



# **A COMPARATIVE ANALYSIS OF TECHNICAL VOCATIONAL EDUCATION AND TRAINING AS AN INSTRUMENT FOR PROSPERITY ATTAINMENT IN SOUTH AFRICA**

**By**

**Mlungisi Mthembu**

**220112272**

A dissertation submitted in partial fulfilment of the requirements for the degree of  
Master of Public Administration

School of Management, Information Technology and Public Governance at the  
University of KwaZulu-Natal

Supervisor: Professor Henry Wissink

2022


## Declaration

I **Mlungisi Mthembu** declare that

- i) The research reported in this dissertation, except where otherwise indicated, is my original research.
- ii) This dissertation has not been submitted for any degree or examination at any other university.
- iii) This dissertation does not contain other persons' data, pictures, graphs or other information, unless specifically acknowledged as being sourced from other persons.
- iv) This dissertation does not contain other persons' writing, unless specifically acknowledged as being sourced from other researchers.

Where other written sources have been quoted, then:

- a) their words have been re-written, but the general information attributed to them has been referenced;
  - b) where their exact words have been used, their writing has been placed inside quotation marks, and referenced.
- v) This dissertation does not contain text, graphics or tables copied and pasted from the Internet, unless specifically acknowledged, and the source being detailed in the dissertation/thesis and in the References sections.

Signed:  .....

## **Acknowledgements**

Completing this dissertation would not have been possible without the support and nurturing of my supervisor, Professor Wissink.

I would like to express my most profound appreciation to Professor Ruffin for her guidance in proposal development. She provided me with the tools I needed to choose the right direction. Moreover, I would also like to thank her for editing my dissertation.

I cannot leave out my sister, Doctor Pinkie Mthembu, for her constructive criticism.

I would also like to extend my sincere thanks to my librarian, Ms Minenhle Jali, for her instantaneous support when I needed it.

I am extremely grateful to Professor Mutereko and Professor Subban for their humility and assistance while applying to be accepted into the Master's Degree Programme via the recognition of prior professional knowledge and skills process.

I would also like to extend my deepest gratitude to the Chief Director for Corporate Services at the Eastern Cape Department of Public Works and Infrastructure, Mr Sicelo Kufa, for assisting me to secure sponsorship. I would also like to thank the Head of Department, Mr Thandolwethu Manda, for inspiring the research topic.

I cannot begin to express my thanks to my friends Maria Ngema, Tumelo Nkohla and Yandisa Mzotsho for their support throughout the journey.

Most importantly, to my wife Nomvuzo Mthembu, I could not have completed this dissertation without her support, encouragement and sacrifices.

## **Abstract**

Poverty alleviation has been the South African (SA) government's central policy issue since Apartheid without success. Hence, this study selected a paradigm shift. Instead of focusing on poverty alleviation, the study constructed a positive mirror image of poverty: prosperity attainment. Notably, the SA government has been using job creation as a policy instrument in vain. Some countries have enacted the Technical Vocational Education and Training (TVET) model and used it as a central policy mechanism for poverty alleviation. Yet poverty alleviation is the means to an end, and the end should be prosperity. In South Africa, there is an absence of a holistic policy framework for TVET implementation across basic education, tertiary education, and industry, which makes coordination difficult. Hence, this study explored TVET policies from China, Finland, Germany and Nigeria to assess the best-fit elements. The primary objective of this study was to explore how TVET can be an instrument for prosperity realisation.

The challenges that inhibit prosperity are neither linear nor straightforward. Hence, this research explored TVET policies using a qualitative research approach to bring a deep and robust understanding of the complex issue under investigation. This research was ontologically driven by the notion that what transpires in the world is not equivalent to what people see. Therefore, the study adopted critical realism (CR) as a philosophical worldview. Moreover, the study used the case study research strategy to answer the research questions and a systematic review of documents to collect data, which it analysed inductively using thematic analysis.

The findings suggest that TVET may enable good governance when curricula are infused with a nationalist ideology, spiritual culture and ethics. Moreover, the results suggest that TVET could enable environmental sustainability by facilitating ecological revolution through incorporating environmental sustainability education. Moreover, a TVET curriculum may likewise facilitate economic sustainability by enabling economic development through entrepreneurship. Lastly, TVET could advance social sustainability by enabling employability, which entails self-employment and industrial employment. The synthesis of findings leads to the conclusion that TVET could enable sustainable socio-economic development, thus enabling prosperity.

Based on the findings and conclusions of this study, the researcher recommends that the South African government considers reintegrating basic and higher education to prevent fragmented governance of the TVET model. Bringing the two departments under one ministry could ensure effective and coherent pathways and implementation of TVET. The study further recommends that the National Treasury conducts an expenditure analysis and cost modelling exercise to ensure equitable funding of TVET in rural areas, urban areas, and previously disadvantaged communities. Additionally, the government should consider scrapping the pre-specified generic curriculum across the country and tailoring the curriculum content per student (considering the knowledge and skills the students already possess)—enhancing the students' career prospects cognitively and innovatively while reducing the learning period.

## **List of Acronyms**

4IR	Fourth Industrial Revolution
ANC	African National Congress
ASGISA	Accelerated Shared Growth Initiative of South Africa
AU	African Union
BBiG	Berufsbildungsgesetz (German: Vocational Training Act)
BRICS	Brazil, Russia, China, and South Africa
CBA	Competence-based Approach
CDE	Centre for Development and Enterprise
CEDEFOP	Centre Européen pour le Développement de la Formation Professionnelle (French: European Centre for the Development of Vocational Training)
CR	Critical Realism
DBE	Department of Basic Education
DHET	Department of Higher Education
DVETS	Dual Vocational Education and Training System
EE	Equality Education
EPWP	Expanded Public Works programme
ESD	Environmental Sustainability Education
EST	Economic Structural Transformation
EU	European Union
FET	Further Education and Training
GDP	Gross Domestic Product
GEAR	Growth Employment and Redistribution
ICESCR	International Covenant on Economic, Social and Cultural Right
IMF	International Monetary Fund
KfW	Kreditanstalt für Wiederaufbau (German: Reconstruction Credit Institute)
Lak	Laki ammatillisesta koulutuksesta (Finnish: Law on Vocational Training)
MCI	Market-creating Innovation
MoHRSS	Ministry of Human Resources and Social Security (China)
NDP	National Development Plan
RDP	Reconstruction and Development Plan

RSA	Republic of South Africa
SA	South Africa
SADC	Southern African Development Community
SMEs	Small to Medium Enterprises
SR	Systematic Review
SSA	Sub-Saharan Africa
Stats SA	Statistics South Africa
TA	Thematic Analysis
TVET	Technical Vocational Education and Training
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organization
US	United States (of America)
VELPRC	Vocational Education Law of the People's Republic of China

## TABLE OF CONTENTS

DECLARATION .....	i
ACKNOWLEDGEMENTS .....	ii
ABSTRACT .....	iii
LIST OF ACRONYMS .....	iv
LIST OF APPENDICES .....	ix
LIST OF FIGURES .....	x
LIST OF TABLES .....	xi

### CHAPTER ONE

1.	INTRODUCTION AND BACKGROUND TO THE STUDY .....	1
1.1.	Introduction .....	1
1.2.	Background.....	2
1.3.	Statement of the Research Problem .....	3
1.4.	Research Questions and Objectives .....	4
1.4.1.	Research Questions.....	4
1.4.2.	Research Objectives.....	4
1.5.	Study Rationale.....	5
1.6.	Research Methodology.....	5
1.7.	Dissertation Structure.....	6
1.8.	Chapter Synopsis .....	6

### CHAPTER TWO

2.	NAVIGATING THE TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING INTERNATIONAL LANDSCAPE .....	7
2.1.	Introduction .....	7
2.2.	Clarification of Concepts.....	7
2.2.1.	Conceptualising Prosperity.....	7
2.2.2.	Conceptualising Poverty .....	8
2.2.3.	Conceptualising Education.....	9
2.2.4.	Conceptualising Good Governance .....	9
2.3.	Neoliberalism.....	10
2.3.1.	South African Neoliberalism .....	11
2.4.	Public Policy.....	13
2.4.1.	Public Policy Associated Concepts.....	14
2.5.	What is Technical Vocational Education and Training (TVET)? .....	17

2.6.	TVET Framework: South Africa .....	18
2.7.	TVET Policies: International Context and Rationale .....	20
2.8.	Justification of the International Cases .....	20
2.8.1.	China .....	20
2.8.2.	Finland.....	20
2.8.3.	Germany .....	21
2.8.4.	Nigeria.....	21
2.9.	Theoretical Framework for the Study .....	22
2.9.1.	Market-Creating Innovation Theory .....	22
2.9.2.	Moral Economy of Affection (MEOA).....	23
2.9.3.	Congruence of the Theoretical Framework.....	23
2.10.	Chapter Synopsis .....	25

### CHAPTER THREE

3.	RESEARCH DESIGN AND METHODOLOGY .....	26
3.1.	Introduction .....	26
3.2.	Research Paradigms/Worldviews .....	26
3.2.1.	Ontological Considerations .....	26
3.2.2.	Epistemological Considerations .....	27
3.2.3.	Axiological Considerations .....	28
3.3.	Research Design .....	28
3.4.	Research Strategy and Type .....	28
3.5.	Data Collection Methods and Instruments .....	29
3.5.1.	Trustworthiness.....	29
3.6.	Systematic Review of Documents .....	30
3.6.1.	Review Process .....	30
3.6.2.	Planning the Systematic Review .....	31
3.6.3.	Conducting the Review .....	34
3.6.4.	Reporting the Review.....	42
3.7.	Ethical Considerations .....	42
3.8.	Research Methodology Convergence .....	42
3.9.	Chapter Synopsis .....	42

### CHAPTER FOUR

4.	DATA PRESENTATION AND INTERPRETATION.....	43
4.1.	Introduction .....	43
4.2.	Findings for Case A: China .....	45
4.2.1.	Theme 1: Teaching and Learning .....	47
4.2.2.	Theme 2: Socio-economic Development .....	52



4.2.3.	Theme 3: Ecological Dimension.....	55
4.3.	Findings for Case B: Finland.....	56
4.3.1.	Theme 1: Teaching and Learning .....	57
4.3.2.	Theme 2: Socio-economic Dimension .....	60
4.4.	Findings for Case C: Germany .....	63
4.4.1.	Theme 1: Teaching and Learning .....	65
4.4.2.	Theme 2: Socio-economic Dimension .....	68
4.4.3.	Theme 3: Ecological Dimension.....	71
4.5.	Findings for Case D: Nigeria.....	71
4.5.1.	Theme 1: Teaching and Learning .....	73
4.5.2.	Theme 2: Socio-economic Dimension .....	74
4.5.3.	Theme 3: Governance .....	77
4.6.	Chapter Synopsis .....	79

## CHAPTER FIVE

5.	DISCUSSION OF KEY FINDINGS, CONCLUSIONS AND RECOMMENDATIONS .....	80
5.1.	Introduction .....	80
5.2.	Summary of the Research Problem and Research Questions.....	80
5.3.	Summary of Emerged Themes and Responsiveness to Research Questions .....	81
5.3.1.	How can a TVET Policy Enable Prosperity? .....	81
5.3.2.	How Can a TVET Policy Enable Employability? .....	83
5.3.3.	How Can a TVET Policy Enable Entrepreneurship?.....	83
5.3.4.	How Can a TVET Curriculum Enable Development?.....	84
5.4.	Conclusions and Recommendations .....	85
5.4.1.	Findings and conclusions that achieve the research objectives.....	86
5.4.2.	Recommendations based upon findings and conclusions .....	88
5.5.	Limitations of the Study .....	89
5.6.	Recommendations for Future Research .....	89
5.7.	Significance of Findings.....	89
5.8.	Policy Implications for South Africa .....	90
5.9.	Chapter Synopsis .....	90
	REFERENCES .....	91
	APPENDICES .....	108

## **List of Appendices**

Appendix A: Ethical Clearance .....	108
Appendix B: Data Quality Form .....	109
Appendix C: Data Extraction Form.....	110

## List of Figures

Figure 2-1: Ecological Disaster – Dried-up Aral Sea .....	8
Figure 2-2: principles of Good Governance .....	10
Figure 2-3: Policy Process.....	14
Figure 2-4: Policy Agenda-Setting Distinct Stages .....	15
Figure 2-5: Multi-disciplinary Policy Analysis .....	16
Figure 2-6: Market-creating innovation manifestation .....	22
Figure 2-7: Dependent and Independent Variables Yielding Theoretical Propositions .....	24
Figure 3-1. An iceberg metaphor for CR ontology.....	27
Figure 3-2: Review Process.....	31
Figure 3-3: Systematic Review Protocol .....	32
Figure 3-4: Systematic Review Search Strategy.....	35
Figure 3-5: Key Concepts from the Research Questions .....	36
Figure 3-6: Stages of Discerning Inclusivity of Studies .....	40
Figure 3-7: Thematic Analysis Process .....	41
Figure 3-8: Research Methodology Summary .....	42
Figure 4-1: Mind Map of the Study.....	44
Figure 4-2: Case A Thematic Framework (Mind Map) .....	46
Figure 4-3: Case A_ Teaching and Learning Sub-themes Mind Map.....	47
Figure 4-4: Case A_ Socio-economic Development Mind Map.....	52
Figure 4-5: Case A _ Ecological Dimension Mind Map.....	55
Figure 4-6: Case B Thematic Framework (Mind Map) .....	57
Figure 4-7: Case B_ Teaching and Learning Sub-themes Mind Map.....	58
Figure 4-8: Case B_Socio-economic Development Mind Map .....	60
Figure 4-9: Case C Thematic Framework (Mind Map) .....	65
Figure 4-10: Case C_ Teaching and Learning Sub-themes Mind Map.....	66
Figure 4-11: Case C-Socio-economic Dimension Mind Map.....	68
Figure 4-12: Case D Thematic Framework (Mind Map) .....	73
Figure 4-13: Case D-Theme 1 Mind Map .....	74
Figure 4-14: Case D-Theme 2 (Socio-economic Dimension) Mind Map .....	75
Figure 4-15: Case D Theme 3 Mind Map (Governance) .....	78

## List of Tables

Table 1-1: Dissertation Outline .....	6
Table 2-1: National Poverty Lines in SA.....	8
Table 2-2: Neoliberalism constructs .....	11
Table 2-3: How SA Poverty Alleviation Macroeconomic Policies Have Been Neoliberal .....	12
Table 2-4: Summary of Early Definitions of Policy. ....	13
Table 2-5: SMART Goals Outline.....	15
Table 2-6: Monitoring and Evaluation Framework .....	16
Table 2-7: TVET Programmes in SA .....	19
Table 3-1: Paradigm Constructs and Definitions.....	26
Table 3-2: Credibility criteria .....	29
Table 3-3: Inclusion and Exclusion Criteria .....	33
Table 3-4: Searched UNESCO Resources .....	36
Table 3-5: Reviewal and Refinement of the Search .....	38
Table 3-6: Systematic Review Quality Criteria .....	39
Table 4-1: Summary of Included Studies per Case.....	43
Table 4-2: Studies Reviewed for Case A.....	45
Table 4-3: Studies Reviewed for Case B .....	56
Table 4-4: Finland Graduates Employment Rates .....	62
Table 4-5: Studies Reviewed for Studies for Case C .....	64
Table 4-6: Percentage of German SMEs Offering WBL .....	67
Table 4-7: Studies Reviewed for Case D.....	72
Table 5-1: Summary of Emerged Themes .....	81
Table 5-2: Findings on Good Governance of the TVET Model .....	82
Table 5-3: Mechanisms within a TVET policy that enable employability .....	86
Table 5-4: TVET Curriculum Elements Enabling Entrepreneurship .....	87
Table 5-5: TVET Policy Mechanisms Enabling Development.....	87

“[We live] in a world of finite resources, constrained by strict environmental limits, still characterised by islands of prosperity within oceans of poverty”. **(Jackson & Senker, 2011)**

“Imagine no possession—I wonder if you can; no need for greed or hunger; a brotherhood of man. Imagine all the people, sharing all the world”. **John Lennon**

## CHAPTER ONE

### 1. INTRODUCTION AND BACKGROUND TO THE STUDY

#### 1.1. Introduction

“It is better to solve the right problem the wrong way than to solve the wrong problem the right way”. –  
*Richard Hamming*

Nelson Mandela spent twenty-seven (27) years in prison fighting for prosperity for all through a democratic South Africa (SA) (SAHO, 2013). Since the 1994 advent of democracy, poverty and inequalities have persisted in disenfranchising South Africans of prosperity. Many government interventions over the past twenty-seven (27) years have been in vain. Perhaps the SA government is committing the error of the third kind (having the right solution for the wrong problem). For example: Wilbur Wright (1867 – 1912) and Orville Wright (1871 – 1948) (the Wright brothers) in the United States (US) are known for the motor-operated aeroplane invention. But most people are oblivious to the odds stacked against the Wright brothers. They were without funding, given the risks involved. Instead, the US government invested the present-day equivalent of approximately R25 million in the National Aeronautics and Space Administration’s (NASA) Professor Langley. This was in vain. At the time, the flying model was a bird; consequently, most scientists adopted ‘best practices’ by replicating the bird’s flying method by creating wings fruitlessly. Notably, the Wright brothers’ discovery did not come from creating improved wings but from the hydraulics theory of lift (Crouch 1987:34-46). Hence, the US’ investment in the ‘bird model’ for flying was misplaced. The Wright brother’s innovative approach was successful.

Analogising the Wright brothers’ scenario to the TVET model in South Africa, costly employment creation interventions have not been effective. This raises questions: Has the SA government been investing in an unsuitable approach to TVET? Is the SA government using the wrong policy instruments<sup>1</sup>? Or is it the neoliberal discourse and economic growth targeting within which the TVET model should be contextualised? Nevertheless, economically prosperous nations have demonstrated a nexus between the TVET approach and prosperity. Why is this not the case in SA?

South Africa is an exceedingly rich country due to abundant natural resources, yet it is among the world’s most poverty-stricken regions. Simultaneously, it is the most unequal country on earth (Schneider, 2018:30; Bond, 2003:24; Narsiah, 2002:13). Despite adopting job creation as a central policy instrument for poverty alleviation, there has been persistent high unemployment rates and poverty levels despite the post-Apartheid reforms (RSA, 1996; RSA 2012; Ramnath 2015; Masters 2019). High unemployment has been structural primarily due to the mismatch in the supply and demand of skills, resulting in constantly growing

---

<sup>1</sup> A policy instrument is a connection between policy formulation and policy implementation. The intent in policy formulation is demonstrated in policy implementation through a policy instrument to accomplish policy objectives adjusted to social, political, economic issues (Capano & Howlett, 2020).

poverty levels. Hence, this study adopted a paradigm shift. Instead of focusing on poverty alleviation, it highlights a positive mirror image of poverty: prosperity attainment. It is worth noting that affluent countries use TVET as a central instrument to attain prosperity. Thus, this study explores how the SA government could use TVET as a policy instrument for the prosperity discourse (Section 2.4 discusses public policy in more detail). The exploration entails a transnational comparative analysis of TVET approaches through multiple case studies. There will be four cases: China, Finland, Germany and Nigeria. In chapter 2, the study will explain why the study chose these cases.

This chapter is organised as follows; after the introduction, the background covers the broad research problem. Next, the chapter discusses the narrow research problem, research questions, and research objectives. Thereafter, it points out the justification for undertaking the study. The research methodology section is followed by the dissertation outline. Finally, the synopsis section concludes the chapter.

## **1.2. Background**

To redress the past imbalances caused by Apartheid, the SA government focused on growth facilitated development through neoliberal policies except for the ‘Reconstruction and Development Programme’ (RDP), which the International Monetary Fund (IMF) conspicuously opposed (Kapoor, 2011:10) as it was socialistic inclined. The RDP sought to end poverty through job creation, using social infrastructure provisioning and focusing on development rather than economic growth (RSA, 1994). The RDP emphasised equitable education, health care, water and sanitation, work opportunities and land redistribution as essential priorities (Aliber, 2003:475). It was discontinued within two years and replaced with the “Growth, Employment, and Redistribution” (GEAR) policy. The emphasis of GEAR was a 6 percent growth, which was supposed to enable the government to create one million new formal and largely private-sector jobs within five years (Treasury, 1996). The IMF-backed neoliberal GEAR necessitated the phasedown on social programmes (Kapoor, 2011:10). The GEAR policy failed, and the ‘Accelerated Shared Growth Initiative of South Africa’ (ASGISA) policy succeeded it. The ASGISA set a target of halving unemployment through economic growth between 2004 and 2014— ASGISA never achieved its targets. SA is currently implementing the National Development Plan (NDP) 2030, which started in 2012.

The NDP set a goal of eliminating extreme poverty and halving unemployment by 2030; notably, the disclaimer in the NDP is that economic growth must be above 5 percent (RSA, 2012:39). In 2015, 18.8 percent of South Africans were poor; in 2019, the share increased to 55.2 percent (World Bank, 2019). Poverty, unemployment, and inequalities have been on the rise since the NDP started, which may signal that it is likely to fail. Remarkably, some countries have successfully escaped the poverty trap post-colonisation, which raises the question: how did they manage to eradicate poverty?

A good example is China, more especially considering its population size. China currently has the fastest growing economy, the second largest globally after the US. China escaped the poverty trap by implementing continued reforms incrementally (Ang, 2016:242). At what cost to the environment, though? —is the

underlying question. Notably, China has done exceptionally well in the fight against poverty. Human capital development has been central in the ‘China miracle’, particularly through TVET.

Sub-Saharan Africa (SSA) is both the poorest and the youngest region globally regarding average age (Fox & Thomas, 2016; Eicker, Haseloff & Lennartz, 2017). Youth unemployment is high throughout the region; it is twice that of adult unemployment (Tabengwa *et al.*, 2017:1). SA is one of four countries in SSA that have been graded as upper-middle-class by the World Bank. Two-thirds of the SA population is in the youth category (World Bank, 2019). The SA TVET system is seemingly ineffective as the unemployment rate keeps rising. The current youth unemployment is 55 percent (Stats SA, 2019). According to Equality Education (2016), graduates from TVET colleges are of inferior quality, contributing to the high unemployment rate.

According to Van der Berg (2017), employers do not target South African TVET graduates. In the first quarter of 2018, the percentage of unemployed TVET college graduates was twice that of university graduates (Stats SA, 2018). According to the SA Minister of Higher Education, the industry is disinclined to employ TVET graduates in SA (Nzimande, 2020). Nevertheless, some scholars (Baatjes *et al.*, 2014:68,84,198; Arfo. 2015:227) argue that there is a stigma challenge. While Tabengwa *et al.* (2017:54) highlight a mismatch between industry needs and the TVET curricula. Tabengwa *et al.* (2017:54) interject that the TVET curricula do not respond to regional contexts. It is generic across the country, despite the geographical diversity of different provinces. Notably, Section 29 of the SA Constitution states that citizens have the right to education (RSA, 1996). It is the nature of curricula that determines the meaningfulness of expression of the right to education.

### **1.3. Statement of the Research Problem**

The policy issue of high poverty levels in SA due to skills shortages restrains prosperity, while there is evidence of TVET as a potent instrument for opulence in economically prosperous countries. In SA, the government’s focus regarding TVET has been mainly on tertiary education. Hence research has been conducted mainly on TVET colleges. Thus, the Centre for Development and Enterprise (CDE) (2015:10) recommends that the SA government urgently develop a policy for mainstreaming TVET into basic education. Furthermore, according to Van der Berg (2017), there are problems in the TVET college sector, and the SA government needs to conduct holistic research.

Accordingly, Sithole (2019:64-72) points out poor teacher quality, sub-standard infrastructure, and management challenges in SA TVET colleges. In comparison, Badenhorst & Radile (2018:3) highlight inferior teaching as the causal factor on the unattractiveness of TVET colleges to the youth, as they mostly favour universities—consequently, these authors insist that the government’s investment in TVET has been in vain. Moreover, Makgato & Moila (2019:336) found that the SA TVET system lacks industry involvement, resulting in the misalignment in the supply and demand of skills. Likewise, the fragmented governance of TVET across basic education, tertiary education and the industry creates an additional dimension of



complexity. The sentiments above signify the need for a holistic TVET policy that will enable integrated TVET implementation by the government, industry, and the private sector in the prosperity pursuit. This requires a paradigm shift and radical thinking in the TVET sector instead of rhetorical commitments (Akoojee, 2016:13). The question becomes: How could a holistic, multidimensional TVET policy enable SA to prosper? The next section raises pertinent questions and objectives whose outcomes seek to address the research problem.

