well-established TVET-to-university pathway could contribute to the overall improvement of the education system, both at the TVET and university levels?

From your perspective, what potential benefits do you foresee in establishing a continuous pathway from TVET National Diploma programs to universities for both students and the education system?

CURRICULUM RESPONSIVENESS OF ARTICULATION APPLICATION IN HIE

In your experience, what are the perceived strengths and limitations of the current approach to curriculum responsiveness, and how have these influenced the effectiveness of the articulation process?

What suggestions do you have for enhancing the current approach to curriculum responsiveness between TVET and universities, and how can these suggestions be practically implemented?

Appendix F - Data Analysis Sheet

Title : Exploring the Challenges in the Curriculum Responsiveness of Articulation between Technical Vocational Education and Training (TVET) National Diploma and Universities

Purpose: The analysis tool used to explore the challenges in curriculum responsiveness of articulation between Technical Vocational Education and Training (TVET) National Diploma and Universities within the Department of Higher Education and Training (DHET) to improve curriculum articulation

Themes colour codes

Key Challenges in Curriculum Responsiveness

Potential Benefits of a Well-Aligned Pathway

Enhancing Curriculum Responsiveness for Quality Education

Why Current Articulation Is Applied This Way

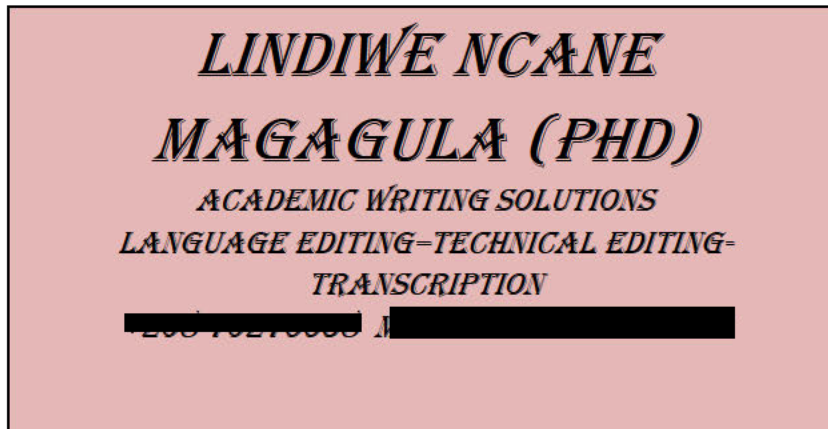
Actionable Recommendations

Q.NO	QUESTIONS	RESPONSE
1.	In your opinion, does department of Higher education responds to curriculum challenges in the TVET sector? If yes, please share policies in this regard	I don't know of any recognition when it comes through with diplomas. I've never heard or seen anyone that is being recognized. university curriculum, it's more intense, more modules, more content
2.	How do you perceive the articulation process between TVET National Diploma and universities in terms of curriculum responsiveness?	The same department, but we're not getting any recognition. We must form partnership with the industry. a lack of communication between TVET and university
3.	In your opinion, what improvements or modifications could enhance the articulation process and curriculum alignment between TVET and universities?	the purpose of TVET is not for student to complete TVET and go to university. they should be meetings between stakeholders and they engage on how to bridge the gap between the two. I won't say the department's need to improve in anything unless if the university, they can just soften their entry requirement to balance that TVET students
4.	Can you share examples of successful experiences in bridging the gap between TVET National Diploma and university-level education within your courses?	They simply did the NPDE. it's not that the gaps is caused by our curriculum. It is caused by the universities not considering the TVET. it is happening I think TVET and university of technology accommodates TVET students

	level education within your courses?	it is happening I think TVET and university of technology accommodates TVET students
5.	What specific challenges have you observed or encountered in the articulation process between TVET National Diploma programs and universities, particularly in terms of curriculum alignment?	It's because of the duration it has a lot gaps it lacks a lot of knowledge
6.	From your perspective, what are the key factors contributing to the challenges in ensuring a seamless articulation of curriculum between TVET National Diploma programs and universities?	Yes. In terms of content, we've got few new modules this side. Where else? (universities) They are offering more. The amount of weight is not the same and with TVET college is a lot more practical where the university is more theory based there's this perception about TVET. You know that we are lower. In the educational hierarchy, we take like the dropouts, those that don't make it to university
7.	What strategies or initiatives do you believe could be implemented to overcome the challenges in curriculum responsiveness during the articulation process between TVET National Diploma programs and universities?	The syllabus changes in terms of alignment. I think that universities are in a way becoming more responsive. to do the research, update the syllabi and curriculum, update the curriculum, make them to be more relevant there must be some implementing strategies as to how we're going to work together to ensure that these two sectors they speak to each other.
8.	In your experience, what role does the curriculum play in facilitating or hindering the successful transition of students from TVET National Diploma programs to university education?	Encourage team work I don't think there is much role that the curriculum is playing They are only concerned about the outcome of Artisans
9.	How do you perceive the current level of collaboration between TVET institutions and universities in addressing curriculum-related challenges during the articulation process?	This two sectors must speak the same language because the main purpose is to assist the students
10.	How do you anticipate that a well-established TVET-to-university pathway could contribute to the overall improvement of the education system, both at the TVET and university levels?	It can be easier for them to switch between the college and the university if there was an articulation To get a better quality of graduate it will eliminate stigmatization associated with TVET the way society looks down those who studied at TVET
11.	From your perspective, what potential benefits do you foresee in establishing a continuous pathway from TVET National Diploma programs to universities for both students and the education system?	Increases have pretty better employment opportunities, in a government sector more TAX. Yes, we have a high percentage of unemployment department can strengthen the relationship with other countries
12.	In your experience, what are the perceived strengths and	Their credits are something closer or similar to what the university is offering.

	limitations of the current approach to curriculum responsiveness, and how have these influenced the effectiveness of the articulation process?	You know, that's a difficult one because obviously there's some new syllabi changes are coming, with people that are experts together with industry A changing curriculum, if they can change the curriculum and align with the original objectives of the TVET
13.	What suggestions do you have for enhancing the current approach to curriculum responsiveness between TVET and universities, and how can these suggestions be practically implemented?	I believe that we can combine and form 1 qualification. It is equivalent but when we do that We need to Work with universities to informing these qualifications These QCTO occupational programs combine them and form something that is aligned to universities.
14.	From your perspective, what institutional policies or guidelines shape the current approach to curriculum responsiveness between TVET and universities, and how have these changed over time?	I just think the QCTO coming in has been a big thing with the syllabus changes you know the syllabus have changed there's been a big push from the industry.

Appendix G – Language Editor’s Letter

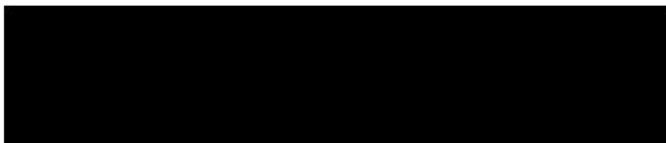


28 September, 2025.

To whom it may concern

Language Editing – Thesis – Lethiwe N. Biyela

I have reviewed the thesis entitled “Exploring the Curriculum Responsiveness of Articulation Between Technical Vocational Education and Training National Diploma and Universities” in terms of spelling, language and grammar, and have made recommendations to the author concerning the necessary changes.



Lindiwe N. Magagula (PhD)

Appendix H – Turn-it-in Report

Exploring the Challenges in the Curriculum Responsiveness of Articulation Between Technical Vocational Education and Training National Diploma and Universities

ORIGINALITY REPORT

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SIMILARITY INDEX

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