#### **1.4. Research Questions and Objectives**

In light of the research problem, the study posed a central research question and three sub research questions as follows.

##### **1.4.1. Research Questions**

- (i) The central research question (CRQ):

How can a TVET policy enable prosperity?

It is worth noting that prosperity is an everyday word typically defined in economics theory as GDP growth per capita. Nonetheless, this study regards prosperity as not just a subject of wealth, but a broad concept, incorporating physical health, ecological well-being, and quality of life. Chapter Two conceptualises prosperity in more detail. The preliminary literature review reveals that prosperity related concepts are employability, entrepreneurship, and development (Toniolo, 2019; Bunt *et al.*, 2019; Al-Jubari & Mosbah, 2021). Hence the research sub-questions are as follows.

- (ii) The research sub-questions (RQs):

RS-Q#1 How can TVET a policy enable employability?

RS-Q#2 How can a TVET policy enable entrepreneurship?

RS-Q#3 How can a TVET curriculum enable development?

##### **1.4.2. Research Objectives**

- (i) The primary objective of the study is to explore how a TVET policy can be an instrument for prosperity attainment.

- (ii) Secondary Research Objectives (SRO) are as follows.

SRO#1 To discover mechanisms in TVET policies that can enable development.

SRO#2 To examine elements of TVET curricula that can enable entrepreneurship.

SRO#3 To determine elements of TVET policies that can enable employability.

## 1.5. Study Rationale

Education is a basic right in SA. Chapter 2, sec 29 (1) (a) and (b) of the SA constitution states that “everyone has a right to basic education; the government is obliged to progressively avail further education through reasonable means” (RSA, 1996). Moreover, SA has an international legal obligation to provide quality education; SA is party to the United Nations’ International Covenant on Economic, Social and Cultural Rights [ICESCR] (UN, 1996).

In the case between “the Governing Body of the Juma Musjid Primary School and Others v Essay NO and Others 2011 (8) BCLR 761 (CC)”; when navigating its way to the accurate decision, the Constitutional Court considered the ICESCR. The judge cited the contents of General Comment 13 of this covenant which states:

Education is both a human right in itself and an indispensable means of realising other human rights. As an empowerment right, education is the primary vehicle by which economically and socially marginalised adults and children can lift themselves out of poverty and obtain the means to participate fully in their communities. Education has a vital role in empowering women, safeguarding children from exploitation and hazardous labour and sexual exploitation, promoting human rights and democracy, protecting the environment, and controlling population growth. Increasingly, education is recognised as one of the best financial investments States can make. But the importance of education is not just practical: a well-educated, enlightened, and active mind, able to wander freely and widely, is one of the joys and rewards of human existence” (UN, 1996).

In SA, poverty eradication strategies have been anchored on job creation. Paradoxically the unemployment rate has been constantly increasing. This is a structural issue due to the mismatch in the supply and demand of skills—high-quality education accessible to everyone is the solution (Jones, 2020). Hence, the underlying rationale that justifies this study is the need for a holistic TVET policy framework to enable South African prosperity.

## 1.6. Research Methodology

The challenging problems that inhibit prosperity are neither linear nor straightforward. Therefore, this research explored TVET policies from four countries using a qualitative research approach to bring a deep and robust understanding of the complex issues under investigation. Teherani *et al.* (2015:669) assert that “qualitative research is a systematic inquiry into social phenomena in natural settings”. The qualitative approach demands that a researcher observes the world with the supposition that nothing is insignificant. In other words, all that exists can potentially be a hint that might unlock deeper comprehension of what is being studied (Bogdan & Biklen, 1997:6). Notably, this research was ontologically driven by the notion that what transpires in the world is not equivalent to what people see. Hence, the study adopted critical realism (CR) as a philosophical worldview from an ontological perspective. The hallmark of critical realism is that humans cannot equate reality to their comprehension of it and that knowledge is influenced by cultural inheritance and historically conditioning. Critical realism resonates with “epistemic relativism”. According to Wilson (2001:177), indigenous people’s reality is dynamic due to cultural influence.

Accordingly, the study adopted relativism and Afrocentricity from an epistemological viewpoint. Moreover, the study used a case study research strategy to answer the research questions and a systematic review of documents to collect data, which it analysed inductively using thematic analysis (Chapter Three will discuss the research methodology in more detail).

### 1.7. Dissertation Structure

This dissertation consists of five chapters. Table 1-1 succinctly highlights what each chapter contributes to the study.

**Table 1-1: Dissertation Outline**

<b>Chapter</b>	<b>Chapter Contribution</b>
<b>Chapter One: Background and Introduction</b>	The chapter introduces the study and gives the background of the phenomenon under investigation.
<b>Chapter Two: Navigating the Technical and Vocational Education and Training International Landscape</b>	The chapter critically analyses, evaluates and synthesises the existing literature on the research topic to illuminate contributions and gaps in the body of knowledge.
<b>Chapter Three: Research Design and Methodology</b>	This chapter gives an overview of the research design and methods applied to achieve the research goals. Furthermore, the chapter covers the data collection method, which is a detailed systematic review of documents.
<b>Chapter Four: Data Presentation and Interpretation</b>	This chapter presents a comprehensive report on the extracted data and then interprets the results of secondary data.
<b>Chapter Five: Discussion of Key Findings, Recommendations and Conclusions</b>	This chapter discusses findings, and the discussion is framed on the central research question and three sub-research questions and is informed by a theoretical framework. Additionally, this chapter concludes the study by presenting high-level findings related to the research objectives as the basis for drawing conclusions and making recommendations.

### 1.8. Chapter Synopsis

This chapter introduced the topic. Subsequently, it gave the background of the phenomenon under investigation, leading to the broad research problem. After that, it discussed the narrow research problem, which led to research questions and objectives. Thereafter, the chapter justified the need for this study. Furthermore, the chapter presented the research methodology employed by the researcher. Lastly, this chapter summarised the dissertation outline through Table 1-1.

## CHAPTER TWO

### 2. NAVIGATING THE TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING INTERNATIONAL LANDSCAPE

#### 2.1. Introduction

“A literature review is a critical analysis and synthesis of existing knowledge relevant to a research problem” (Hart, 2018:2). Rowley and Slack (2004:32) assert that a literature review categorises concepts in related literature. This chapter will critically analyse, evaluate, and synthesise the existing literature on the literature’s research topic. The chapter aims to illuminate contributions and gaps in the body of knowledge and state how findings and conclusions from the study will help address those gaps. The study explores how SA could attain prosperity through the TVET model. The chapter goes on to discuss constructions of neoliberalism and public policy before examining facets of the TVET model. The selection of countries from which secondary evidence is drawn to present case studies is justified before the theoretical framework driving the study is articulated. Before reviewing the literature, the chapter will clarify key concepts. It is worth mentioning that prosperity has related concepts that are critical for the study, which the chapter will discuss next.

#### 2.2. Clarification of Concepts

Prosperity and its related concepts like poverty, development, education, good governance, and corruption seem to have clear-cut or obvious meanings until scholars probe them more deeply. These concepts are firmly established in history and civilisation. Hence it is not easy to decipher and acknowledge their intrinsic constructs. This chapter probes these concepts in this section; next will be the central concept: prosperity.

##### 2.2.1. Conceptualising Prosperity

The SA NDP states, “We respect the ability, competence and talent; now our economy is growing; our prosperity is increasing” (RSA, 2012:17). There are rival concepts of prosperity, which chiefly fall into four paradigms – the economic, social, ecological, and spiritual. The most dominant paradigm of prosperity is grounded in economics theories. The definition of economic prosperity globally is growth in Growth Domestic Product (GDP) per capita (Borowy & Schmelzer, 2017:1). According to Jackson & Senker (2011:51), this is a Western phenomenon. However, prosperity is not merely a matter of wealth or income, but a more extensive phenomenon, encompassing “health, ecological well-being, opportunity and quality of life” (Jackson & Senker, 2011:49-50; Moore, 2018:1502). Attaining sustained prosperity depends on providing capabilities for people to prosper—bounded by the finite planet’s ecology and resources (Jackson & Senker, 2011:49-157). There are examples of regions wherein the opportunity cost of economic prosperity has been ecological disasters that resulted in endless human suffering. One example (see Figure 2-1) is central Asia, where the Aral Sea dried up due to rivers diverted for industrial farming irrigation.

**Figure 2-1: Ecological Disaster – Dried-up Aral Sea**



Source: Herwig (2004)

The Aral Sea drying up resulted in unprecedented problems related to climate, health, and socio-economic complications (Jin *et al.*, 2017:2). Then what is prosperity? According to the Oxford dictionary, prosperity is adapted from the Latin word *prosperitas*, which means to be happy, cause to succeed. Then the question scholars must answer is: how did society reduce prosperity to material wealth accumulation (GDP growth)? Moreover, concerning prosperity attainment, Méda (2014:6) formulates the question that matters as: “is prosperity without GDP growth possible?” This takes on the all-encompassing definition of prosperity as advocated by Jackson & Senker (2011:49-50). Notably, prosperity contrasts with poverty; hence the study conceptualises it next.

### **2.2.2. Conceptualising Poverty**

The definition of poverty that the World Bank internationally advances is about income, i.e., living wages below \$1,9 per day. However, the SA government defines poverty in three categories (see Table 2-1).

**Table 2-1: National Poverty Lines in SA**

<b>Poverty Line</b>	<b>Definition</b>	<b>Amount per Month<sup>2</sup></b>
<b>“Food poverty line (extreme poverty)”</b>	“The amount of money that an individual will need to afford the minimum required daily energy intake.”	R585
<b>Lower-bound</b>	“The food poverty line plus the average amount derived from non-food items of households whose total expenditure is equal to the food poverty line.”	R840
<b>Upper-bound</b>	“The food poverty line plus the average amount derived from non-food items of households whose food expenditure is equal to the food poverty line.”	R1 268

Source: Stats SA (2020a)

What constitutes poverty? Vélez (1994:9), cited in Dieterlen (2005:19), defines extreme poverty as persons with insufficient nutrition, which leads to a deficient level of physical and intellectual functioning—this study adopted this definition. According to Leyens (2014:43), poverty has two dimensions; one is

<sup>2</sup> The SA government adjusts the poverty lines annually in line with the cost of living. In Table 2-1, Rand values are for 2020.

concerned with the nature of poverty and the other one with the threshold of poverty. In other words, the former is concerned with poor in what sense and the latter with poor from which viewpoint. Furthermore, Leyens' framework for defining poverty has three elements: formal definition, conceptual definition, and indicators. Leyens (2014) makes an example of a formal definition as: "a condition in which people cannot live in a sufficiently decent manner". This definition leaves open the concept of "sufficiently decent living". At a theoretical level, the definition provokes a debate of what constitutes living decently? What are the essentials? Are they commonly identical for all human beings? If food is a constituent of essentials, should it be classified in terms of commodities such as meat and mielie meal or characteristics such as nutrition and calories?

### **2.2.3. Conceptualising Education**

It is widely accepted that education entails imparting knowledge and instilling societal values (Hotmart, 2020). However, scholars have different views about education. According to Philip (2008), education is intended to enhance employability; most students acquire education to improve employability prospects. While Chomsky (1995:3) argues that education is designed for obedience and passivity, it prevents free thinkers from childhood. In other words, education is intended for social control. (Ibid) argues that capitalist systems use education to produce instruments of production and oppression. Thus, this section may infer that lack of education in capitalist or neo-liberal systems may result in unemployed and ultimately destitute people. Ngcwangu (2014) argues that education is not 'ideologically neutral' and occurs within the rubric of capitalist accumulation strategies and maximisation of profits. Vally and Motala (2014:44) assert that education based on only the aptitude regardless of social status and power (or marginalisation) is deceptive since its effects are expressive of such relations of power and continue to reproduce social inequality.

This section has established that education entails much more than simply academic knowledge imparting. In summing up, this section favours Kadir & Nimota's (2019:2) definition of education. (Ibid) postulates that "education is the development of a complex of knowledge, skills, attitude, and value by which people may improve their lives and sustain their nation." Moreover, (ibid) asserts that education is a critical element of good governance, which this section will explore next.

### **2.2.4. Conceptualising Good Governance**

According to the IMF, before there can be prosperity, there must be growth, and before there can be growth, there must be good governance. In other words, the causal chain for poverty alleviation is as follows, good governance→growth→prosperity (IMF,1997). According to Villoria (2021), the state must prevent corruption to achieve good governance. Corruption is the primary cause of bad governance, which is the view supported by Karstedt (2001:300); Karstedt's study concluded that countries with high-income inequality have high levels of corruption, resulting in poor governance and slow growth. In other words, when there is poverty, there is poor governance. States accomplish public administration modernisation by primarily eliminating corruption. "As countries grow rich, a burgeoning middle class demands more accountability

and protection of individual rights, leading eventually to capitalist democracies” (Ang, 2016:2). According to (ibid), it is logically spontaneous that strong, “law-bound” state-run institutions characterise all thriving economies. Likewise, the IMF suggests that developing countries must duplicate the prosperous countries’ checklist of model practices. Consequently, the development would naturally grow from an excellent institutional base (IMF 1997). The modernisation theory leaves open how the developing countries should deal with the cyclical causal effect of poverty and corruption.

Furthermore, on a theoretical level, the social contract is rooted in good governance (see Figure 2-2), which means the inherent relationship between the state and people is founded on the principles of “accountability, transparency, responsiveness, equitable and inclusiveness, consensus-oriented and participatory, government, follows the rule of law and should be effective and efficient” (Nzimakwe and Pillay, 2014:5). Kadir & Nimota (2019:2) sums up Figure 2-2 by postulating good governance as “full respect of human right, participation of people in decision making, transparency and accountability, resources management, equity, access to knowledge and the likes that foster responsibility towards the realisation of goals and objectives”.

**Figure 2-2: principles of Good Governance**



Source: Adapted from Nzimakwe & Pillay (2014)

Thus, this section sums up good governance as a political-administrative interface that ensures the citizens’ will is realised through public policies by establishing rules that ensure efficient service delivery, enabling social development.

### **2.3. Neoliberalism**

Neoliberalism is a capitalist system for social domination, which has philosophical origins in Adam Smith’s free-market capitalist economy (Saad-Filho & Johnston, 2005:10). However, it is worth mentioning that there are differentiated definitions of neoliberalism. For example, Whyte & Wiegatz (2016:229) define it as an economic growth model based on the government’s removal of capital controls. Moreover, it includes supply-side economic policies comprising tax reduction for the rich and corporates—fiscal policies fixated



on wage and inflation control (Ibid). While Narsiah (2002:3) defines it as a worldwide dogma, which combines “fiscal austerity, deregulation and privatisation”. On the other hand, Steger & Roy (2010:11) contend that neoliberalism is a broad concept that requires a framework to define, which this study will adopt. The framework chiefly consists of three constructs: ideology→mode of governance→policy package, as seen in Table 2-2 below.

**Table 2-2: Neoliberalism constructs**

Construct	Exploration
Ideology	The codifiers of neoliberalism are worldwide power elites, including influential scholars, directors of large international businesses, and celebrities. They strategically use the media to saturate the public discourse with romanticised conceptions of a consumerist, free-market world to serve a particular political interest.
Mode of governance	Neoliberal governmentality is rooted in the devolution of power and individual empowerment. It achieves this by adopting a self-regulating free market and a pursuit of profits instead of enhancing civil society and social justice. This construct gave rise to the <u>new public management</u> (NPM) in the 1980s. Neoliberalism as NPM sought to ensure that the public sector operated as a private corporation.
Policy package	There are primarily three neoliberal policy packages: deregulation of the economy, liberalisation of trade and industry, and privatisation of state-owned enterprises (SOEs). Other cross-cutting policies include substantial tax cuts (particularly for corporations and the wealthy), lessening social services and social programmes, interest rate targeting through an independent reserve bank that implements inflation targeting even if the opportunity cost is high unemployment and inequalities.

Source: Adapted from Steger & Roy (2010:11)

Neoliberal policies were standardised under the ambit of the ‘Washington Consensus’ in the 1990s (Bowsher, 2020:46); after the 1990s, neoliberalism became a global phenomenon. The ‘consensus’ locus is the three Washington-based institutions, “the World Bank, the IMF and the US Treasury Department”. Neoliberal policies reduce state capacity to deal with critical social problems, especially poverty, unemployment, and inequalities (Saad-Filho & Johnston, 2005:115).

### **2.3.1. South African Neoliberalism**

The release of Mandela in 1990 initiated the end of Apartheid; four years later, democratic elections were held, which Mandela’s ANC won. Leading up to the elections, the ANC’s manifesto was based on the Reconstruction and Development Programme (RDP), which the ANC derived from the Freedom Charter that was socialist inclined. Table 2-3 used the framework in Table 2-2 above to demonstrate how the SA macroeconomic policy framework has been neoliberal.



**Table 2-3: How SA Poverty Alleviation Macroeconomic Policies Have Been Neoliberal**

Policy	Ideology	Mode of governance	Policy package
<b>GEAR</b>	Economics Gurus from the Apartheid regime and the “World Bank/IMF” pressurised the government to abandon the socialist RDP and rather adopt a Neoliberal GEAR (Ansari, 2019:151; Williams & Taylor, 2000:26; Bond, 2003: ix-71). The IMF approved the 1996 loan subject to the government’s approval of the GEAR policy (Ansari, 2019).	The mode of governance for the GEAR policy was characterised by “capitalism, fiscal austerity, export-oriented development and privatisation”. (RSA, 1996; Narsiah, 2002:5; Ansari, 2019:2).	Primarily consists of redistribution of wealth as a subordinate effect of economic growth, lessening state authority in trade and industry and privatising enterprises owned by the state (Narsiah, 2002:5-6). Other common policy instruments included considerable corporate and wealth tax reduction, reduced government spending on social programmes; inflation and growth targeting regardless of job losses (Williams & Taylor, 2000:33-34)
<b>ASGISA</b>	Former president Thabo Mbeki appointed an international panel that included scholars from Harvard University to provide an ideological cover through recommendations on the policy instruments of ASGISA would be based (Isaacs, 2014:58). The ASGISA was also endorsed by the IMF (Treasury 2006)	ASGISA kept the elements of GEAR of fiscal austerity, privatisation and export-driven economy and privatisation (Gelb, 2006:5; Hajdu et al., 2012:52). The policy aimed to unlock the bottlenecks to economic growth, which was a predictor variable to poverty eradication.	It aimed to alleviate poverty through economic growth-targeting at an average of 6% annually. Its primary instrument was lessening the “costs of doing business in South Africa” through state-led infrastructure spending (Satgar, 2012:55). In addition, the objective was to increase the county’s competitive capacity by supporting the export-led approach.
<b>NDP</b>	The IMF/World Bank endorsed GEAR’s ideology underpins the NDP. Codifiers of the NDP were power elites; forty-four percent were businesspersons, and the rest were academics and technocrats (COSATU, 2013:56).	The NDP dismissed the role of a state-led investment which contradicts the state’s intention to build a developmental state, which is a philosophy that encourages an interventionist government. (Isaacs, 2014:61). The NDP aggressively adheres to the GEAR export-led growth path and prominently features trade liberalisation (ibid).	The NDP’s employment strategy is based on the SMME’s sector and services. According to COSATU (2013:27), “the [NDP] economic strategy is export-driven, with exports being regarded as the primary catalyst of growth. Economic strategies dominated by a focus on exports are associated with neoliberal growth models”. Lastly, 90% of the jobs it aims to create must come from SMMEs

Source: Created by the Author from Various Sources as Indicated

The RDP became the first SA democratic macroeconomic poverty eradication policy. However, the ANC would be persuaded by the Bretton Woods institutions and prominent businesses to embrace neoliberalism (Schneider, 2018:307). The IMF and the World Bank opposed the RDP, which led to its office's closure in 1996 (Narsiah, 2002). The GEAR, ASGISA and the NDP, which were all neoliberal, succeeded the RDP, and they were all endorsed by the Bretton Woods institutions.

## 2.4. Public Policy

The study seeks to address a contentious public policy issue: How can the SA government address the lack of prosperity among the majority of South Africans? The preliminary literature review in Chapter One revealed that other countries successfully used TVET policies to attain prosperity. The assertions above make 'policy' a subject for interrogation. Before the study delves into the topic, it is essential to define policy. The historical origins of the term 'policy' are Latin: *politia*, which means 'state', the term 'policy' has evolved into the middle English's *policie*, which means to conduct public affairs or the administration of the state (Dunn 2017:31). This section may deduce that the term policy is linked to the state and public affairs from the statements above. Table 2-4 summarises early definitions of policy; however, De Coning & Wissink (2018:7) provide a broad contemporary definition which this study will adopt—it is as follows:

“a public sector statement of intent including sometimes a more detailed program of action, to give effect to selected normative and empirical goals in order to improve or resolve perceived problems and needs in society in a specific way, thereby achieving desired changes in society.”

**Table 2-4: Summary of Early Definitions of Policy.<sup>3</sup>**

Source	Definition
Ranney (1968:7)	“a declaration and implementation of intent.”
Easton (1953:129)	“the authoritative allocation through the political process, of values to groups or individuals in the society.”
Dye (1987:7)	“a comprehensive framework of and/or interaction.”
Starling (1979:4)	“a kind of guide that delimits action.”
Baker, Michaels & Preston (1975:12-15)	“a mechanism employed to realise societal goals and to allocate resources.”

Source: Cloete, De Coning, Wissink & Rabie (2018:6)

In other words, the term 'public policy' is typically aligned with a government program and a specific course of action to attain societal goals. The former indicates that there is a process, and the latter denotes that there must be a management function in public policy, and there must be an analysis to ascertain the extent to which the policy attains the desired goals. Hence the key concepts in public policy are policy process, policy analysis and policy management.

<sup>3</sup> For Table 2-7 references, see Cloete et al. (2018:27-31)

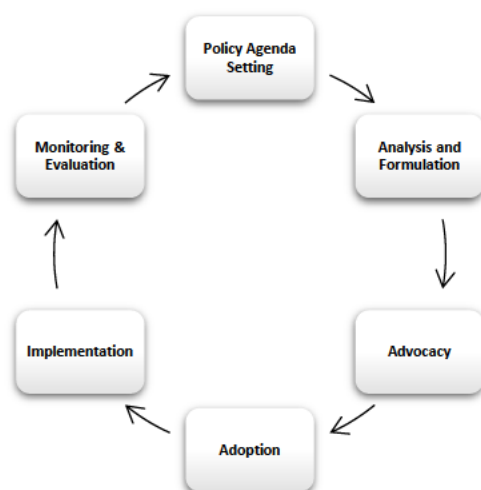
### 2.4.1. Public Policy Associated Concepts

#### 2.4.1.1. Policy process

The “policy process” consists of various stages, including: “initiation, design, analysis formulation, advocacy, implementation, and evaluation.” (Cloete *et al.* 2018:6; Birkland 2019:26). According to Dunn (2017:46), the policy process is cyclic and consists of “agenda-setting, formulation, adoption, implementation, assessment, adoption.” This study will merge the versions mentioned above, as seen in Figure 2-3.

**Policy agenda setting** – an agenda is worth defining as it is an operative word in agenda-setting. An agenda is characteristically a list of deliberated issues and occasionally acted upon by an establishment or society. While Birkland (2019:169) defines agenda-setting as the course of action by which problems and possible solutions attain public and ‘elite attention’<sup>4</sup>. In comparison, Cloete *et al.* (2018:137) define policy agenda-setting as a purposeful planning procedure for recognising policy issues, delineating and ranking problems, rallying support, and lobbying decision-makers to take appropriate action.

**Figure 2-3: Policy Process**

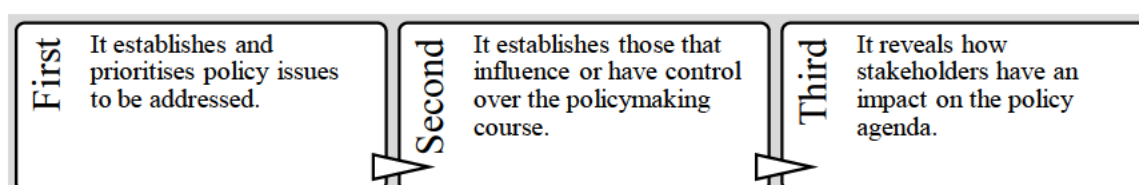


Source: Cloete *et al.* (2018:6), Birkland (2019:26) & Dunn (2017:46)

According to (ibid), policy agenda-setting consists of three distinct stages highlighting its significance in policymaking (see figure 2-4). In certain circumstances, a policy is firstly embraced; after that, it may be necessary to work in retrospect. According to Dunn (2017:46), “parallel cycles occur, where different stakeholders develop policies, and there may be forward (“arborescent”) as well as backward (“assembly”) branching from one phase to multiple successors or predecessor phases.”

<sup>4</sup> “Elite theory—In studies of groups and politics, the theory or belief that policy making is dominated by the best educated, wealthiest, and most powerful elites. This position is most closely associated with sociologist C. Wright Mills. Contrast with pluralism” (Birkland 2019:169).

**Figure 2-4: Policy Agenda-Setting Distinct Stages**



Source: Adapted from Cloete et al. (2018:138)

**Policy formulation** – this stage involves establishing the feasibility of accepting, albeit rejecting, a course of action for addressing the policy issue (Madimutsa 2019). In other words, policy formulation arises from claims by other actors for action on a specific issue. Hence, policy formulation entails defining policy goals and choosing the most appropriate policy instruments to enable the policy to attain those goals. Policy actors include citizens, political parties, and pressure groups.

**Policy advocacy** – is the process of taking on interventions that seek to influence government policy (Cullerton *et al.*, 2018). According to De Coning & Wissink (2018:10), policy advocacy entails analysing the claim for a particular policy issue. Moreover, these authors assert that “the analyst as a political actor and the political actor as an analyst are both controversial roles as they may sacrifice scholarly standards of objectivity and detachment”. In other words, the two roles mentioned above do not guarantee that a policy decision is informed by empirical processes and conclusions derived from data or well-developed theoretical frameworks.

**Policy Adoption and implementation** – policymakers or government institutions adopt formulated policies for implementation. However, various factors may affect policy adoption, including estimated costs for proposed policy alternatives (Walker, 2000:15). Once policymakers have adopted a policy, the next step is implementation, which entails setting SMART goals (see table 2-5). Furthermore, implementation involves capacity building of implementers and relevant stakeholders, funding of the preferred policy and mobilising resourcing for implementation (Cloete *et al.*, 2018).

**Table 2-5: SMART Goals Outline**

Smart Goals	Towards Implementation
<b>Specific</b>	Use action verbs for end results
<b>Measurable</b>	Can be determined when the goal has been achieved
<b>Attainable</b>	End result achievable
<b>Relevant</b>	Why should we achieve this goal?
<b>Time-bound</b>	Attainable with the set time frame

Cloete et al. (2018:161-162)

**Monitoring and Evaluation** - Monitoring and evaluation (M&E) is a warning mechanism that can alert an organisation about its potential successes and failures. M&E is an integral part of each phase/step of the policy life cycle. Therefore, there must be measurable goals when the project is defined.



Each element of the M&E framework should indicate the frequency of implementation. The frequency depends on the nature of the policy and measurable milestones in the implementation plan, during which monitoring will show the extent to which the government has reached the goals and targets.

**Table 2-6: Monitoring and Evaluation Framework**

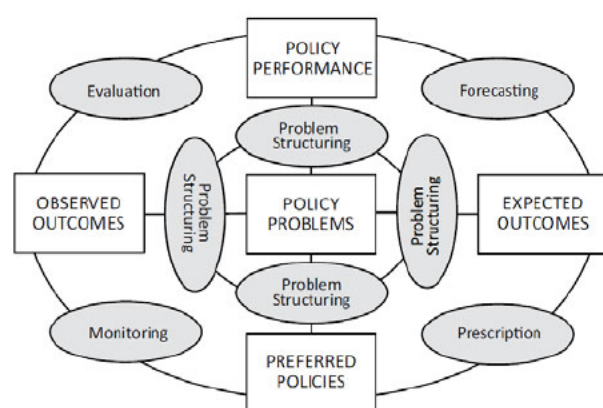
	Element	Short description
Monitoring	Relevance	“is the extent to which a policy deals with the issues and the particular requirements of the target group. Relevance may alter over in the long term. This may occur due to the evolution of the nature of the problem and the utilitarian context.”
	Efficiency	“refers to the effort and resources put into the policy relative to the outputs and outcomes”.
	Effectiveness	“describes the extent to which the policy achieves the set goals”.
	Impact	“is the general effect (both positive and negative) of the policy, project on the target group. Often different forms of impact can be distinguished, direct and indirect, intended, and unintended.”
	Sustainability	“describes the endurance of the results of the policy after the financing has stopped. It must be investigated in advance whether the objectives achieved can and will remain in existence without further external support.”
Evaluation	Accountability	“Economic use of funds by the programme managers who are responsible for the worth of their programmes. Also, to verify whether the benefits reached the people for whom the policy was meant”
	Knowledge	“The purpose is to establish new knowledge about social problems and the effectiveness of the programmes designed to alleviate them. It helps to make plans for future work.”

Source: Adapted from Cloete et al. (2018:281-282)

#### 2.4.1.2. Policy Analysis

According to Dunn (2017:3), policy analysis is an approach for providing a multi-faceted inquisition that aims to establish crucial evaluation and diffusion of knowledge relevant to the policy—as a problem-solving field; it uses social science techniques and theories to resolve everyday problems (see Figure 2-5).

**Figure 2-5: Multi-disciplinary Policy Analysis**



Source: Dunn (2017:6)

According to Dunn (2017:5), the purpose of policy analysis is to deliver ‘policy-pertinent knowledge’ regarding five categories of questions:

- 1) Which policy issue a policy analyst seeks to resolve?
- 2) What are the expected policy outcomes?
- 3) What are favoured policies?
- 4) What policy outcomes a policy analyst expects?
- 5) To what extent the policy achieves the set goals?

#### 2.4.1.3. Policy Management

The essence of managing policies is to ensure that they do not remain simply declarations of intent (De Coning, Koster & Leputu, 2018:236). According to (ibid), project and programme management are key mechanisms for managing policies. In both mechanisms, the common element is management—on the one hand, the widely accepted management elements are planning, organising, leading, and controlling. On the other hand, the success of a project is assessed within the rubric of time, cost, and quality, commonly known as the “iron triangle”. According to Radujković & Sjekavica (2017:608), project management assessment expands beyond the “iron triangle” and incorporates communication, risk, and financial and resource management. A Programme (in programme management) is the aggregate inter-connected projects which seek to attain a common objective. Programme management must provide a level of governance above projects to ensure they are run efficiently, effectively, and economically.

Now that the study has outlined public policy above, the attention will shift to TVET, as the main aim of the study is to explore if TVET policies can lead to prosperity.

### 2.5. What is Technical Vocational Education and Training (TVET)?

This section succinctly unpacks the term “technical and vocational education and training” and places TVET in a historical context to establish what it entails. It is worth mentioning that the term TVET is not universal. For instance, in other parts of the world, like the anglophone countries, the term vocational education and training (VET) is used (Winch, 2013:90).

Below is a brief clarification of the TVET acronym taken from Winch (2013):

- **Technical:** a program relating to a technical and technological speciality such as information technology and engineering processes.
- **Vocational:** program that primes learners for a particular specialist career such as law, built environment, medicine or maritime.
- **Education:** the process of expediting learning and knowledge development.
- **Training:** focused skilling of participants in a specific field.

According to Oviawe, Uwameiye, & Uddin (2017), TVET is the uptake of skills to advance one's economic, [social] and technological prospects. Moreover, Galguera (2018:8) asserts that TVET is complex teaching and learning which incorporates multiple variables and elements to attain a common goal. It is notable that in SA, TVET is commonly associated with post-school learning. However, this study will demonstrate that TVET does not only relate to further education and training (FET) as an alternative to enrolling at a university. Even though some people associate it with dropouts at the school levels, TVET is offered in all education stages. Thus, TVET is a wide-ranging concept incorporating "formal, nonformal, and informal learning" from primary to tertiary education (Galguera 2018).

Turning to the historical context, in most parts of the world, people have generally perceived TVET as a relatively unappealing educational option compared with university education (Ismail, 2019). According to Winch (2013:92), most people have historically associated TVET with lower levels of the working class devoid of elite status. It is worth mentioning that the stigmatisation of TVET globally is asymmetric. For instance, in France, the stigma is minimal, as there is a TVET-academic interface. In that case, TVET transcends the pressing skills demands of the industries, and there is scope in the curriculum for academic progression. In SA, the government initiated the TVET systems in the 19<sup>th</sup> and 20<sup>th</sup> centuries to supplement mining and railways activities (CDE, 2015:3). According to CDE (2015:3), the focus was on the production of white artisans. The concentration was on skills training, and there was no avenue for academic advancement. Consequently, many parents were not in favour of TVET. Instead of reforming the TVET sector, the present-day government offered TVET to those who struggled academically or were high school dropouts (Equality Education, 2016:8). Consequently, TVET became associated with inferior societal status. The scope and quality of educational services were conspicuously mediocre for black students. The combination of these factors heightened the stigma attached to black TVET enrollees, a stigma that exists even until today (CDE, 2015:6). Furthermore, the SA education system has been designed to produce white-collar workers instead of covering all aspects of the education system. Consequently, it is not producing skills that respond to the skills demanded by the economy (PMG 2018).

## **2.6. TVET Framework: South Africa**

Since 1994, the South African government has reformed legislation for education and training. As a result, some TVET high school subjects were eliminated from the curriculum, including metalwork, bricklaying, and motor mechanics. There does not seem to be empirical evidence to support such elimination (CDE, 2015:4). In 2009, South African educational offerings were sub-divided into two ministries of basic and higher education. TVET programmes are shown in Table 2-7 on overleaf.

**Table 2-7: TVET Programmes in SA**

<b>Establishment</b>	<b>Labour Market Programme</b>
Technical High Schools	TVET is available from grade 8 in four engineering fields: mechanical, civil, electrical. Students graduate with a matric certificate embedded with vocational elements.
FET Colleges	These offer National Certificate Vocational (NCV) and 'Nated' (N) certificates. <b>NCV:</b> prepares students for labour market skills, including life skills and 19 occupationally orientated careers comprising but not limited to agriculture engineering, information technology, finance, education and business administration. <b>N programmes:</b> consist of a sequence of qualifications from N1 to N6—each level takes up to a semester (six months). Additionally, a student must complete 2000 hours of in-service training to obtain a national diploma after N6. To get an artisanal diploma, a student must pass a trade test.
Technikons	Originally, technikons offered a broad range of full-time vocational diplomas programmes for three years, with the final year spent in the industry (in-service training). In 2004, the SA government replaced technikons with universities of technology, which offer advanced academic qualifications and research.
Informal Training	Informal training is workplace learning on an <i>ad hoc</i> basis. Thus, it is beneficial to use concepts that characterise its contributions and shortcomings on its own terms and not those from the academic discourse. Besides workplace learning, informal learning may comprise traditional crafts and fisheries.

Source: Adapted from Simon, Pauline & José-Luis (2014:19-22)

The SA government's TVET focus has been mainly on post-school education or FET. TVET Colleges were once called FET colleges. The NDP suggests the improvement of FET colleges as a mechanism for addressing the skills gap (RSA 2012:60,143,324). The NDP paradoxically acknowledges the essence of having an integrated approach in skills development through linking basic and tertiary education with industry (RSA 2012:296). Yet, the government separated basic from higher education. On the one hand, the Department of Higher Education and Training (DHET) attempted to reform the TVET legislation. In 2012 DHET developed a turnaround strategy on FET, which sought to address challenges about resources and quality in TVET (DHET 2012). The turnaround strategy developed into a green paper (DHET 2012a) and ultimately the "White Paper on Post-School Education and Training", which sought to expand and improve education and training (DHET 2013). According to Akoojee (2016:13), the white paper was not radical enough to address the skills challenges faced by the country. Moreover, Akoojee (2016:13) argues that the reform should have taken communities as the point of departure rather than an afterthought. Akoojee (2016), therefore, regards the legislation as a rhetoric commitment that has not resulted in a meaningful transformation of the TVET sector.

On the other hand, the Department of Basic Education (DBE) instituted the three-stream model to reform technical education (or TVET) in basic education. The first stream is general education, which prepares students for academic progression. The second stream is vocational education, which prepares students for post-school employment. The third stream is the vocationally learning stream, which primes students for further education and training (Equality Education, 2016:14).



## **2.7. TVET Policies: International Context and Rationale**

Internationally, some scholars have explored the TVET phenomenon. For instance, Remington (2018) wrote a discussion paper exploring the possibility of adapting the German dual TVET system in the US, which has the world's largest economy. According to Remington (2018:498), the US government in recent years has been vouching for the change of the US education system to be predominantly TVET. This is due to a considerable mismatch between demand and supply of labour in the US. Remington (2018) further claims that one reason countries remain trapped at the middle-income level is the inconsistent quality of TVET across the regions. Moreover, in 2011, Harvard University released a report which stated that most jobs now require extensive skills (Harvard University, 2011:500)—this highlights the importance of TVET going forward. The US's rationale to reform the TVET system resonates with most African countries, especially Sub-Saharan Africa. The discussion now turns to the justification for the cases selected for this study.

## **2.8. Justification of the International Cases**

Notably, in SA, there is no dedicated policy for TVET across basic education, tertiary education and the industry. Hence, this study explores TVET related policies implemented in four countries drawn from three continents – two in the Global North and two in the Global South. The two Global North countries in Europe are Germany and Finland. The two Global South countries are China in Asia and Nigeria in Africa. All four countries have TVET Acts. The countries are the cases, and the TVET policies are the units of analysis. A cross-country comparative analysis is provided in Chapter Four. Elements that could be contextually appropriate for South African implementation are identified in Chapter Four and Chapter Five. Next is the rationalisation for the selection of these cases.

### **2.8.1. China**

The People's Republic of China is located in East Asia and is host to the world's highest population. (1.44 billion). The Chinese economy is the largest in Asia and the second largest globally (Investopedia, 2020). Since the reforms started in 1978, the Chinese economy has grown at an unprecedented average of 10 percent (World Bank, 2020). During the same period, extreme poverty decreased from 88 percent to currently 0.7 percent (Postiglione & Min Tang, 2019:131). China deliberately located almost 80 percent of TVET institutions in rural areas and offered agricultural studies to alleviate poverty (Zouliatou 2017:186). However, there are challenges that were faced by the Chinese TVET system, one of those was the stigma. China 'miracle' (poverty alleviation) is hinged on the TVET system. That is why the study selected China in Asia.

### **2.8.2. Finland**

Finland is a unitary state located in Northern Europe. Some scholars, such as Sahlberg (2013), Morgan (2014) and Meriläinen *et al.* (2019), regard the Finnish education system as one of the best in the world.

It is founded on the principle of delegation of decision-making powers to the local municipal level and school levels (Koukku *et al.*, 2014:23). There is no national curriculum; the government delegates curriculum development to the school level. Vocational education is part of the school curriculum. Finnish TVET's distinguishing feature is the centrality of individual competencies, the objective of which is to create new knowledge. That is why the study selected Finland.

### **2.8.3. Germany**

Germany is a federal state located in central Europe. According to an overview of Germany conducted by EUBusiness (2020), Germany is the most populous European country, with over 81 million citizens. According to Investopedia (2020), the German economy is the largest in Europe and the fourth largest globally. The reason this study chose Germany is because of its excellent economic performance. According to many scholars and reports, German economic success is due to her Dual-TVET system. Due to its resounding success, the German TVET system has been replicated in over 100 countries (KfW Research, 2019:21; Remington, 2018). According to the World Bank (2019), extreme poverty in Germany is at zero percent, and the unemployment rate is at 3.1 percent. Furthermore, unlike most nations, the German education system also produces entrepreneurs, not just job seekers. This is demonstrated by the finding that more than 90 percent of German companies are SMEs employing less than ten people (KfW Research, 2019:16). Nigeria is one of the countries that have replicated some of the elements of the German TVET system.

### **2.8.4. Nigeria**

Nigeria is a federal state located in West Africa and is host to the highest population in Africa. According to the World Bank (2019a), the current population is about 200 million – and about 50 percent (100 million) of the citizens live in extreme poverty. The Nigerian economy is the largest in Africa. After regaining independence from Great Britain, Nigeria reformed the colonial education system, including the TVET sector (Okorafor & Nnajofo, 2017:613). According to these scholars, TVET reforms started in 1977, but TVET has not yielded the desired results. The reason for which the study selected Nigeria is the similarities in socio-economic profiles of Nigeria and SA.

Moreover, the Nigerian government has long acknowledged TVET, at least in policies, as the master key to unlocking prosperity (Okorafor & Nnajofo, 2017:615). The Nigerian governmental policies were meant to lead Nigeria to prosperity through TVET, but the government has not achieved that objective. Okorafor & Nnajofo (2017:616) claim that the problem is poor governance and weak structures. Moreover, they cite corruption, lack of political will, political instability, and corruption. The study draws lessons from the reasons causing Nigeria to be less successful than China, Germany and Finland.

## 2.9. Theoretical Framework for the Study

The theoretical lenses through which the study explored the phenomenon under investigation principally encompass two theories. These are the Moral Economy of Affection and the Market Creating Innovations—which the study will discuss next.

### 2.9.1. Market-Creating Innovation Theory

The main objective of the study is to demystify prosperity attainment through TVET. In exploring prosperity attainment, Christensen, Ojomo & Dillon (2019) undertook an international comparative case study. Their study established that nations could attain prosperity through the market-creating innovations (MCI) theory via transforming commodities that were conventionally only accessible to the affluent. The MCI reworks commodities into affordable and attainable inventions to many people (Christensen *et al.*, 2019: 22-24). The main instruments of this theory are **innovation** and **non-consumption**. They define innovation as: “a change in the processes by which an establishment transforms labour, capital, materials, and information into products and services of greater value” (Christensen *et al.*, 2019: 8). Non-consumers of innovation struggle to progress due to the historical unavailability of a good solution (Christensen *et al.*, 2019). Nonconsumption is the incapability of a possible consumer to acquire and use a good or service (Christensen *et al.*, 2019: 24). This phenomenon hinders them from acquiring development in a particular aspect of their lives. MCI proposes that prosperity may arise when there is an investment in niche innovations—which functions as a stimulus and base for establishing sustained economic development (Christensen *et al.*, 2019: 4-6). In other words, MCI→economic growth→prosperity. These point to M-PESA, M (mobile) PESA (money in Swahili) as shown in Figure 2-6 on overleaf.

**Figure 2-6: Market-creating innovation manifestation**

Nonconsumption	Innovation	Impact
More than 85 percent of Kenyans were without bank accounts before M-PESA, especially in rural areas.	M-PESA is a mobile money platform that offers the transfer and saving of money without a bank account.	There are currently more than 30 million M-PESA subscribers; 96% of households outside Nairobi have at least one M-PESA account.

Source: Adapted from Christensen *et al.* (2019:47) and World Bank (2017).

The example depicted in Figure 2-6 demonstrates the manifestation of MCI amidst non-consumption, which is prevalent in many poor regions across Africa (Christensen *et al.*, 2019:48). MCI theory has been employed by other scholars to advance innovation. For example, Bonsu (2019) used the MCI theory to develop the Customer-Centric Strategic Management Model. Bonsu applied the MCI theory to explore one of the propositions of that model, which is “efficiently producing varieties of products and services at a low cost to meet the demand of multicultural customer and lure the noncustomer.”

Finally, O’Callaghan, Adapa, & Buisman (2020) used the MCI theory to develop a framework for an “investment strategy in the water” and a framework for academic dialogue on “water technology innovation”.

### **2.9.2. Moral Economy of Affection (MEOA)**

The pre-colonial African worldview on development was based on the conception that the living world relies on the connection between humans, nature, and the spiritual world (Rutatora & Nindi, 2008:180). As a result of colonisation, African ways of knowing and being changed to the Westernised ways that were [are] characterised by materialism (Arowolo, 2010:2; Madukwe & Madukwe, 2010:271). Moreover, some scholars assert that due to the Washington Consensus, which adopted capitalist neoliberal policies, inequalities created by the Apartheid system are exacerbated under neoliberalism (Schneider 2018:30; Bond 2003:24; Narsiah 2002:13). Whyte & Wiegratz (2016:230) also corroborate the preceding assertion. These scholars state that neoliberalism deepens poverty and inequalities and morals that are characteristically associated with neoliberalism “advance self-interest practice, individualism, egoism, opportunism, cunning and disregard for the common good” (Whyte & Wiegratz (2016:232).

Typically, poverty in Africa is prevalent in rural areas. According to the World Bank (2019c), 82% of people living in extreme poverty in Africa live in rural areas. Despite this gloomy picture, Sugimura (2007:49) believes that the capitalist world does not straightaway alter a peasant into a *homo economicus*<sup>5</sup>. In peasant livelihood, family propagation is more important than individual profit maximisation – this was a starting point for Hydén’s (1980) ‘economy of affection’. Hydén (1980:13) broadly defines this economy as ‘Africa peasant’s socio-economic networks based on reciprocal relationships.’ The building blocks of Hydén’s theory are networks of kinship, friendship, and neighbourliness (Hydén (1980:13-113).

There are successful examples of MEOA in the modern world. For example, new interpretations of MEOA are called ‘another development’ in Sweden and ‘endogenous development’ in Japan (Sigumura, 2007:55-56). In addition, the Miombo project in Tanzania, which aimed to research endogenous knowledge farming systems for sustainable development, used the MEOA (Sigumura, 2007:55-56). The Sigumura (2007:57) study found that capitalism has considerable limitations, especially regarding the deterioration of the environment and that MEOA is the viable solution for development.

### **2.9.3. Congruence of the Theoretical Framework**

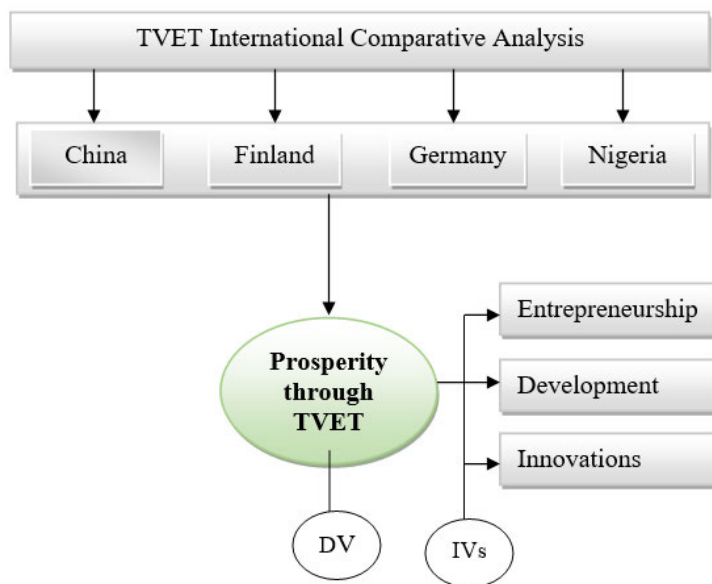
The moral economy is concerned with restoring African pre-colonisation norms of “reciprocity and subsistence”. If fittingly systematised, the moral economy may be fertile ground for innovation and technological systems resonating with Africans, especially those living in rural areas. Prahalad (2006:1-

---

<sup>5</sup> “In certain economic theories, people are portrayed this way: as ideal decision-makers with complete rationality, perfect access to information, and consistent, self-interested goals” see: <https://www.investopedia.com/terms/h/homoeconomicus.asp>

6) postulates an African economic perspective that indigenous people have a quantitative power to reinvent the capitalist system in a way that resonates with the MCI mechanisms, innovation, and non-consumption. Christensen *et al.* (2019) discovered that targeting non-consumption is ripe for innovation, leading to entrepreneurship. In this study, prosperity through TVET is a dependent variable, and entrepreneurship is an independent variable along with development and innovation. The congruence of the MCI and MEOA theories as a theoretical framework helped achieve the objectives of this study, but the theories are not without weaknesses. The weakness of the MCI theory is that it only considers material affluence. This study acknowledges prosperity as an extensive phenomenon encompassing “health, opportunity and quality of life”, which are all dependent on ecological well-being.” The gap in the theory is how poor regions may improve their quality of life without relying on GDP growth? The MEOA theory suggests that prosperity can be attained without relying on GDP per capita. This helps overcome the weakness of the MCI theory. Figure 2-7 depicts the interaction between the dependent and independent variables followed by the theoretical propositions that emerge from the variables.

**Figure 2-7: Dependent and Independent Variables Yielding Theoretical Propositions**



Certain theoretical propositions are suggested by the interaction of the DV and IVs reflected in Figure 2-7. These are that:

- a) Education that incorporates entrepreneurship and indigenous knowledge is ripe for sustainable development.
- b) Development should be based on the conception that the living world relies on the connection between humans, nature and the spiritual world, which may lead to prosperity.
- c) Prosperity is attainable when there are market-creating innovations and the custom of common reciprocity in society.

## **2.10. Chapter Synopsis**

This chapter first clarified prosperity and related concepts in depth to illuminate their fundamental constructs. After that, it explored neoliberalism as the initial review signalled that it has a significant causal factor on the research problem. Specifically, the review revealed that GEAR, ASGISA, and the NDP are SA poverty reduction strategies that fall under the umbrella of neoliberalism. Yet, post-apartheid poverty reduction strategies have done little to respond to poverty. Additionally, the chapter highlighted associated public policy concepts before exploring TVET, which is the central dependent variable of the study. This chapter pointed out the gap in the literature, which is the absence of a policy for South African TVET coordination and implementation. Thereafter, the chapter covered the theoretical framework, which underpins the study. The theoretical framework is comprised of the MCI and the MEOA theories, which yield theoretical propositions that served as the frame of the study and were used to test the identified variables; in search for the development of a South African TVET policy instrument for prosperity attainment. The next chapter of the dissertation focuses on the research methodology applied in the study.

## CHAPTER THREE

### 3. RESEARCH DESIGN AND METHODOLOGY

#### 3.1. Introduction

This chapter details the methodology employed by the research to undertake the study. It presents the research paradigms, research design, strategy and type. Furthermore, the chapter covers data collection methods as well as sampling strategies and size. Section 3.6 will discuss the systematic review of documents—it firstly discusses the review process, which consists of planning the review → conducting the review → reporting it. Moreover, planning the review covers the need for a review and the review protocol. While conducting the review reflects on the identification of the research, selection of primary studies, data extraction and study quality assessment, and data synthesis. Thereafter, the chapter will discuss ethical considerations, and lastly, it will cover the synopsis. Next, the chapter will discuss research paradigms/worldviews

#### 3.2. Research Paradigms/Worldviews

Scholars posit different definitions for research paradigms or worldviews. Creswell & Creswell (2018:5) depict worldviews as universal philosophical predispositions about the world. Hart (2010:2) defines worldviews as “cognitive, perceptual, and affective maps that people continuously use to make sense of the social landscape and to find their ways to whatever goals they seek”. In other words, worldviews develop during an individual’s lifetime through socialisation. In contrast, Ang (2016:10) and Wilson (2001:175) define a paradigm as viewing the world. Moreover, these two scholars argue that a paradigm is about acquiring knowledge that guides one’s actions in undertaking research. In summing up, this study regarded paradigms as accepted worldviews. Thus, four aspects merged to compose the research paradigm for the study as follows: ontology + epistemology + axiology + methodology as reflected in Table 3-1.

**Table 3-1: Paradigm Constructs and Definitions**

Paradigms	Definitions
Ontology	What one believes is the reality in the world.
Epistemology	What one thinks or knows about reality – how we know what we know.
Axiology	Set of morals, ethics, biases, and values.
Methodology	Ways in which the researcher uses thinking to gain more knowledge about reality.

Source: Adapted from Wilson (2001:175)

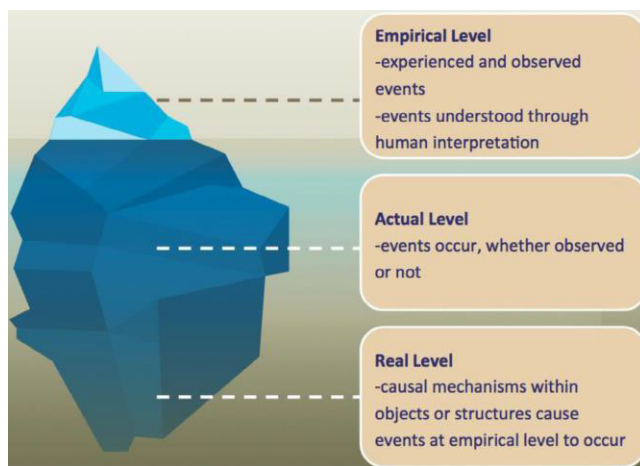
##### 3.2.1. Ontological Considerations

From an ontological perspective, this study used critical realism (CR) as the lens to explore the phenomenon under consideration. Contrary to traditional realism, CR is founded on a “deep, differentiated



and stratified” ontology – unlike empiricism, CR assumes natural necessity (Bergene, 2007:11-12). According to Archer *et al.* (2016), CR is an alternative paradigm to positivism and is fundamentally different. Archer *et al.* (2013:190) argue that positivism can be characterised as (Observation + Correlation = Explanation + Prediction), which relegates both natural and social reality. Critical realists assert that what transpires in the world is not equivalent to what people know. Thus, the definite realm comprises occurrences irrespective of humans’ comprehension. As Stevens (2020:6) puts it—CR contrasts with a “flat ontology”, which causes the “epistemic fallacy” of fusing our comprehension of reality with the actual reality. An iceberg metaphor in Figure 3-1 corroborates the above-mentioned assertion. One of the critical principles of CR is that ontology is not reducible to epistemology (Fletcher, 2017:182). In other words, people should not reduce reality to only the human comprehension of concepts.

**Figure 3-1. An iceberg metaphor for CR ontology.**



Source: Fletcher (2017:183)

### 3.2.2. Epistemological Considerations

“Critical realism [CR] does not advocate [for] an omniscient, mono-perspectival, value-neutral attempt to capture and fix the world in one scientific approach” (Stevens, 2020:6). In other words, from an epistemological standpoint, CR acknowledges the competing takes in developing a well-rounded account of a complex reality. According to (Bishop *et al.* 2002:611), “understanding worldviews of both the targeted community and ourselves is imperative if we are going to do more good than harm”. Furthermore, CR acknowledges that the locus of our knowledge is cultural inheritance and historically influence. Hence, CR resonates with “epistemic relativism”, —which is “entailed both by ontological realism and by the transformational conception of social activity” (Bhaskar, 1998: 57-58 cited in Stevens, 2020:6). Hence in addition to CR, this study had two more related epistemological positions: relativism and Afrocentricity.

**Relativism**—There are different forms of relativism; however, this section focused on epistemological relativism. Relativism from an epistemological perspective maintains that knowledge claims are



deemed to be confirmed as true or untrue relative to specific epistemic criteria (Stenmark, Fuller & Zackariasson, 2018:2). In other words, truth is relative to the observer's perspective; there is no absolute truth. This study acknowledges that knowledge is polluted by many factors, including locality, perspectives, religion, and power relations—Archer *et al.* (2016) supports this view.

**Afrocentricity**—This paradigm is based on the philosophical notions of traditional Africa (Thabede, 2008:235). According to Wilson (2001:177), “our fluid reality as indigenous people are affected by our culture”. This study agrees with Wilson's (2001:176) assertion that indigenous epistemology is interpersonal and is shared with the cosmos and nature.

### **3.2.3. Axiological Considerations**

According to Hart (2010:1-2), the drawback of worldviews is that the mainstream focus is on “cognitive processes” as the determining factor—this process disregards values such as spirituality and intuition inherent in indigenous worldviews. Hence, this study values prosperity as not merely a matter of wealth or income but a more extensive phenomenon, encompassing “health, ecological well-being, opportunity and quality of life”. With the underlying paradigmatic perspectives in mind, the discussion turns to the research design followed by the research strategy.

### **3.3. Research Design**

A research design is a systematic link between the research questions and the evidence gathered and scrutinised in a study (Yin, 2017:288). According to Saunders *et al.* (2009), a research design is much more than just systems by which data are gathered and methods by which they are scrutinised. However, a research design is an inclusive configuration that involves analysing the evidence accumulated and its source (Saunders *et al.*, 2009). Moreover, a research design includes how evidence is construed to answer the initial research questions. This study used a qualitative research approach. According to Teherani *et al.* (2015), “qualitative research is a systematic inquiry into social phenomena in natural settings.” Furthermore, Aspers & Corte (2019:155) assert that qualitative research is an iterative process, and it aims to obtain a deeper understanding of a phenomenon through its exploration.

### **3.4. Research Strategy and Type**

According to Rahi (2017:2), a research strategy is “a process of collecting and interpreting data with clear objectives”. This study used the case study to answer the research questions as the research strategy. The conceptualisation of a case study contrasts across disciplines, particularly relating to the underlying philosophies (Mills *et al.* 2010: xxxii)—this study focused on the social science (SC) conceptualisation. From a social science perspective, Kothari (2004:113) and Creswell & Creswell (2018:247) postulate that a case study is an intensive qualitative analysis of a particular social unit(s). In corroborating the preceding definition, Yin (2017:15) states that a case study is an in-depth empirical investigation of a phenomenon (“the case”) within its real-world context.

### 3.5. Data Collection Methods and Instruments

Creswell & Creswell (2018:185) define data collection as the process of setting boundaries for the research through “sampling and recruitment”; sourcing data through observations, interviews, and documents. These scholars highlight the importance of establishing a protocol for recording information during data collection. Regarding case study data collection, Yin (2017:81-111) posits that a researcher can obtain evidence from multiple sources. This study used the systematic review of documents discussed in section 3.6 to collect data. Data quality control for qualitative research is often accomplished through pillars of trustworthiness (Lincoln & Guba, 1985), which is discussed next.

#### 3.5.1. Trustworthiness

The study adopted Lincoln & Guba’s (1985) trustworthiness framework, which entails credibility, transferability, dependability, and confirmability.

##### (i) Credibility

Credibility is the degree to which an inquiry is believable and applicable (Mills *et al.*, 2010:242). Table 3-2 outlines the credibility criteria the study used.

**Table 3-2: Credibility criteria**

Questions	Intervention
1. Are the results “true” for the contributors and the context?	This question refers to the reliability and was addressed by ensuring internal validity.
2. Are the conclusions relevant in other contexts or settings?	This question relates to judgments about applicability, and the study addressed it through external validity.
3. Would the findings be similar if the research were repeated with the same or similar participants in the same or similar context?	This question refers to consistency. The study addressed this by the exclusion and inclusion criteria, the quality assessment, and data extraction checklists.
4. How much have the researcher’s biases, and perspectives influenced the findings.	This question refers to bias and confirmability. The study addressed bias through data saturation and inclusion and exclusion criteria. It triangulated across multiple sources and only considered convergences

Source: (Lincoln and Guba, 1985) cited in (Mills et al. 2010:242)

##### (ii) Transferability

Transferability was essential for this study as it sought to recommend best-fit practices for the South African TVET sector based upon evidence from other countries. Generally, researchers establish transferability by substantiating that research findings could be replicated in different contexts and settings (Schreier 2018:86). It is virtually impossible to think or make sense of the world without comparing. For example, when explaining electricity to someone who does not know it, one would say it is an electric current. A current is the concept of hydraulics (rivers) (Watts, 2014). The degree to which the findings can be replicated depends on the similarity between the corresponding contexts (Schreier

2018:86). Schreier (2018:86) suggests that the study should provide comprehensive information about the context in which it is conducted to achieve transferability. This study adopted that suggestion. Furthermore, the study considered the argument by Mills *et al.* (2010:500) that it is essential to offer the readers thick descriptions of the case to draw their conclusions about the characteristics of the case and the transferability of the findings to other settings.

#### (iii) Confirmability and dependability

Confirmability and dependability verify the research. The research can substantiate findings with traceable evidence, which results in logical conclusions (Mertens 2014). The study ensured an audit trail—following Lincoln and Guba (1985) cited in Agostinho (2004), the research audit trail consisted of elements outlined in Table 3-2. Furthermore, the researcher used a reflexive journal for the entire study to further improve trustworthiness, which served as a portal of emotions and ideas. It recorded the whole dissertation and was a stronghold for the whole of the study. Lastly, it is imperative to note that trustworthiness is essential, but it is open-ended from a critical realist perspective.

#### (iv) Methodological Rigour

The study developed thematic frameworks for each case from the codes that emerged organically from the included studies to ensure a rigorous data analysis process. The procedure mentioned above assisted in collecting disjointed data into a coherent record and clarified connections between categories, which the researcher recorded in the NVivo software to aid in inductive analysis.

### **3.6. Systematic Review of Documents**

The researcher grounded the study on document analysis through a systematic review as a data collection method. Systematic reviews require substantially more effort than traditional reviews—they stand out because they provide critical data about the cause and effect of phenomena across various settings. Accordingly, the study narrowed the scope to ensure that its focus was on records that provided a resonant range of data for the research purpose. The study validated the documents based on the themes and sorted them into appropriate categories for further analysis.

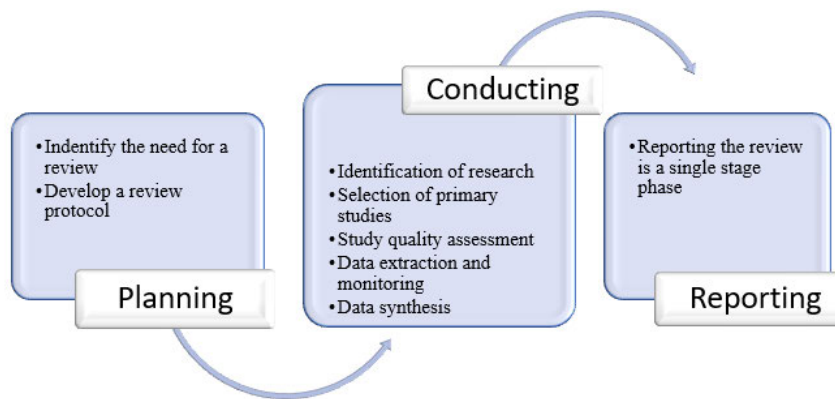
Furthermore, the study explored the research problem by drawing on primarily contemporary documents (not more than five years old). The documents entailed studies, public policy documents, and journal articles. The aim was to critically analyse and synthesise the available data to arrive at new cumulative conclusions and get a new perspective on the research topic. Next, the chapter will discuss the review process.

#### **3.6.1. Review Process**

A systematic review (SR) of documents is a rigorous scientific process encompassing planning, execution, and reporting of findings through a methodical exploration of documents (BCM 2020). Moreover,

the SR essentially answers research questions via a comprehensive search strategy to find and summarise existing evidence to present unbiased findings. The study assessed the evidence through rigorous inclusion and exclusion criteria (Curtin University [CU], 2021). A SR involves several distinct activities; existing guidelines for systematic reviews have similar suggestions about the number and the order of activities. Nevertheless, a SR's internationally recognised defining characteristics include the stages depicted in Figure 3-2.

**Figure 3-2: Review Process**



Source: Adapted from Kitchenham (2004:3)

Sections 3.6.2 to 3.6.4 succinctly unpack Figure 3-2 (review process), starting with the planning of the review process.

### **3.6.2. Planning the Systematic Review**

The planning process encompasses identifying the necessity for a SR and developing a review protocol, which will be discussed in detail next.

#### **3.6.2.1. The need for a review**

It is worth mentioning that a SR is not always the correct instrument for data collection. Hence, Petticrew & Roberts (2008:21) found that a study must meet the following criteria to assess the appropriateness of a SR:

- The author is uncertain about the effectiveness of a particular policy, while some research on the issue exists;
- “In the early stages of developing a policy, when evidence of the likely effects of an intervention is required”;
- Where there are unanswered questions despite there being extensive research on the issue;
- In instances when the researcher wants to gather sufficient evidence to recommend further research on the issue;

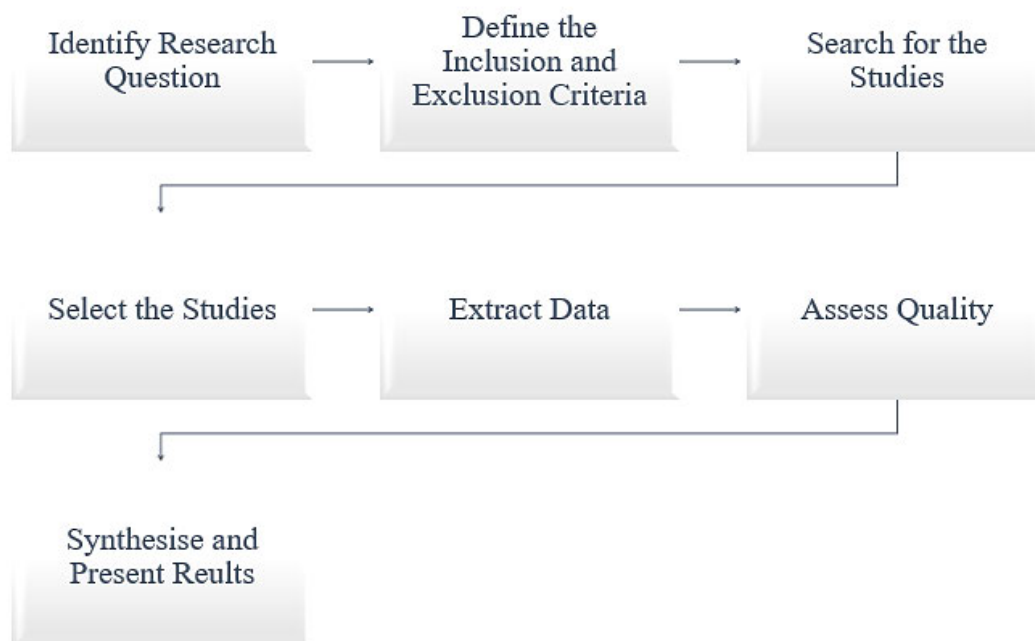
- “When an accurate picture of past research, and past methodological research is required to promote the development of new methodologies.”

In corroborating the criteria above, Kitchenham (2004:3) asserts that a need for a SR arises from a requirement of researchers to exhaustively consolidate the latest conclusions on a particular phenomenon rigorously and impartially.

### 3.6.2.2. Review Protocol

There is consensus among some scholars that a review protocol is critical in SRs; for example, Kitchenham (2004), Petticrew & Roberts (2008) and Haddaway, Pritchard & McGuinness (2021). The work of these scholars shows that a protocol universally entails the steps in Figure 3-3 below.

**Figure 3-3: Systematic Review Protocol**



Source: Kitchenham (2004), Petticrew & Roberts (2008) and Haddaway *et al.* (2021)

Below, this sub-section will briefly discuss Figure 3-3, starting with research questions.

**i) Research Questions:** According to Čablová, Pates, Miovský & Noel (2017:176), in a SR, for research questions to be relevant for formulating the study’s inclusion and exclusion criteria, the questions must complement the study objectives and methodology. Hence, this study identified a central question and sub-questions which complement the objectives (see section 1.4). The questions and objectives are then consistent with the theoretical propositions stated in section 2.9.3, based on the theoretical framework. The researcher took the questions, objectives and theoretical framework into consideration when determining the research design and methods.

**ii) Inclusion and Exclusion Criteria:** The basis of the inclusion and exclusion criteria is the research questions and a theoretical framework, and the primary purpose is to identify and delimit primary studies that offer direct evidence about the research questions. In light of the research questions and theoretical framework, the research established the inclusion and exclusion criteria shown in Table 3-3.

**Table 3-3: Inclusion and Exclusion Criteria**

Parameters	Inclusion criteria	Exclusion criteria
Geographical setting	Studies conducted in China, Finland, Germany, and Nigeria	Studies falling outside China, Finland, Germany, and Nigeria
Language and publication	Peer-reviewed literature published in English between 2016 and 2021;	Non-peer reviewed literature
Context	Studies on TVET policies.	Studies on general education and training;
Intervention	Studies on TVET policies that focus on the following themes: <ul style="list-style-type: none"> <li>• Entrepreneurship and SME</li> <li>• Graduate employability</li> <li>• Public-private partnerships</li> <li>• Teacher training</li> </ul>	Studies that are not related to TVET policies
		The adjacent themes to be derivatives of TVET education
Outcome	Studies that specify the effectiveness of TVET policies, both positive and negative	Studies that do not indicate the methodology used in arriving at the results.
		The data from other studies overlap outcomes from another study.

Source: Adapted from Keele (2007)

The parameters in the first column enabled the researcher to apply the criteria in Table 3-3 to delimit the literature. To the best of the author's knowledge, there was a limited exploration of the phenomenon under review; hence it was realistic to reach data saturation.

**iii) Search for the Studies:** The study focused on primary studies, including search terms and resources to be searched. The sources were government websites, databases, books, and relevant journals. Moreover, the author also used the school librarian as a resource.

**iv) Select the Studies:** The researcher went through titles and abstracts and decided on their eligibility for inclusion. Additionally, the researcher examined each selected study by examining the complete text, which assisted in establishing eligibility that the initial screening could not.

**v) Data Extraction:** Data extraction is a procedure that involves abstracting documented data from primary studies of interest—the study used data extraction forms. According to Büchter, Weise & Pieper (2020:1), the essence of data extraction forms is to link primary data and SRs and serve as an instrument for lessening the likelihood of bias.

**vi) Quality Assessment:** Some scholars agree that quality concerning document analysis relates to how the study curtails bias and augments internal and external validity (Haddaway, Pritchard & McGuinness, 2021; Kitchenham, 2004). Therefore, the study assessed the quality by stipulating quality

indicators that measured the methodological strengths and weaknesses of the included studies, keeping in line with the pillars of trustworthiness discussed in section 3.5.1.

**vii) Data Synthesis and Results:** Data synthesis entails gathering and summarising the outcomes of the selected primary studies. The study extracted data from the selected primary studies and arranged them according to the assessment questions. Moreover, it used a structured matrix to illuminate correlations and dissimilarities between study conclusions—this is corroborated by Aromataris & Munn (2020), who maintain that it is vital to recognise both the results' homogeneity and heterogeneity. Consequently, the study arranged the results to illuminate divergence and convergence. Notably, the study enabled the reproduction of the findings by explicitly describing the processes and results from the data analysis.

### **3.6.3. Conducting the Review**

The study conducted the assessment using the SR protocol discussed above. The review entailed: identification of research→selection of primary studies→quality assessment→data extraction and monitoring→data synthesis (see Figure 3-3).

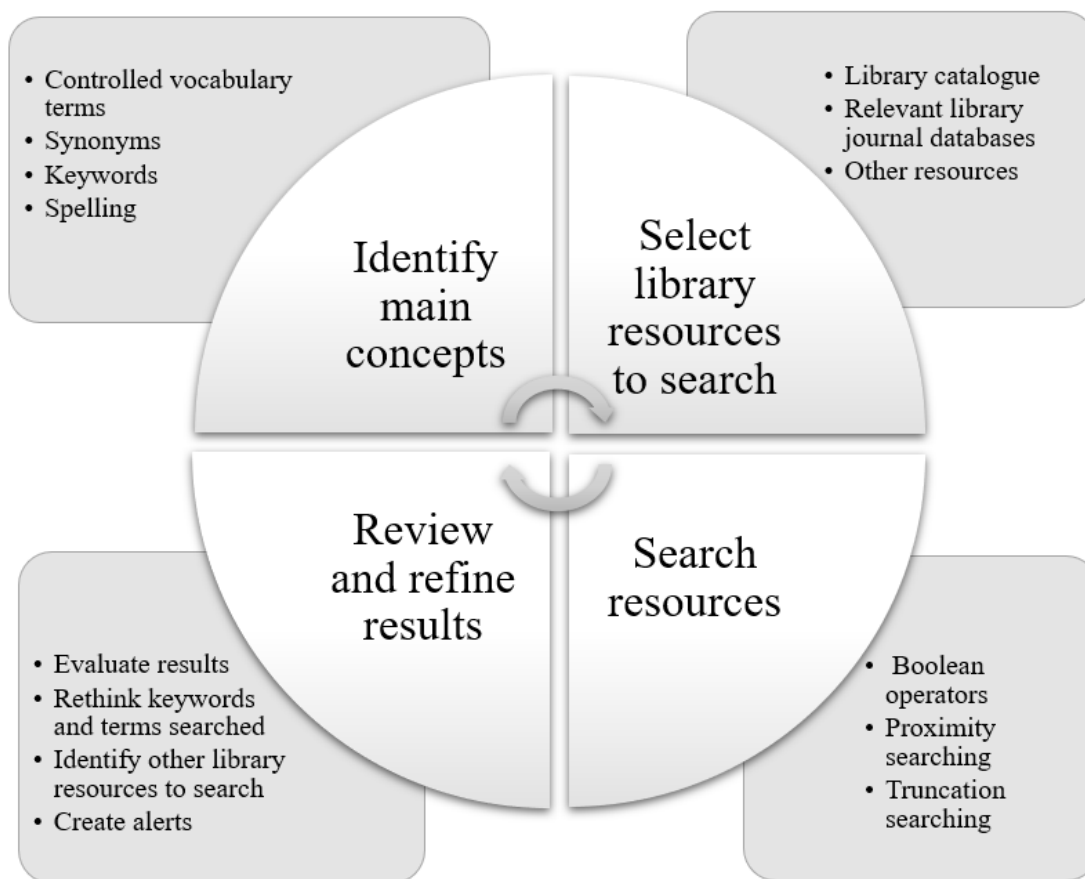
#### **3.6.3.1. Identifying research and recording search activities**

Identifying research in a SR is the location of maximal primary studies relating to the research question(s) through a rigorous, unbiased search strategy. According to CSU (2021), a search strategy is critical as it enables a structured, coherent search of data relevant to the research questions. Figure 3-4 encompasses the search strategy that this study used. Simultaneously, the researcher kept a record of the search activity. This study embraced CSU's [Charles Sturt University] advice, which states that a search strategy must keep a search log or journal describing the search activities in detail. The researcher must likewise keep track of search terms to help others reproduce the researcher's steps and arrive at the same or similar conclusions (CSU 2021). Therefore, the search strategy shown in Figure 3-4 served both searching and recording purposes.

#### **3.6.3.2. Selecting Primary Studies (Search Strategy)**

Selecting primary results in a structured and consistent manner requires a search strategy, which is demonstrated meticulously in Figure 3-4. This section provides a more detailed explanation of the search strategy, identifying the main concepts in light of Figure 3-4 on overleaf.

**Figure 3-4: Systematic Review Search Strategy**



Source: CSU (2021)

(i) Identification of Main Concepts

Figure 3.4 calls for the identification of main concepts. This starts with formulating research questions (CSU, 2021). This study extracted dependent and independent variables in Chapter 2, which helped formulate critical concepts. Moreover, in chapter 2, the study established that the four cases would be China, Finland, Germany, and Nigeria, which was equally helpful in formulating main concepts. A dependent variable would be prosperity, while the independent variables would be entrepreneurship, development, and innovations. Below are the research questions with main concepts in italics.

**Central Research Question:** How can a *TVET policy* enable *prosperity*?

The dependent variable from the central research question is prosperity. It is worth mentioning that this study in chapter 2 defined prosperity as follows:

Prosperity is not merely a matter of wealth or income but a more extensive phenomenon, encompassing “health, ecological well-being, opportunity and quality of life.”

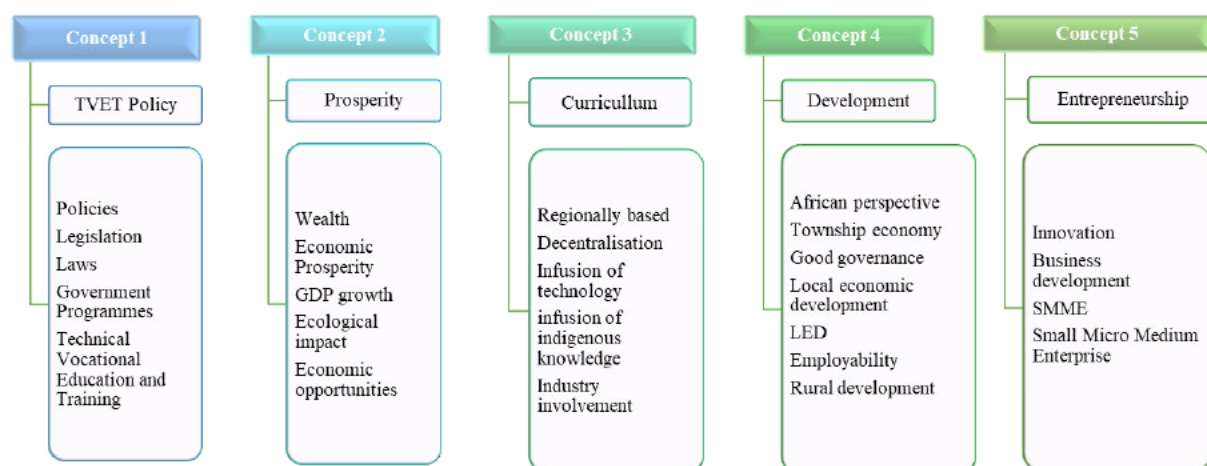


## Sub-research Questions

- How can a *TVET curriculum* enable *development*?
- How do mechanisms within TVET policies enable *entrepreneurship*?
- How can TVET policies enable *employability*?

The study identified five concepts, which Figure 3-5 below demonstrates.

**Figure 3-5: Key Concepts from the Research Questions**



## (ii) Selection of Resources

Since 1992, the United Nations Educational, Scientific and Cultural Organization (UNESCO) has been an ambassador for TVET (UNESCO, no date). Hence, UNESCO has been facilitating the International Project on Technical and Vocational Education (UNEVOC) to strengthen TVET. Therefore, the study used TVET discipline-specific databases recommended by UNESCO as resources (see Table 3-4).

**Table 3-4: Searched UNESCO Resources**

Databases
Career and Technical Education Research
Education Statistics Quarterly
European Journal for Open, Distance and E-Learning
Impact: Journal of Applied Research in Workplace E-learning
Journal of Career and Technical Education
Journal of Industrial Teacher Education
Information Technology, Learning, and Performance Journal
The Journal for Vocational Special Needs Education
The International Review of Research in Open and Distance Learning

Source: UNESCO (no date)

Furthermore, the study undertook a trial search on google scholar using key concepts to establish more resources (see Figure 3-5). Other resources included eBooks and grey literature. The researcher had

access to the University of KwaZulu Natal library for eBooks. According to CSU (2021), “academic libraries have invested heavily in books published by reputable and scholarly publishers”. The added advantage of such publications is that they comprehensively cover the research topic compared to journal articles (CSU, 2021). Grey literature is typically material that is not peer-reviewed or index-linked to bibliographical records. Moreover, grey literature includes government reports (web-based and hard copies), circulars, technical papers, and various non-scholarly documents. The study noted the assertions by, Enticott, Buck & Shawyer (2018:1) and Petticrew & Roberts (2008:280) that it is vital to include grey literature in a study to avert the possibility of biased reporting due to the exclusion of data that is not published on academic databases; thus, ensuring rigour.

### (iii) Searching the Resources

The study followed the Western University (WU) guideline to search the resources, emphasising the significance of incorporating Boolean operators, phrase search, wildcards, and truncation symbols to minimise bias (WU 2021). Boolean operators are logical expressions that enable a comprehensive search of resources; they are typically AND, OR and NOT.

- AND: search outcomes **include all** terms.
- OR: search outcomes **include at least one** search term.
- NOT: search results **exclude all** stated terms.

Next, phrase searches enable searching the combination of more than one phrase using quotation marks around the terms to be searched, for example, “township economy”, “economic prosperity”, and “infusion of indigenous knowledge” (WU, 2021). Finally, wildcards and truncations symbols played a role in searching for data. A wildcard is a symbol that assists in establishing word variations, while truncation symbols replace the ending of a word to find all possible forms of that word. On the one hand, for example, the truncation symbol (\*) in educ\* where \* generates, educates, education, educated, educator and educating. On the other hand, a wildcard character substitutes one character to find different spelling options of a word. For example, m?n where ? is the wildcard symbol to find men and man (WU, 2021).

### (iv) Review and Refine Results

Remaining in sync with Figure 3-4, the researcher reviewed and refined the results by listing all keywords and terms stated in the topic description and using truncation and wildcards to minimise bias. Table 3-5 shows how the researcher systematically reviewed and refined search results.

Table 3-5 summarises the refinement and reviewal of the research results. Table 3-5 further demonstrates the interactivity between identifying concepts, selecting and searching resources and reviewing and refining research results.

**Table 3-5: Reviewal and Refinement of the Search**

	Concept 1	AND	Concept 2	AND	Concept 3	AND	Concept 4	AND	Concept 5
Key words, synonyms and terms including truncation*, “combined concepts within quotation marks”, and wildcards?									
	OR		OR		OR		OR		OR
	Legislation		Wealth		“Regionally curriculum”		“African perspective”		Innovation
	OR		OR				OR		OR
	Law*		“Economic prosperity”		“Decentralis* curriculum”		“Township economy”		“Business development”
	OR		OR				OR		OR
	“Government programme”		“GDP growth”		“Indigenous knowledge”		“Good governance”		SMME
	OR		OR				OR		OR
	“Technical Vocational Education and Training”		“Ecological impact”		“Industry involvement”		“Local Economic Development”		“Small micro medium enterprise”
			OR				OR		
			“Economic opportunit*”				LED		SME

Adapted from: DU (2017)

Sections 3.6.3.3 to 3.6.3.6 highlight the roles of quality assessment, data extraction, data synthesis and thematic synthesis when conducting a SR.

#### 3.6.3.3. Study Quality Assessment

It is worth mentioning that critical elements of the quality assessment are bias, internal validity and external validity. These concepts are succinctly defined by Kitchenham (2004:11) as follows:

**Bias** produces results that depart systematically from the ‘true’ results while unbiased results are internally valid. Internal validity is the extent to which the design and conduct of the study are likely to prevent bias. **Internal validity** is a prerequisite for external validity. **External validity** is the extent to which the effects observed in the study are applicable outside of the study.

#### 3.6.3.4. Data Extraction and Quality Assessment

Data extraction and quality assessment steps followed during this study enabled the researcher to create data extraction forms to register the primary studies' information consistently. Furthermore, the study

specified and piloted data extraction forms at a study protocol definition stage to minimise bias. Toward that end, the researcher designed data extraction forms to collect all the essential data necessary to answer the review questions and satisfy the study's quality criteria. As per Kitchenham's (2004:17) assertion, the study ensured that data collection forms contained the following information: References which consist of data source, author information and publication year, study title, setting (location), design of the study, the objective of the study, the population size, dependent and independent variables, quality valuation, conclusions and results. It is worth mentioning that "inclusion and exclusion" criteria alone are insufficient to ensure quality. Therefore, it is imperative to assess the quality of selected studies in a SR (Covidence, 2021). Hence, the study assessed quality for studies deemed to be included. Table 3-6 reflects the criteria employed by the researcher, with concentration on each primary study's methodology.

**Table 3-6: Systematic Review Quality Criteria**

No.	Criteria
1.	Researcher's "control for general trends".
2.	Reliability and representativity of data sample;
3.	Sufficiency of data for validation of results;
4.	Assessment of the availability of data for at least three years before and after the intervention was implemented;
5.	The data backup of the conclusions

Source: Adapted from Petticrew & Roberts (2008:141)

Quality assessment of primary studies enabled the researcher to cluster studies by quality in preparation for data synthesis and results, which is discussed next.

#### 3.6.3.5. Data Synthesis

Data synthesis in a SR encompasses organising and summing up findings of the included primary studies to complete the body of evidence (McKenzie *et al.*, 2020). Generally, data synthesis can either be descriptive or statistical. This study is qualitative; hence the researcher selected a descriptive data synthesis technique. Additionally, qualitative research analysis and synthesis typically assesses and contrasts elements across various studies, enabling the synthesis of characteristics and clustering of themes. Relevantly, the type of research questions and the primary studies incorporated inspired the synthesis method chosen by the researcher. Table 3-6 highlights the stages undertaken by the researcher to assess the quality of literature under review during a screening process. Thereafter, the researcher decided whether particular literature should be part of the SR.

**Figure 3-6: Stages of Discerning Inclusivity of Studies**

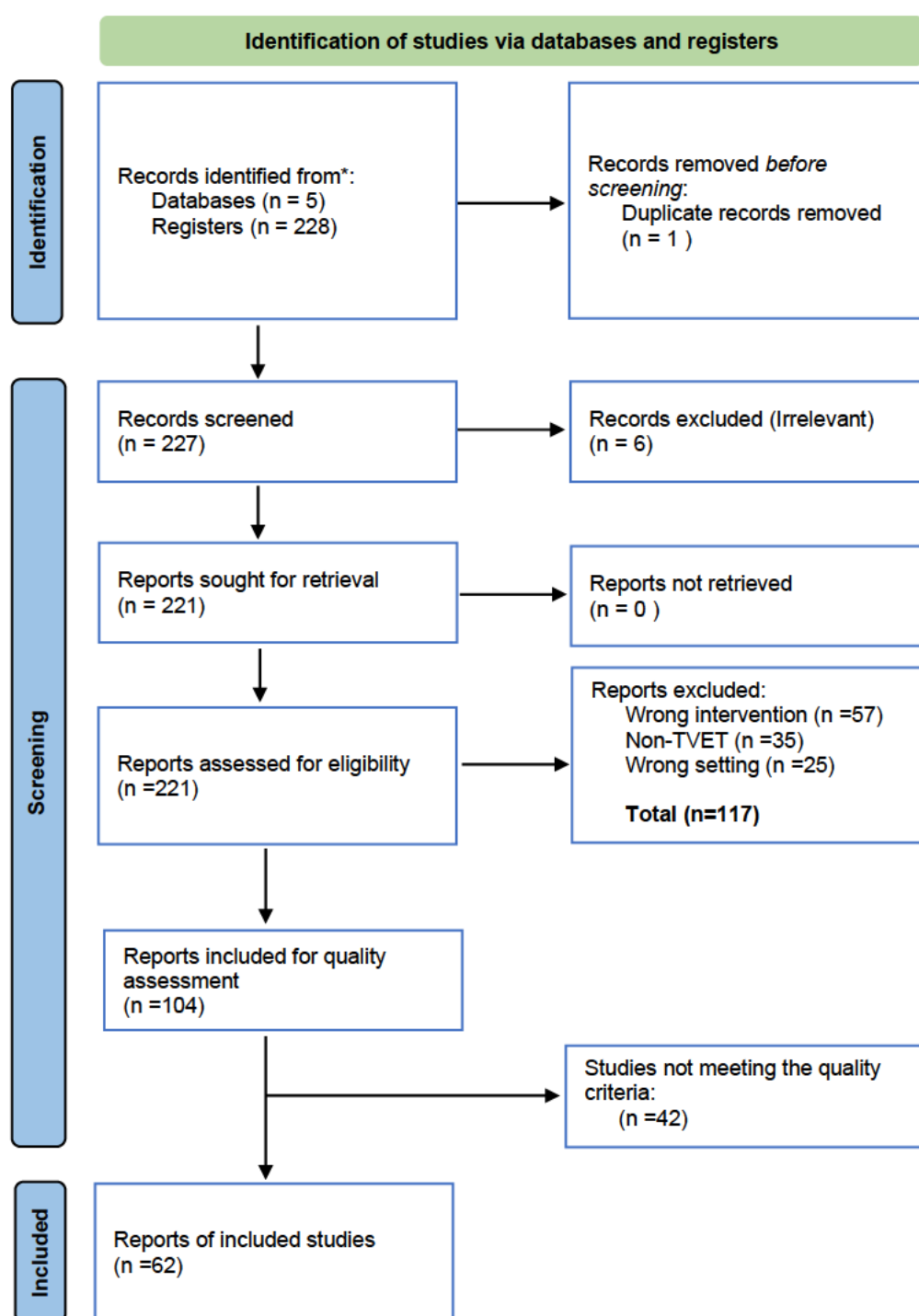


Figure 3-6 indicates the outcome of studies under review. The process involved an ongoing comparative analysis of studies uncovered. Comparative studies place a significant premium on the study's upholding of context sensitivity. This accentuates the prevention of merely summarising the results instead of interpreting and making sense of them. The interpretation and sense-making required to justify the study's employment of thematic analysis. Furthermore, the study aimed to gauge the underlying causal

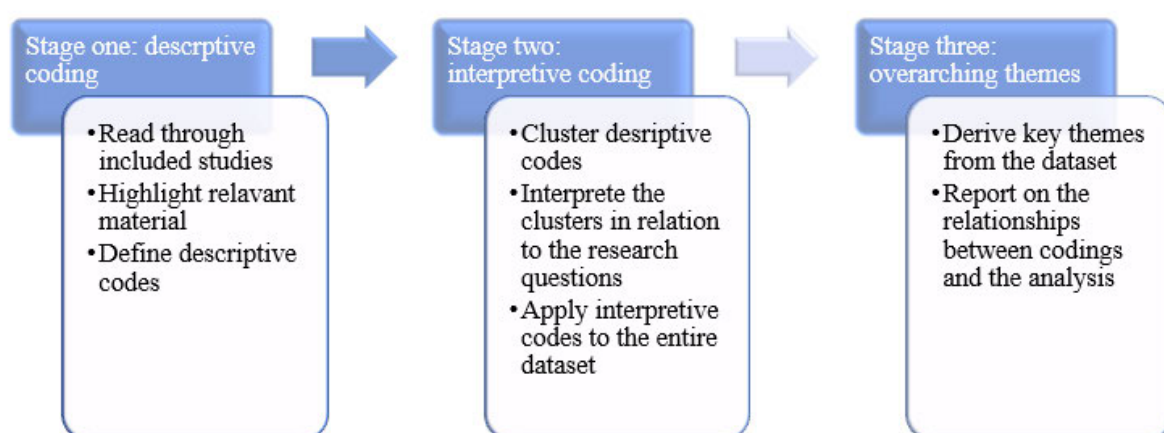
relationships between the current South African TVET system and poverty and propose contextualised recommendations from international best practices to attain prosperity through TVET. This was done against the backdrop of rationalising critical realism (CR) as the lens for the study. Therefore, all processes and methods of the SR mandated careful planning and adherence to plans.

### 3.6.3.6. Thematic Synthesis

One of the primary purposes of thematic analysis (TA) is to acknowledge key concepts and patterns essential in answering the research question(s). The study used the TA technique to synthesise the data. TA is a method of establishing and examining qualitative data's themes and patterns (Maguire & Delahunt, 2017). It is worth highlighting the essence of TA as a method rather than a methodology. This means that TA is fluid, unlike methodologies. The TA method is not bound to a specific epistemological standpoint. Substantially, TA helped establish critical themes and sub-themes in congruence with the study's ontological and epistemological considerations. Hence, Lawani (2020) maintains that CR seeks to evaluate the latent causal relationships within social phenomena to understand social problems in-depth.

On the one hand, the SR assisted the study to attain semantic themes, which Terry, Hayfield, Clarke & Braun (2017:23) refer to as “surface meanings” that do not explore further than what has been written. On the other hand, TA systematically established latent themes, which required in-depth, below the surface analysis and interpretation (Terry *et al.*, 2017:23), resonating with CR. The TA outcomes are a significant constellation of results in datasets regarding the phenomenon the study explored. Figure 3-7 itemises the stages undertaken by the researcher when conducting TA.

**Figure 3-7: Thematic Analysis Process**



Source: Adapted from: Braun & Clarke (2006:77-101)

As demonstrated in Figure 3-7, the study engaged Braun and Clarke's widely cited three-stage process comprising “coding results of incorporated studies, development of descriptive themes, and yielding of analytical themes” (Braun & Clarke, 2006:77-101).



### 3.6.4. Reporting the Review

The last stage in the review process, as shown in Figure 3-2 as adapted from (Kitchenham 2004:3), is the reporting of the SR. The study will comprehensively report the results in a single-stage phase in the next chapter (Chapter Four).

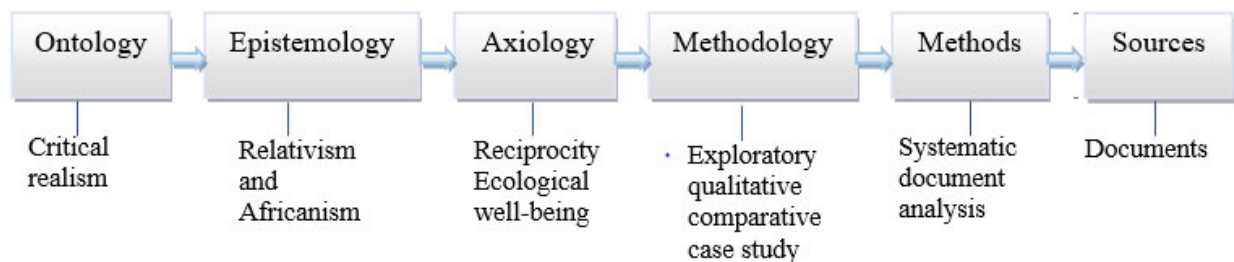
### 3.7. Ethical Considerations

Ethical considerations are of concern for every study. The researcher anticipated ethical considerations and vigorously dealt with them in the study plans. Before conducting the study, the author focused on ethical issues, beginning the study, data collection and analysis, reporting, sharing, and storing the data (Creswell & Creswell 2018:89-97). It is worth mentioning that when collecting data from documents, researchers need to determine whether documents were ethically sourced or not and if their inclusion in a study is justified (Rapley & Rees 2018). This study used public documents, which are custom-made for public consumption. Hence the study did not have to access documents through a custodian of an organisation or through human subjects. However, the author secured ethical clearance from the University of KwaZulu-Natal Research Office, which was issued under protocol number 00012089

### 3.8. Research Methodology Convergence

Before concluding the chapter, Figure 3-8 is presented to portray the research methodology applied by this study, followed by the chapter synopsis.

**Figure 3-8: Research Methodology Summary**



### 3.9. Chapter Synopsis

This chapter covered the study's methodology, research paradigms/worldviews, research design, strategy and type. Additionally, the chapter reported the data collection methods used and discussed data quality control and measurements. Moreover, it covered a detailed review process that entailed how the study planned and implemented the SR. The implementation of the process covered the development of a SR protocol which entailed identification of research→inclusion and exclusion criteria→search strategy→selection of the studies→extraction of data→assessment of quality→data synthesis. It is worth mentioning that all the stages mentioned above were systematic to ensure coherence. In the next chapter, the study will report the SR results.

## CHAPTER FOUR

### 4. DATA PRESENTATION AND INTERPRETATION

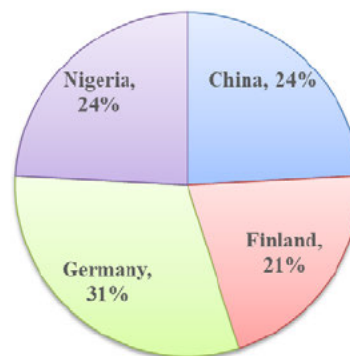
#### 4.1. Introduction

The previous chapter covered the SR of included studies (n=62) to synthesise quality research findings of the four cases, as summarised in Table 4-1. This chapter presents a comprehensive report on the extracted data and interpretation of results. Figure 4-1 represents the mind map (thematic framework)<sup>6</sup> and the summary schematic report of the study. This consists of the four cases and the themes that emerged from each case. Moreover, it is worth noting that the graphical representation of Table 4-1 demonstrates that the distribution of studies in the SR are relatively even, with Germany having a slight edge.

The study entails a transnational comparative analysis of TVET policies from China, Finland, Germany, and Nigeria. The choice of selected countries was motivated by evidence that the German TVET system is arguably the world's best regarding public-private partnerships and entrepreneurship. The Finnish TVET system is possibly best known for an individualised school-based curriculum ripe for advancing innovation. The Chinese TVET system is possibly leading in terms of rural development through agriculture. Moreover, like China and Germany, the Nigerian economy is the largest within its continent. However, not unlike SA, Nigeria is among the most impoverished regions on earth. The study aimed to draw lessons from the prosperous countries and learn why Nigeria is wealthy, yet the Nigerians are impoverished.

**Table 4-1: Summary of Included Studies per Case**

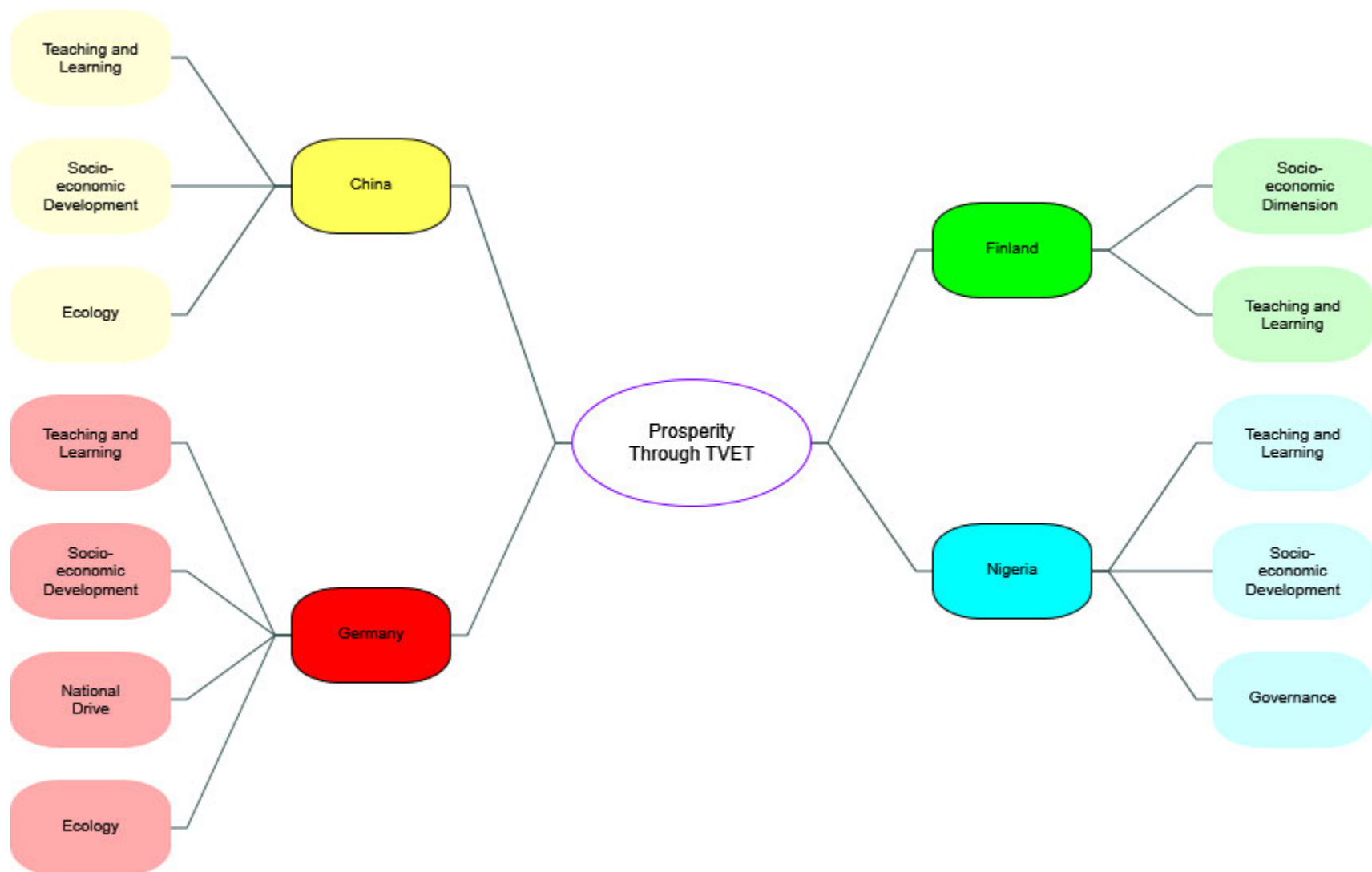
Case No.	Case	Included Studies	Percentage Coverage
A	China	15	24%
B	Finland	13	21%
C	Germany	19	31%
D	Nigeria	15	24%
<b>TOTAL</b>		<b>62</b>	<b>100%</b>



<sup>6</sup> The thematic analysis seeks to unearth themes prominent in the text at various levels, and the thematic framework aims to facilitate the structuring of these themes, which emerge from coding the data. Coding is a process of organising collected data categorically (nodes) to establish a platform for creating meaning (themes) (Akinyode & Khan 2018).



**Figure 4-1: Mind Map of the Study**



Against the backdrop of a mind map considering all countries, this chapter presents case-by-case descriptive findings of the extracted data. This is followed by assessing the results, including the methodological rigour applied. The first case is China (Case A), followed by Finland (Case B), Germany (Case C), and lastly, is Nigeria (Case D). Each case includes a country-specific thematic framework or mind map. Thereafter, within each case study, there is a mind map that is theme specific. This shows how the broader themes emerged from sub-themes.

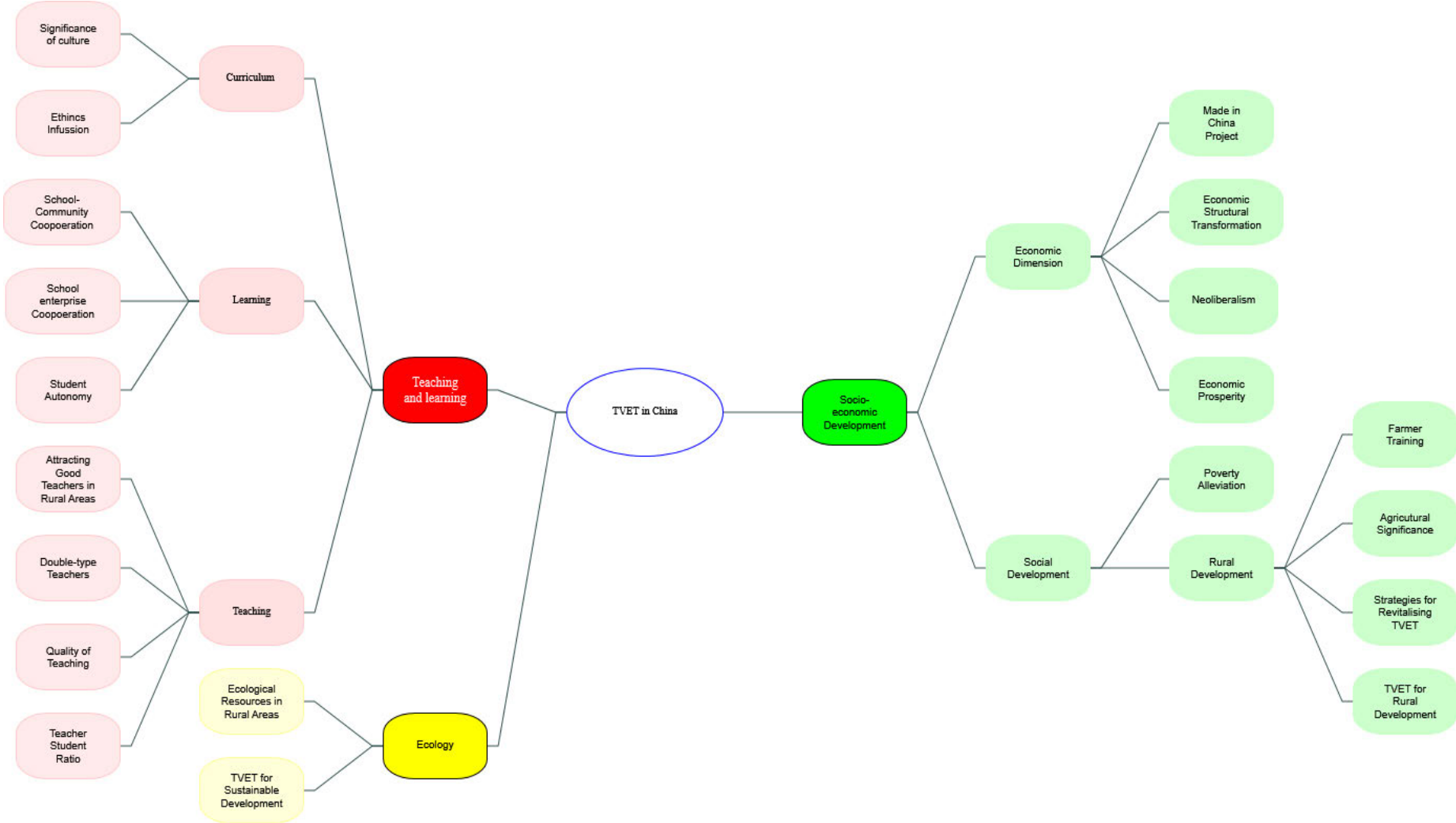
#### 4.2. Findings for Case A: China

This section presents findings from Case A; Table 4-2 summarises the included studies. Three themes emerged from Case A as follows: (1) Teaching and Learning (2), Socio-economic Development (3) and Ecology. Figure 4-2 represents the mind map of how the study constructed the themes from sub-themes and codes; each theme is distinctly colour coded—the mind map summarises Case A findings.

**Table 4-2: Studies Reviewed for Case A**

No.	Study Reference	Research Subject	No. of Codes
1	Chen, 2019	Enlightenment of German Education of Dual System on Foreign Language Education in China	10
2	Cheung, 2020	Ethics Study in Professional and Vocational Education: Voices from Practitioners.	2
3	Delei <i>et al.</i> , 2018	Method and Path Selection for Optimisation and Promotion of Teaching Quality of Applied Courses.	6
4	Gong 2019	Path Reconstruction of the Development of Rural Vocational Education Under the Background of Rural Vitalization Strategy	15
5	Hongwei, 2018	Innovation of Talent Cultivation Education Mode of Modern Apprenticeship Participated by Industry Associations.	4
6	Hui, 2017	The Path to Deepening School-Enterprise Cooperation in Higher Vocational Education.	4
7	Lu, Koo & Pun, 2019	Attempting to transgress neoliberal value: Constructing a micro-foundation of social values of working-class youth in vocational schools in China.	10
8	Mingjun & Fenglan, 2017	Countermeasures for Rural Vocational Education.	24
9	Minglun, 2017	An Empirical Analysis of the Development of China Higher Vocational Education	5
10	Pavlova, 2018	Fostering inclusive, sustainable economic growth and green skills development in learning cities through partnerships.	4
11	Pilz, 2017	Vocational education and training in times of economic crisis.	2
12	Suwen, 2021	Research on the Cultivation Path of High-Quality Farmers.	34
13	Xu & Sun, 2021	Mechanism of vocational education promoting precision poverty alleviation.	6
14	Zeng & Xiao, 2018	The Study on Rural Vocational Education to Keep Within Limits of Poverty in the Era of Post Poverty.	13
15	Zhang, 2018	Insights into Chinese agriculture	6

Figure 4-2: Case A Thematic Framework (Mind Map)

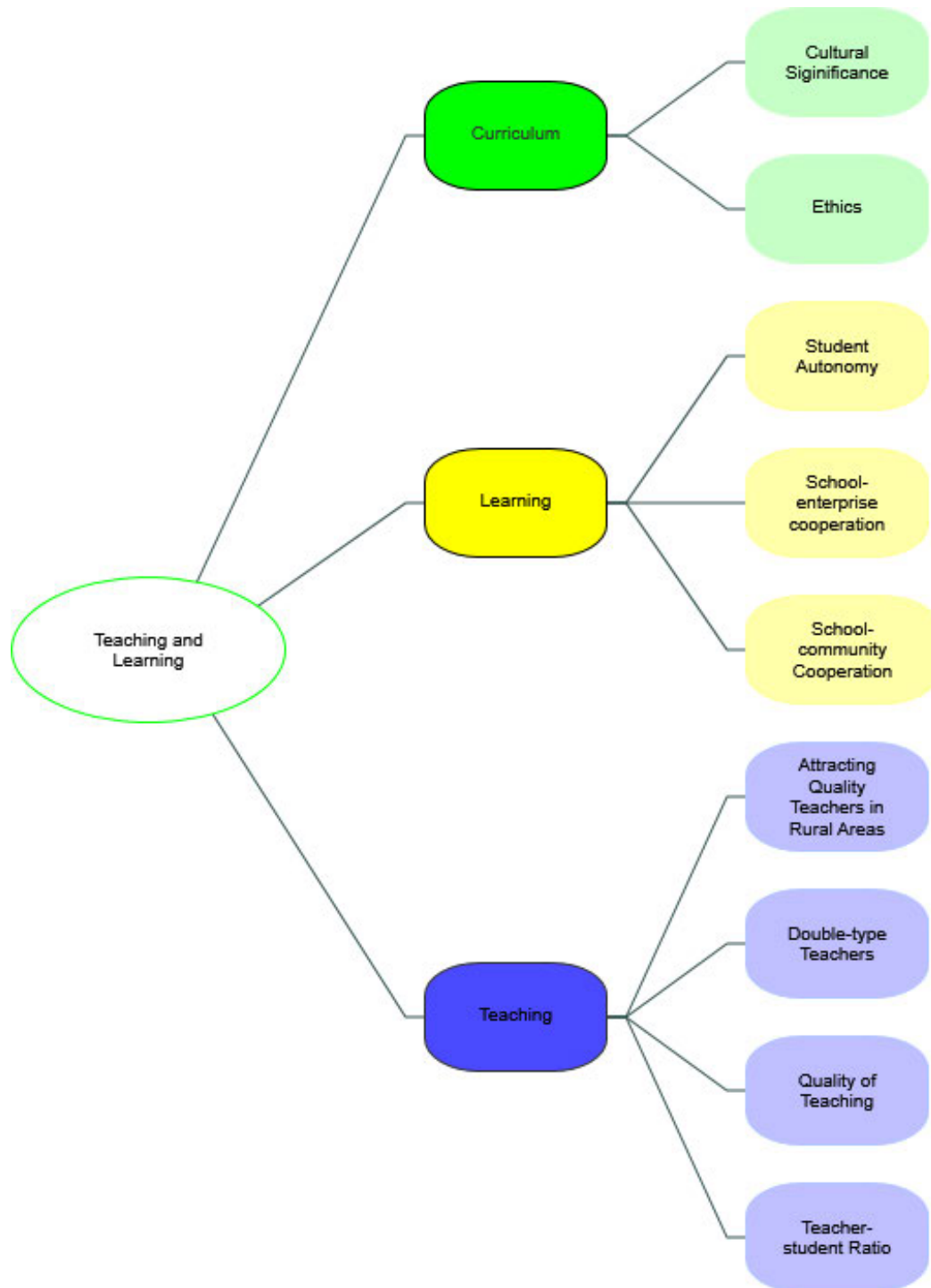


#### 4.2.1. Theme 1: Teaching and Learning

Three sub-themes emerged from the Teaching and Learning theme as follows: (1) Teaching + (2) Curriculum + (3) Learning = Teaching and Learning.

Figure 4-3 below represents the mind map of the themes, sub-themes, and codes/nodes. Moreover, it serves as the Teaching and Learning theme summary.

**Figure 4-3: Case A\_ Teaching and Learning Sub-themes Mind Map**



#### 4.2.1.1. Teaching

Three studies covered this sub-theme: Gong 2019 Mingjun, 2017 and Suwen, 2021. Four codes formed this sub-theme of teaching, namely: (1) Attracting quality teachers in rural areas, (2) Quality of teachers in China, (3) Double-type teachers and (4) Teacher/student ratio.

##### (i) Attracting quality teachers in rural areas

Gong (2019) asserts there is a gap in the treatment of teachers between urban and rural teachers in China. According to Gong (2019), the phenomenon results in rural teachers migrating to the cities, leading to brain drain with regard to rural areas. Consequently, the quality of TVET in rural China is low.

“[The] teaching environment by combining the advantages, attract and keep, develop the training activities for teachers positively, and pay attention to the value creation and realisation of teachers in this sector.”  
(Gong 2019:1710)

The study found that the rural-urban dichotomy regarding TVET requires attention for China’s prosperity.

##### (ii) Quality of teachers in China

Three studies covered the quality of TVET teachers in China, namely: Mingjun & Fenglan, 2017; Pilz, 2017 and Zeng & Xiao, 2018.

“China’s rural vocational education teachers are generally not in high level; their greatest ideal is to leave the countryside” Mingjun & Fenglan (2017:656).

The quotation above corroborates the assertion by Gong (2019) that there is a need to attract quality teachers in rural areas. According to Pilz (2017:233), the hallmark of TVET teachers’ qualifications has changed from an “input to an output” nature. Hence, Mingjun & Fenglan (2017) conclude that the Chinese government should increase investment in rural vocational education and promote it to better serve the community. Furthermore, Pilz (2017) conducted a qualitative study (n=183), which sought to measure professional competencies instead of assessing professional aptitude as a measure of teacher quality. The study found that comprehensive TVET college teachers are more qualified than secondary TVET teachers; only 42.86% of the latter possess minimal competence. Lastly, the study found that teachers with poor professional competence were from rural schools.

“The development of vocational schools must have a group of outstanding teachers to play a vanguard role”  
(Zeng & Xiao, 2018:320).

The findings indicate an unequal allocation of TVET resources in China which disadvantages rural areas. Zeng & Xiao (2018) acknowledge that the Chinese government has accomplished much with regard to decreasing extreme poverty. However, poor teacher quality in rural areas must be addressed to strengthen the fight against poverty.

### (iii) Double-type Teachers

Three studies covered Case A's double-type teachers: Delei *et al.*, 2018; Minglun, 2017 and Hongwei, 2018.

“The Ministry of Education of China clearly proposed to strengthen the construction of teaching teams with “double qualifications & double abilities” in order to emphasise the construction of teaching teams” (Delei *et al.*, 2018:2747)

As stated above, the study found that China is moving towards having TVET teachers with double qualifications (double type). “Double-type” teachers entail teachers with dual qualifications. For example, an educator could be a qualified teacher and a professional engineer. The objective is to improve the quality of teaching and learning by appointing teachers with academic and professional (industry) qualifications. In other words, teachers with two abilities (Delei *et al.*, 2018; Minglun, 2017 and Hongwei, 2018). Hence Minglun (2017:439) concludes that the Chinese government should reform the TVET policy to provide for dual qualification teachers to improve the quality of teaching and learning.

### (iv) Teacher-Student Ratio

The teacher-student ratio is one of the factors that enhance teaching and learning. Mingjun & Fenglan (2017) found that the teacher-student ratio in the secondary school TVET experience is worsening. In other words, there is a mismatch between enrolment growth and full-time teacher recruitment, especially in rural areas due to rural-urban migration

#### 4.2.1.2. Curriculum

The curriculum is at the centre of teaching and learning as it is a mechanism for enabling students to acquire knowledge to prepare them for societal contribution and personal development. Five studies discussed the curriculum, and they are as follows: Suwen, 2021; Cheung, 2020; Mingjun & Fenglan, 2017; Hui, 2017 and Delei *et al.*, 2018. Two codes culminated into the sub-theme of curriculum, (1) Cultural significance and (2) Importance of ethics.

#### (i) Cultural Significance

Four studies highlighted the significance of infusing a cultural dimension into the curriculum: Suwen, 2021; Mingjun & Fenglan, 2017; Hui, 2017 and Delei *et al.*, 2018. TVET schools prepare students for industry. According to Hui, it is critical to acknowledge that:

“Enterprises value product quality, economic benefits, and social service more highly. There are differences in the cultures of higher vocational schools and enterprises, but there are actually places where their cultures overlap, and they have a relationship expressed by harmony in differences” (Hui, 2017:453).

Hui (2017) maintains that schools encompass behavioural and spiritual cultures in China, while the industry is mainly concerned with systemic and material cultures. However, it is imperative to acknowledge the essence of spiritual culture in a curriculum, as it plays a role in cognitive unification and integrates the sense

of determination and wisdom cultivation. The study found that the recent reform in the Chinese TVET policy of introducing “double-type” teachers or dual-qualifications for teachers creates an overlap between the two cultures (school and industry) (Hui, 2017:454).

Rural vocational education as an instrument of rural revitalisation imparts “scientific and technological knowledge” and advances contemporary culture while enhancing farmers’ scientific and cultural mastery. Moreover, Hui (2017:655) asserts that “the consequence is a positive and healthy lifestyle, and finally promotes rural life, economy and culture”. This is corroborated by Suwen (2021:24), who emphasises that the Chinese TVET curriculum “not only retains the original spiritual core and historical features of the countryside but also enriches it in line with the times”. In other words, the end product is rural prosperity<sup>7</sup>. In summing up, Suwen (2021:24) (Ibid) asserts that rural TVET in China should maintain the elements of “responsibilities, and social service awareness” (*Ubuntu*)<sup>8</sup> to maintain and enhance prosperity.

#### (ii) Ethics Significance

One study (Cheung 2020) from the included studies highlighted the significance of incorporating ethics into the Chinese TVET curriculum.

“The education should not only instil ethics knowledge to students but also provide an environment for students to apply that ethics knowledge learnt” (Cheung 2020:67).

The study mentioned above found that most students in China (83%) value incorporating ethics in the TVET curriculum for student development to enhance learning for good governance and prosperity. Ethics intimately relate to interrelated concepts like well-being, justice, and happiness—which signify good by an individual. This study concurs with Aristotle that “an individual cannot regard his well-being apart from others” (Kraut, 2001), which embodies the axiological considerations of the study (see chapter 3.2.1).

#### 4.2.1.3. Learning

The primary goal of attending school is to learn, making this sub-theme essential; hence eight studies (just over half 53%) covered it. These are: Zeng & Xiao, 2018; Xu & Sun, 2021; Suwen, 2021; Mingjun & Fenglan, 2017; Lu, Koo & Pun, 2019; Hui, 2017; Delei *et al.*, 2018 and Chen, 2019. Three codes formed the learning sub-theme: (1) Student autonomy + (3) School-enterprise cooperation + (2) School-community cooperation = Learning.

#### (i) Student Autonomy

Two studies covered student autonomy: Suwen, 2021 and Chen, 2019. On the one hand, Chen (2019) highlights the significance of not having compulsory courses as they invariably result in coercion, diluting students’ autonomy. On the other hand, a study by Suwen (2021) found that the Chinese TVET’s latest reforms

<sup>7</sup> See how the study conceptualises prosperity in Chapter 2, section 2.2.1

<sup>8</sup> Africans call this assertion *Ubuntu*. See the axiological considerations of the study in section 3.2.3. for the clarification of *Ubuntu* philosophical worldview.

ensure that the practical training provided to students is designed to provide only skills that the students will apply after graduation. In other words, skills that respond to available economic opportunities. Significantly, the study found that lately, China has been moving towards teaching skills according to students' aptitude (Suwen 2021:28).

#### (ii) School-Enterprise Cooperation

Six studies covered this code: Zeng & Xiao, 2018; Xu & Sun, 2021; Suwen, 2021; Mingjun & Fenglan, 2017; Lu, Koo & Pun, 2019; Hui, 2017 and Delei *et al.*, 2018.

Zen & Xiao (2018:318) and Xu & Sun (2021:7) highlight the importance of having a tripartite synergy between government, TVET schools and the market. In contrast, Lu, Koo & Pun (2019:1054) warned about the potential danger of succumbing to “capitalist realism or market populism” and ignoring the inherent contradictions between the quest for prosperity and capitalism (Sections 2.2.1 and 2.3 conceptualise these concepts). Hui (2017) corroborated the preceding assertion as follows:

“Enterprises value product quality, economic benefits, and social service more highly. There are differences in the cultures of higher vocational schools and enterprises, but there are actually places where their cultures overlap, and they have a relationship expressed by harmony in differences” (Hui, 2017:453).

Furthermore, Hui found that “double-type” or teachers with dual-qualifications infused with the school-enterprise arrangement enable the enterprise culture to merge with the school culture. This, in turn, enhances the learning culture and gives students and staff a sense of identity (Hui, 2017:454). However, Hui (2017:454) goes on to warn that the Chinese government should be conscious that school-enterprise cooperation is not a two-way interaction between school and enterprise as students are also learning entities. Suwen (2021:28) found that in rural areas, the school-enterprise cooperation involves the informal sectors making use of skilled local farmers—this brings this section to the next code: School-Community Cooperation.

#### (iii) School-Community Cooperation

One study (Suwen, 2021) covered the less explored dual-TVET through TVET school-community cooperation and focused on rural areas. Suwen (2021:27) found that school-community cooperation enhances the farming culture in basic education (primary and secondary) TVET schools. Moreover, the study found that this arrangement is a mechanism for incorporating indigenous knowledge into rural TVET education.

“Primary and secondary schools cooperate with communities to promote the integration of local teaching materials such as local characteristic culture and agricultural characteristic brands into the campus culture of primary and secondary schools and promote the incorporation of local culture into the classroom” (Suwen 2021:27).

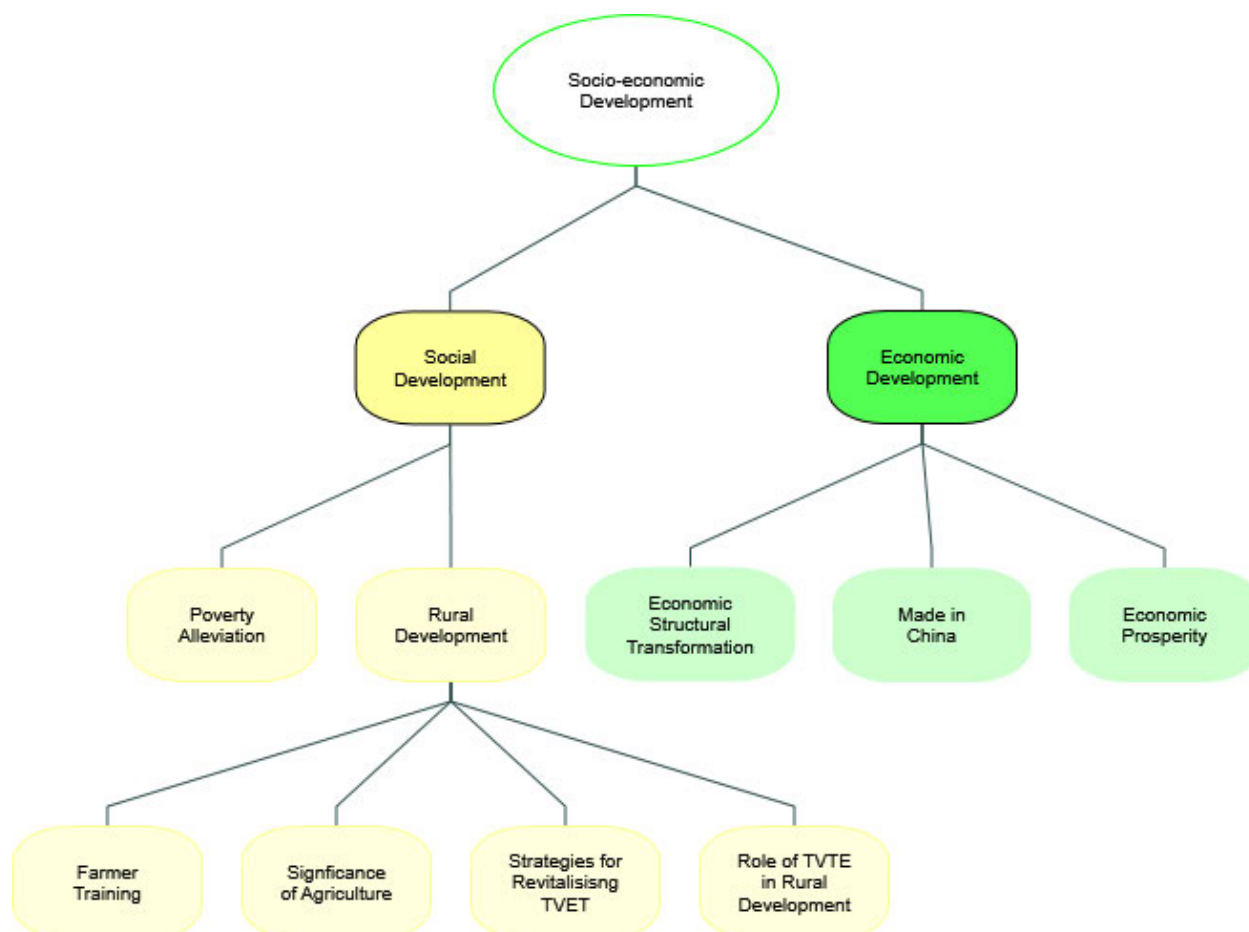
Lastly, the Suwen (2021) study found that school-community cooperation “creates a docking mechanism” with the municipalities and government departments of agriculture to infuse local talents into practical training of TVET students (Suwen, 2021:28).



### 4.2.2. Theme 2: Socio-economic Development

Two sub-themes culminated in the theme of Socio-economic Development: (1) Social Development + (2) Economic Development = Socio-economic Development. Embedded within the subthemes are several codes, which are discussed in the relevant section.

**Figure 4-4: Case A\_ Socio-economic Development Mind Map**



#### 4.2.2.1. Social Development

As shown in Figure 4-4, two codes formed the sub-theme of social development: (1) Rural Development + (2) Poverty Alleviation = Social Development. Four nodes led to the rural development code, as indicated in Figure 4-4.

##### (i) Rural Development

Seven studies covered rural development. Four nodes (talking points) emerged as follows: the significance of agriculture in TVET, farmer training, strategies for revitalising TVET in rural areas and the role of TVET in rural development. Each is briefly discussed in turn.

**TVET Role in Rural Development:** Despite having the largest economy in Asia and the second-largest economy globally, China is regarded as a Global South country. Minglun (2017:435) found that the cost of

higher TVET education in developing countries is 265% higher than the cost of general higher education—meaning TVET requires high investment. This could be why some scholars like Xu & Sun (2021:3) contend that TVET in China is fundamentally underfunded, especially in rural areas. The phenomenon results in rural-urban migration both for educational and employment purposes and poverty.

Lu, Koo & Pun (2019:1053) found that 80% of students in China are from rural areas; their parents are either farmers, farmworkers, or migrants in cities. According to Minglun (2017), there is a need for the Chinese government to adequately resource rural TVET to strengthen urban and rural economic development. This means that rural TVET should not only focus on agriculture. According to Minglun (2017), most of the Chinese labour force is from rural areas. This makes the development of rural TVET critical for Chinese prosperity. Nonetheless, the government's focus has predominantly been on agriculture offered in secondary TVET schools (Mingjun & Fenglan, 2017:656).

Agriculture is imperative for rural development and curtailing rural-urban migration. Nonetheless, Mingjun & Fengla (2017:656) found that the Chinese government primarily focuses on secondary school TVET in rural areas. On the one hand, Mingjun & Fengla (2017:656) advocate for the modernisation and industrialisation of rural TVET for Chinese prosperity. On the other hand, Lu, Koo & Pun (2019) warn against succumbing to capitalist realism, which may inhibit rural prosperity. Hence, Gong (2019:1704) and Suwen (2021:24) emphasise the essence of ecological and cultural consciousness in the TVET curriculum. Suwen (2021:24) found a need for homogeneous TVET in rural China—encompassing “health, ecological well-being, opportunity and quality of life of rural people.”

**Significance of Agriculture:** The Gong (2019) study found that TVET agriculture is vital for the vitalisation of rural areas in China.

“The problems of the issues relating to agriculture, rural areas, and rural people are the fundamental problems which are related to [the] national economy and the people's livelihood; thus, we should keep the problems of issues relating to agriculture, rural areas, and rural people as the priority among priorities of the party work, and we should implement [a] rural vitalisation strategy” – President Xi Jinping<sup>9</sup>. Cited in Gong (2019:1704)

According to Gong (2019:1704), having agriculture as a priority revolutionises the connections between urban areas, rural areas, and industry. Moreover, Gong (2019:1706) affirms that the Chinese government must ensure the evolution of rural TVET into a “flexible cultivation model” to become the platform for advanced technical talents in agriculture and provide technical support to rural labourers and farmers. Zhang (2018:125) sums up this topic by insisting that “Local government agricultural departments ought to be more farsighted and realise the significance of vocational agricultural education and training, regard it as their primary task and give full support to aspects such as policy, funding, and school management.”

---

<sup>9</sup> From the report by President Xi Jinping in the 19th National Congress of the Communist Party of China.

**Farmer Training:** Gong (2019) found it vital to skill unskilled farmers to enhance rural development. Mingjun & Fenglan (2017) argue that it is crucial to professionalise farmers to attain prosperity in rural areas—meaning there is a need for adult TVET in China.

#### (ii) Poverty Alleviation

“Poverty refers not only to material poverty but also to mental poverty.”—Xi Jinping

In China, roughly 10 million (0.7%) citizens still live in extreme poverty (Postiglione & Min Tang, 2019:131). Hence Xu & Sun (2021:318-320) acknowledge that China has done well to reduce poverty but insists that the government must stabilise this achievement by strengthening rural TVET. The next step will be to eliminate extreme poverty and break intergenerational transmission. According to Hence Xu & Sun (2021:318-320), the government can only achieve the milestone mentioned above by strengthening the career development prospects of students and continuously improving teacher quality. Lastly, the curriculum must respond to economic development opportunities at both macro and micro levels.

#### 4.2.2.2. Economic Dimension

Five studies covered the economic dimension sub-theme, accounting for one-third (33.33%) of the studies included for Case A. They are as follows: Zeng & Xiao, 2018; Suwen, 2021; Lu, Koo & Pun, 2019; Hongwei, 2018 and Chen, 2019. As shown in Figure 4-4, three codes formed the sub-theme: (1) Made in China + (2) Economic Structural Transformation + (3) Economic Prosperity = Economic Dimension.

##### (i) Made in China

Germany is the global manufacturing frontrunner —the “made in Germany” brand is reputable globally. Youth graduating from the German TVET system are the essential human capital for Germany and a key instrument for the German global manufacturing dominance (Chen 2019:1439). The People’s Republic of China wants to be on the same level as Germany by 2025. Hence the Chinese government is investing in the “Made in China 2025” and “Industrial 4.0” projects founded on TVET, which must produce world-class technical personnel. The latter project seeks to ensure that China rides the Fourth Industrial Revolution (4IR) wave Chen 2019:1439.

##### (ii) Economic Structural Transformation

The study found that China is in a period of “economic structural transformation” (EST) by enhancing its economic growth model to evolve from labour-intensive industries to technology-intensive industries in response to the 4IR (Hongwei, 2018). The deterrent to this quest is the fight against poverty, especially in rural areas. Moreover, the recent economic downturn contributed to TVET underfunding. Therefore, EST implementation has been delayed.

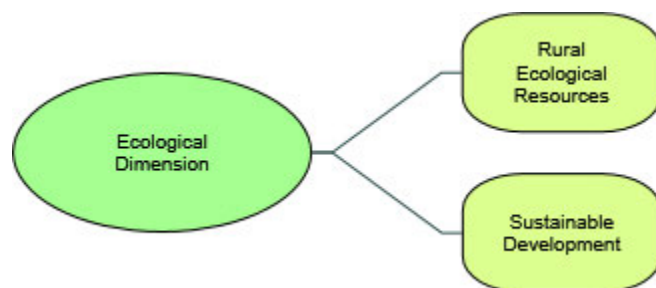
### (iii) Economic Prosperity

Lu, Koo & Pun (2019:1058) argue that prosperity should be actively revolutionised to change the money-logic and redefined as a “social mechanism of values through care, cooperation and solidarity”. Furthermore, these scholars contend that human labour is merely a productive instrument limited to producing “material capital”. It is about labouring for essential and dignified social values. In contrast, Suwen (2021:23) avers that prosperity is “based on respecting the natural, historical, and humanistic attributes of the countryside and fully considers the multiple functions of the country production, life, ecology, culture, and economy.” As discussed in the literature review, the term prosperity is a contested concept.

#### 4.2.3. Theme 3: Ecological Dimension

As shown in Figure 4-5, two sub-themes culminated in the theme of Ecological Dimension: (1) Sustainable Development + (2) Ecological Resources in Rural Areas = Ecological Dimension.

**Figure 4-5: Case A \_ Ecological Dimension Mind Map**



##### 4.2.3.1. Sustainable Development

“One of the requirements of building a learning city is working to ensure its sustainable development” (Pavlova, 2018:1).

Sustainable development is critical for prosperity attainment. The study found that it is essential for the government to harness green skills to attain sustainable development. Green skills prepare and conscientise the future labour force about “green growth and greening of the economy” (Pavlova, 2018:5). Thus, the TVET curriculum must incorporate the ecological dimension to connect environmentalism, geographical elements and product awareness. The consciousness mentioned above, according to Suwen (2021:29), deepens the cognitive aspects of ecological civilisation.

##### 4.2.3.2. Ecological Resources in Rural Areas

A pleasant living environment requires people to shield and nurture the ecological resources in rural areas. Thus, rural TVET should conscientise learners about the conservation of ecological resources and emphasise the essence of cultural education to improve the cultural quality of farmers and build prosperous villages (Gong 2019:1704).

“Therefore, rural revitalisation requires the survival wisdom of respecting nature, cherishing things we have, and enjoying peace. It requires the ecological concept of treating, respecting nature and the sense of responsibility and mission of loving agriculture and rural areas and serving the construction of local communities” (Suwen, 2021:24).

The study found that it is imperative to conscientise the future entrepreneurs and industrial workers through TVET about conserving ecological resources in rural areas.

### 4.3. Findings for Case B: Finland

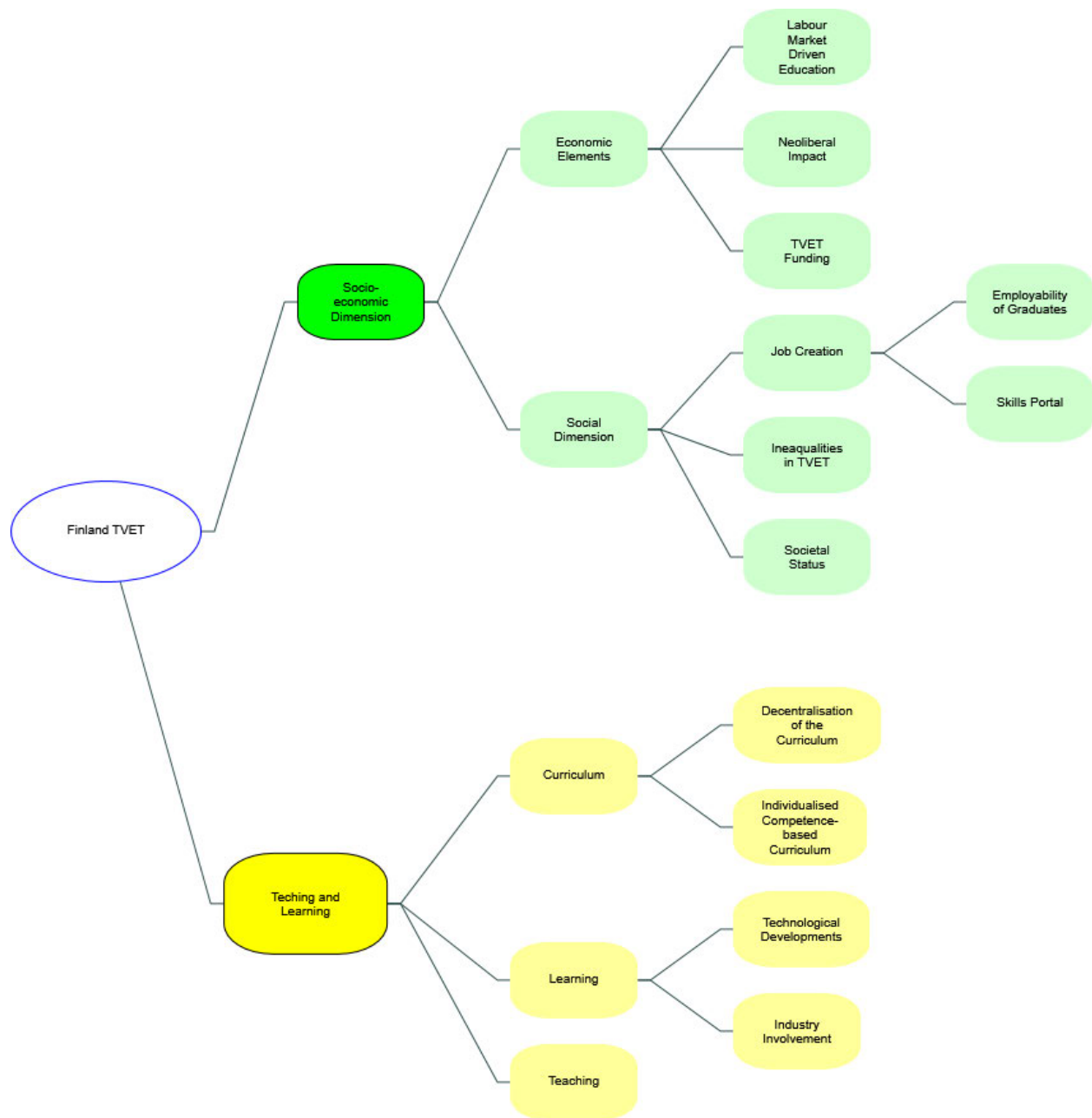
This sub-section presents findings from Case B; Table 4-3 summarises the included studies. Two themes emerged from Case B as follows: (1) Teaching and learning and (2) Socio-economic Dimension.

**Table 4-3: Studies Reviewed for Case B**

No.	Study Reference	Purpose of the Study	Codes
1.	Brauer, 2020	The ‘spirit of the times’: Fast policy for educational reform in Finland	4
2.	Hardy et al., 2020	Digital Open Badge-Driven Learning: Practical applications to support Validation of Prior Learning	12
3.	Karttunen, 2016	Country report	9
4.	Kiilakoski, 2019	Youth work education in Finland	8
5.	Moitus et al., 2020	Flexible learning pathways in higher education: Finland’s country case study for the IIEP-UNESCO SDG4 project in 2018–2021	10
6.	Pylvsm & Nokelainen, 2017	Finnish WorldSkills achievers’ vocational talent development and school-to-work pathway	3
7.	Rintala & Nokelainen, 2020	Standing and attractiveness of vocational education and training in Finland: Focus on learning environments	11
8.	Salovaara, 2021	Structured Agency: Students’ Scope of Action in the Transition Phase from Basic Education to Upper Secondary Education in Finland	12
9.	Tervasmki et al., 2020	Changing the heart and soul? Inequalities in Finland’s current pursuit of a narrow education policy	20
10.	Virolainen & Heikkinen, 2018	Vocational Education and Training Institutions’ Collaboration with the World of Work from the Perspective of Actor Networks and Ecosystems of Learning	3
11.	Virolainen & Persson Thunqvist, 2017	Varieties of universalism: post-1990s developments in the initial school-based model of VET in Finland and Sweden and implications for transitions to the world of work and higher education	3
12.	Virolainen, 2018	Changing patterns of transition to VET and from VET to higher education: the ongoing Finnish VET reform	12
13.	Winch et al., 2020	Transforming vocational education and training for nearly zero-energy building	2

Figure 4-6 on overleaf represents the mind map of how the study constructed the themes from sub-themes and codes; each theme is distinctly colour coded—the mind map summarises Case B findings.

**Figure 4-6: Case B Thematic Framework (Mind Map)**



### 4.3.1. Theme 1: Teaching and Learning

Three sub-themes formed Theme 1: (1) Curriculum + (2) Learning + (3) Teaching = Teaching and Learning.

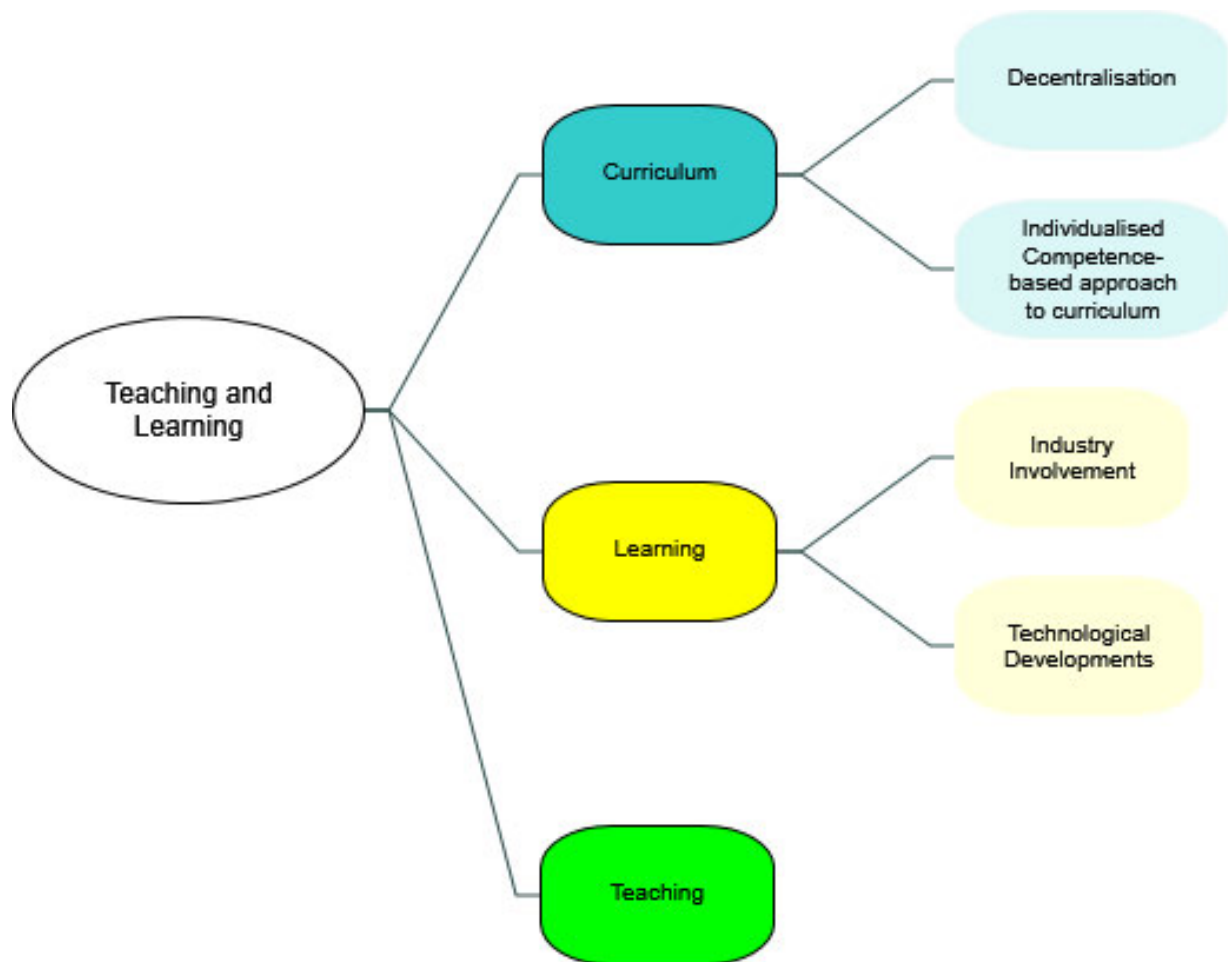
#### 4.3.1.1. Curriculum

“[Finland] turned TVET into a demand-driven, competence-based and customer-oriented initiative, with a focus on individual study paths, validation of prior learning and emphasis on workplace learning; a new, ongoing system of continuous student recruitment was also implemented”, Hardy *et al.* (2020:9).

Some scholars regard the Finnish curriculum as the best in the world. Fittingly, seven studies (70%) from Theme 1 included studies that covered the curriculum sub-theme. They are as follows: Virolainen, 2018; Tervasmki *et al.*, 2020; Salovaara, 2021; Rintala & Nokelainen, 2020; Kiilakoski, 2019; Karttunen, 2016;

Hardy *et al.*, 2020 and Brauer, 2020. There were two discussion points on curriculum: individualised competency-based curriculum and decentralised curriculum.

**Figure 4-7: Case B\_ Teaching and Learning Sub-themes Mind Map**



(i) Decentralisation

In Finland, the government decentralises the formulation of detailed curricula to the local municipal and school levels. According to Tervasmki *et al.* (2020:2), Kiilakoski (2019:25) and Hardy *et al.* (2020:6), this arrangement ensures that the curriculum responds to local developmental attributes and incorporates local knowledge. In other words, the curriculum policy provides for the incorporation of indigenous knowledge and responds to local economic development opportunities.

(ii) Individualised Competence-based

It is worth highlighting the difference between competence and competency. The former encompasses what students have to achieve to obtain their educational goals, and the latter involves students' inherent skills and attributes (Mokoro, 2020).

“[Competence-based curriculum] increase[s] the rigour and relevance of the curriculum, [and] move students beyond a focus on the memorisation and regurgitation of scientific facts, and better enable them to understand scientific principles and apply them to the practice” (Brauer, 2019:35).

The competence-based approach (CBA) caters to individual students’ interests and careers prospects and is tailored to enhance social and technological development (Brauer, 2020:154). CBA is founded on accreditation of prior learning, both formal and informal, while catering for industry requirements (Rintala & Nokelainen, 2020:253). Individualisation entails doing away with a pre-specified generic curriculum and tailoring its content per student needs. This means considering the knowledge and skills (including language skills) that the students already possess (Virolainen, 2018; Karttunen, 2016:6 and Salovaara, 2021:247). Schools and industry representatives undertake a skills audit of students and design individualised curricula based on a student’s skills gap, aptitude and potential career prospects. This study found that this approach averts subjecting students to an abstract curriculum or fruitless endeavours of offering content that would not enhance the students’ career prospects cognitively and innovatively. In other words, learning that encompasses the three Es: economy, effectiveness and efficiency, which brings the study to the next sub-theme: Learning

#### 4.3.1.2. Learning

Four studies covered the Learning sub-theme: Virolainen, 2018; Pylvsm & Nokelainen, 2017; Moitus et al., 2020 and Hardy *et al.*, 2020. Two codes formed this sub-theme: Industry Involvement and Technological Developments.

##### (i) Industry Involvement

The Finnish education policy values the significance of effectively and efficiently preparing students for industry. However, this study found that there is inadequate industry involvement for practical training in Finland. Hence, Pylvsm & Nokelainen (2017) indicate that the Finnish TVET system focuses on unearthing skills relevant for a specific industry but inadequately collaborates with industry experts for students’ practical training. Likewise, Hardy *et al.* (2020:10) insist that “collaboration and sharing of responsibilities between schools and workplaces, regarding the competence-based practice, has been described as inadequate.”

##### (ii) Technological Developments

“Digitalisation will be a big thing over the next decade, which will change higher education structures radically (Moitus *et al.* (2020:88).”

This study found that the Finnish TVET system has a global reputation of being among the best in the world. Nonetheless, Moitus *et al.* (2020:76) sensitised the government to the importance of cognition about the 4IR threat.



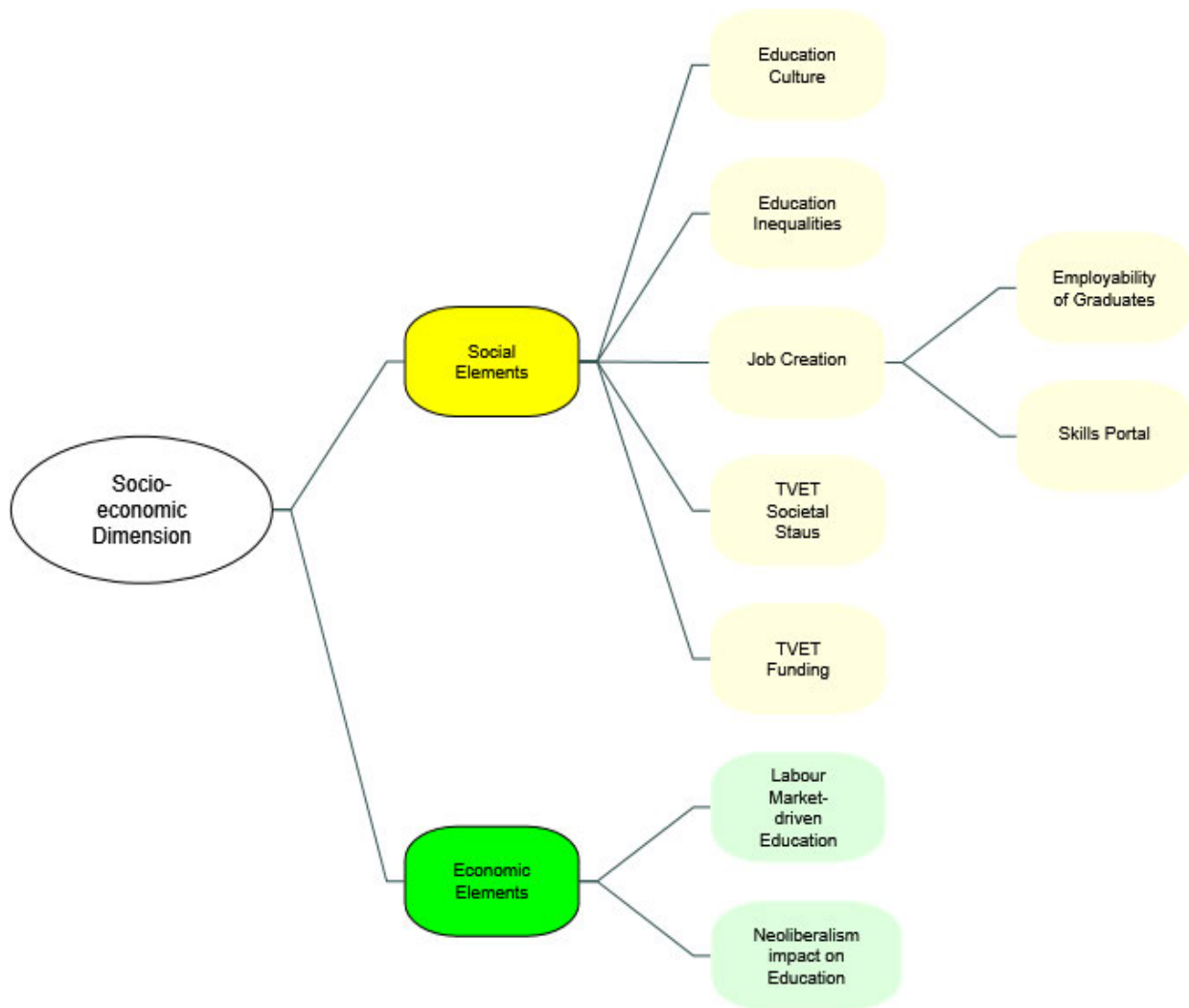
#### 4.3.1.3. Teaching

One study covered the Teaching sub-theme: Hardy *et al.*, 2020. The study found that the Finnish government has substantial confidence in its teaching staff (teacher and principals). Therefore, the government's monitoring of the teaching staff is nearly non-existent (Hardy *et al.*, 2020). Moreover, Hardy *et al.* (2020:6) assert that the confidence mentioned above emanates from a long history of framing the reforms on professional teachers—specifically since the 1970s. Furthermore, according to Hardy *et al.*, 2020:9, the recent reform about competence-based curriculum and on-the-job training, which began in 2000, “[was] implemented gradually and systematically, and was supported by offering teachers possibilities for professional development in order to better understand and engage with reformed VET-practices.”

#### 4.3.2. Theme 2: Socio-economic Dimension

Two sub-themes formed Theme 2: (1) Social Elements + (2) Economic Elements = Socio-economic Dimension.

**Figure 4-8: Case B\_Socio-economic Development Mind Map**



#### 4.3.2.1. Social Elements

All studies included for Theme 2 covered the Social Elements sub-theme. Four codes formed this sub-theme: (1) Education Culture + (2) Education Inequalities + (3) Job Creation + TVET Societal Status + TVET Funding = Social Elements.

##### (i) Education Culture

This study found that the success of Finnish education can be attributed, in part, to the education culture. The culture entails the rich national ethos that citizens are essential national asset and that education enables the people to become prosperous. Hence, free, equal education is provided to all citizens regardless of socio-economic status. According to Kiilakoski (2019:65), the education system is ripe for professional development in Finland due to the education culture. Furthermore, the education culture has enabled the education policy, including TVET, impervious to global influences (Hardy *et al.* 2020:6). Nevertheless, Tervasmki *et al.* (2020:7) and Salovaara (2021:247) warn against the unintended consequence of educational inequalities caused by the competence-based individualised curriculum.

Student's educational trajectory is connected to their socio-economic background (Salovaara, 2021:249)

##### (ii) Inequalities

As stated in 5.3.1.1 (ii), this study has found that local school specialists primarily focus on the skills learners already possess when undertaking the RPL (recognition of prior learning). This is in preparation for the competence-based individualised curriculum. Salovaara (2021:249) concludes that students' educational and, ultimately, career paths are linked to their socio-economic backgrounds. Likewise, manifesting inequalities. This rebuts the assertion in the Finnish education policy documents that "the Finnish education system is equal and provides equal opportunities to all" (Salovaara, 2021:257).

"This blinkered view of education policy ignores fundamental issues regarding the equality of educational opportunities, and socio-cultural inclusion. It is thus implicit in endorsing educational segregation, atomisation, intergenerational inheritance of social class and education, in other words, selectivism" (Tervasmki *et al.* 2020:5)

Moreover, Tervasmki *et al.* (2020:1) infer that the Finnish government's education policy shows an obsession with a flexible workforce and national competitiveness. Yet the government neglects the manifestation of inequality upon policy implementation. Education that is based solely on one's aptitude regardless of social status and power (or marginalisation) is deceptive. The effects of education are expressive of such relations of power and continue to reproduce social inequality. Lastly, this study deduced that the Finnish education policy possibly causes inter-generational inequality by disregarding socio-cultural diversity.

##### (iii) Job Creation

Two discussion points led to the job creation code which fed into the social elements sub-theme. These are the skills portal and TVET graduate employability. Each is highlighted in turn.

**Skills Portal:** The Finnish Employment Services has created a web-based employment portal for vocational guidance to heighten employability. It assists unemployed youth with career guidance and profiling skills to match the unemployed with the available employment opportunities (Karttunen, 2016:6). Each job seeker is allocated a psychologist for counselling and a mentor for developing an individual job search plan as well as job interview preparations for interviews (Karttunen, 2016:6)

**Employability of TVET graduates:** Virolainen (2018:59) maintains that youth employment depends on the TVET efficacy and the labour market performance. Simultaneously, Tervasmki *et al.* (2020:9) contend that the Finnish government's investment in education enhances the employability of disadvantaged groups. Rintala & Nokelainen (2020:251) insist that TVET provides a more seamless entry into the job market than general education. However, the Rintala & Nokelainen study (2020) found that "the early career advantages diminish over time compared with general education." Another discovery from that study is that the Finnish upper secondary TVET does not prepare learners for employment (Kiilakoski, 2019:26). In contrast, Virolainen (2018) proposes a paradigm shift in the TVET system based on the argument that "a new, wider and more flexible provision of studies" is required to shorten the schooling period. This, in turn, would enable specialisation elasticity, quicker entry to institutions of higher learning and improved employability. Table 4-4 provides the employment rate for Finish graduates.

**Table 4-4: Finland Graduates Employment Rates**

Qualification	Employment Rate
Specialist TVET	95%
University	90%
TVET Qualification	84%
Basic TVET	69%

Source: Moitus *et al.* (2020:78)

Table 4-4 shows that Specialist TVET graduates are in demand, followed by university graduates. The study deduced that specialist TVET and university qualifications have a higher societal status, which the next sub-theme will discuss.

#### (iv) TVET Societal Status

Virolainen's (2018) study found that the TVET is not popular among the youth in Finland. Enrolment in TVET has been below 50% for a while, as it is just over 40%. Rintala & Nokelainen's (2020:252) study found that TVET has a stigma among the individuals who never attended it. Lastly, the study also found that students from affluent backgrounds opt for university degrees. In contrast, students from disadvantaged backgrounds primarily choose basic TVET (Moitus *et al.*, 2020:83).

#### 4.3.2.2. Economic Elements

One study included for Theme 2 covered the Economic Elements sub-theme. Two codes formed this sub-theme: (1) Labour Market-driven Education + (2) Neoliberalism Impact = Economic Elements.

##### (i) Labour Market-driven Education

According to Tervasmki *et al.* (2020), the notion that Finnish education is intended for students' individual development is misleading. Instead, it is meant for creating a pool of skilled personnel for the labour market. Furthermore, Tervasmki *et al.* (2020:5) posit that even the entrepreneurial discourse eventually caters to the labour market.

##### (ii) Neoliberalism Impact

“Treating education as something that should be determined by the demands of the labour market reflects a broader neoliberal discourse at work across the globe” (Tervasmki *et al.*, 2020:4).

Education has become an ideological instrument for the capitalists influenced state Tervasmki *et al.* (2020:7). Nonetheless, this study found that besides the inherent neoliberalism threats, the education system is ripe for innovation and employability. This results in social security for the Finnish citizens.

##### (iii) TVET Funding

Since 1972, Finland has offered free, equal basic education, including meals (grade 1-9), regardless of socio-economic status (Kiilakoski, 2019:25), which is reminiscent of a welfare state. Free, equal basic education, which is a social service by the government, inhibits the idleness of the youth from being inactive (Salovaara, 2021:247).

Nonetheless, recently, the state has cut the education budget by 190 million Euros despite student enrollment growth (Tervasmki *et al.*, 2020:6), which may signal a neoliberal direction.

“When [the] state has been looking for ways to reduce budgets, [the] educational sector has been [the] one lose” (Virolainen, 2018:586).

This study deduced that neoliberalism could have resulted in the Finnish government cutting the education budget. As stated in section 2.3 (table 2-2), one of the neoliberalism policy packages is ‘lessening social services and social programmes.’

#### 4.4. Findings for Case C: Germany

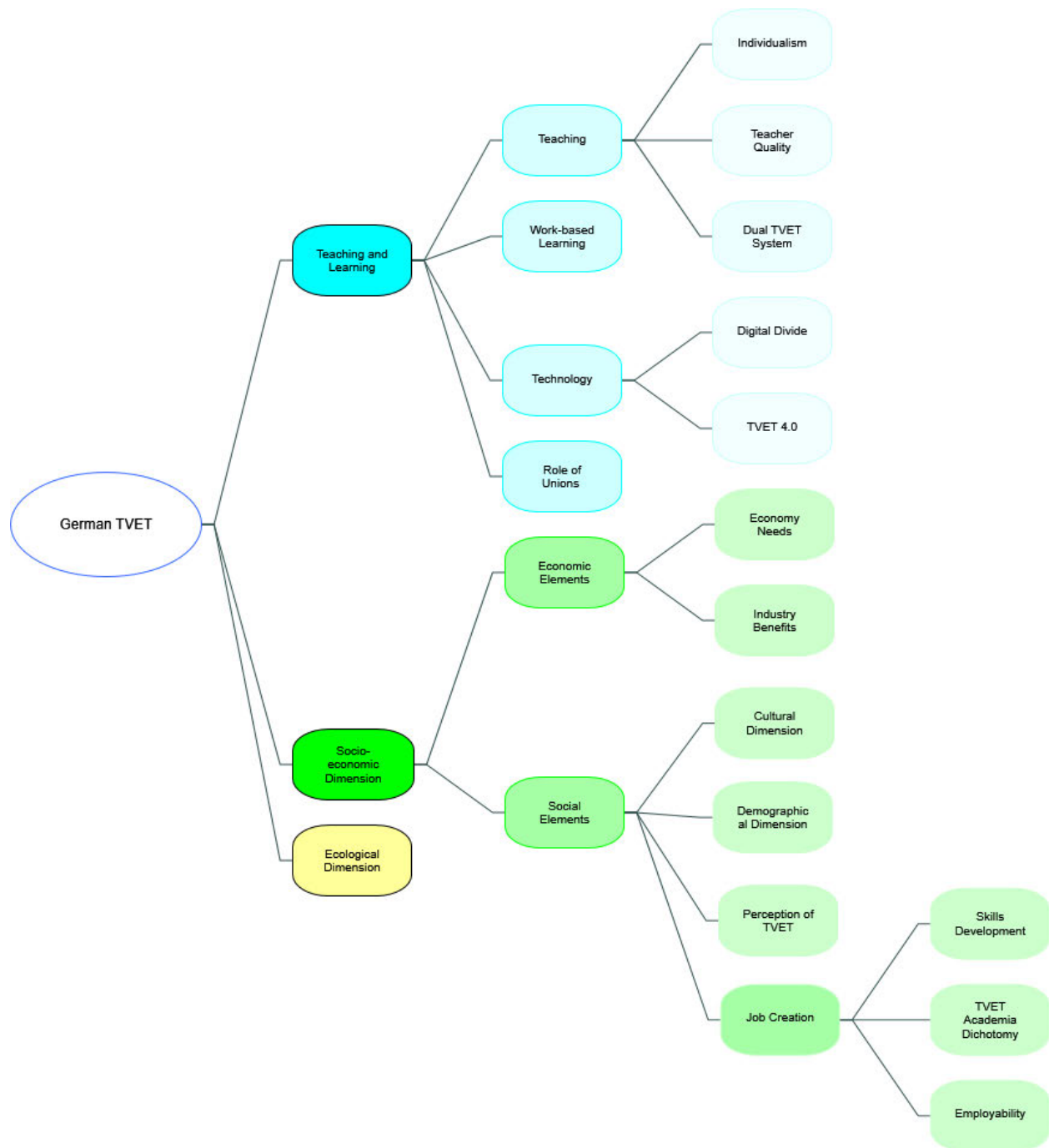
This sub-section presents findings from Case C; Table 4-5 on overleaf summarises the included studies. Three themes emerged from Case C as follows: (1) Dual VET System, (2) Socio-economic Dimension and (3) Sustainable Development.

**Table 4-5: Studies Reviewed for Studies for Case C**

No.	Study	Topic	Codes
1	Annen & Tiemann, 2017	Educational pathways and decisions—Comparing the returns to investment in Germany and Canada	4
2	Bahl, 2019	How Trainers Experience the Structural Dynamics of German Apprenticeship	15
3	Boichevska & Veremiuk, 2020	Dual education: application of Germany’s positive experience in Ukrainian reality	7
4	Burhan & Duruhan 2020	Scrutinising the German education system in terms of its effect on social and cultural structure, employment and economy	16
5	Deissinger, 2018	Problems and Challenges of Full-time and School-based VET in Germany	2
6	Durazzi & Geyer, 2020	Social inclusion in the knowledge economy: unions’ strategies and institutional change in the Austrian and German training systems	4
7	Ebbinghaus, 2019	Training marketing by German companies. Which training place characteristics are communicated?	11
8	Gessler, 2017	The lack of collaboration between companies and schools in the German dual apprenticeship system: Historical background and recent data	2
9	Haasler, 2020	The German system of vocational education and training: challenges of gender, academisation and the integration of low-achieving youth	15
10	Herr & Nettekoven, 2018	The role of small and medium-sized enterprises in development: What can be learned from the German experience?	12
11	Lambini, et al., 2021	Achieving the Sustainable Development Goals through Company Staff Vocational Training—The Case of the Federal Institute for Vocational Education and Training (BIBB) INEBB Project	3
12	Lensing, Dieball, & Pit13tich, 2018	How to Foster the Awareness for Sustainable Development in Vocational Training with the Help of Audits	3
13	Li, Zhong & Xu, 2020	The “Cradle of German Technical Talents” Re-Analysis of Dual System Mode	10
14	Liu, 2020	A Comparative Study of Vocational Education in China and Germany	14
15	Pilz & Fürstenau, 2019	Duality and learning fields in vocational education and training: Pedagogy, curriculum, and assessment	7
16	Pinnow, 2019	The German Dual VET System and Approaches to enhance Employer Engagement	19
17	Schönfeld et al., 2020	Training in Germany—an investment to counter the skilled worker shortage	2
18	Tasli, 2018	National skill systems: A comparative analysis of vocational education and training in Germany, Japan and Turkey	10
19	Yu, 2019	Germany’s dual education system: The assessment by its subjects	14

Figure 4-9 on overleaf represents the mind map of how the study constructed the themes from sub-themes and codes; each theme is distinctly colour coded—the mind map summarises Case C findings.

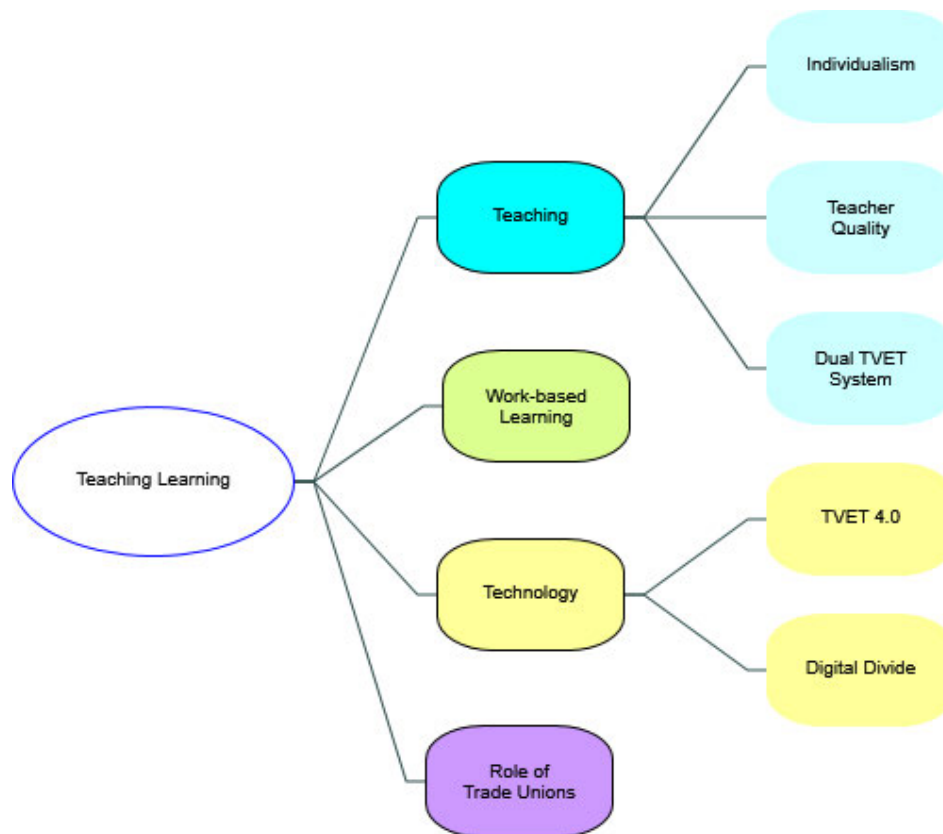
**Figure 4-9: Case C Thematic Framework (Mind Map)**



#### **4.4.1. Theme 1: Teaching and Learning**

Four sub-themes formed the Teaching and Learning theme: Teaching, Work-based learning, Technology and Role of Trade Unions. Each is discussed in accordance with Figure 4-10 on overleaf.

**Figure 4-10: Case C\_ Teaching and Learning Sub-themes Mind Map**



#### 4.4.1.1. Teaching

Four codes formed the teaching sub-theme: (1) Individualism + (2) Teacher Quality + (3) Dual VET System = Teaching.

Next, this section will discuss individualism.

##### (i) Individualism

This study found that the German government invests in education to enhance the labour market pool for economic reasons (Burhan & Duru-han 2020:804). However, Pinnow (2019:4) insists that it is equally essential to consider societal factors such as a sense of duty to the community and independence. Burhan & Duru-han (2020:804) assert that the return on investment in education should also be beneficial from both an individual perspective and societal point of view.

##### (ii) Teacher Quality

In Germany, VET teachers are professionals with extensive technical corporate experience. Liu (2020:15) establishes that typically, these teaching professionals have over ten years' work experience. According to Liu (2020:15), some are even professional engineers. In contrast, Pilz & Fürstenau (2019:324) stress the general educational skills of teaching professionals within VET. This would ensure that would-be boundaries between the VET system and general education is fluid.



### (iii) Dual VET System

The Dual VET System (DVETS) in Germany entails collaborations between VET institutions and industry to satisfy the local and national labour market needs (Boichevska & Veremiuk, 2020:12). Some businesses have an all-embracing involvement. For example, most big companies establish their own training centres and employ teachers from within the company (Liu 2020:15).

*Berufsbildungsgesetz* [Vocational Training Act] of 2005 governs the DVETS implementation (Gessler 2017:172). The law provides for the formation of training committees, including government authorities, companies, and unions. The multi-level government (central, state and local) is responsible for the implementation and governance of DVETS, including monitoring and evaluation (Li, Zhong & Xu, 2020:156). Additionally, the law provides for committees that certify the final examinations—these committees must consist of two-thirds employers and at least one teacher (Gessler 2017:172).

“In Germany, about 70% of graduates take part in the [DVETS] training every year, while only 30% go to university” (Li, Zhong & Xu 2020:155)

One feature that makes DVETS popular is its reputation of producing first-rate specialists and artisanal labour. Hence, it is critical in Germany’s economic model (Boichevska & Veremiuk, 2020:12). DVET is a popular choice among the youth, that generally choose it over university (Deissinger, 2018:149)

#### 4.4.1.2. Work-Based Learning (WBL)

Work-based learning is the basis for the DVETS. Even though the DVETS combines industry-based training and school-based theoretical teaching, Tasli (2018:1674) and Burhan & Duruhan (2020:807) emphasise that industry plays a significant role. Learners spend between sixty to eighty percent (60-80%) of their time on work-based training. Ninety percent (90%) of apprenticeships in Germany are offered by small-medium enterprises (SMEs) (Herr & Nettekoven 2018:13). Table 4-6 presents the breakdown of training per SME category—the defining characteristic of a category is the staff complement.

“Apprenticeships offered by SMEs can be considered an investment in the skill level of the companies’ workforce since many of the apprentices are hired by the company as regular employees after completing their vocational training” (Herr & Nettekoven 2018:13)

**Table 4-6: Percentage of German SMEs Offering WBL**

SME Size	Defining Characteristic	Enterprises offering WBL
Big	50 employees or more	76%
Medium	10 to 49 employees	50%
Small	5 to 9 employees	24%
Micro	Less than 5 employees	5%

Source: Adapted from Herr & Nettekoven (2018:13)



It is worth mentioning that small and micro enterprises have a small percentage share of WBL provision. According to Haasler (2020:61), the causal factors are the failure to comply with training requirements and the lack of training resources. Generally, the German government uses WBL as an instrument for economic growth. It creates a pool of highly skilled personnel to enable efficiency and effectiveness to enable optimal productivity (Bahl, 2019:311-313).

#### 4.4.1.3. Technology

This study found that governments must keep up with technological developments to maintain low unemployment rates. According to Bahl (2019:314), the rapidly evolving technological environment challenges the employment landscape. Hence, Bahl (2019:314) highlights that dealing with the digital divide and the VET upgrades give a technologically based industrial revolution. Bahl (2019:315) that VET must be digitised and called for the evolution of VET to VET 4.0 (4IR VET).

#### 4.4.1.4. Role of Trade Unions

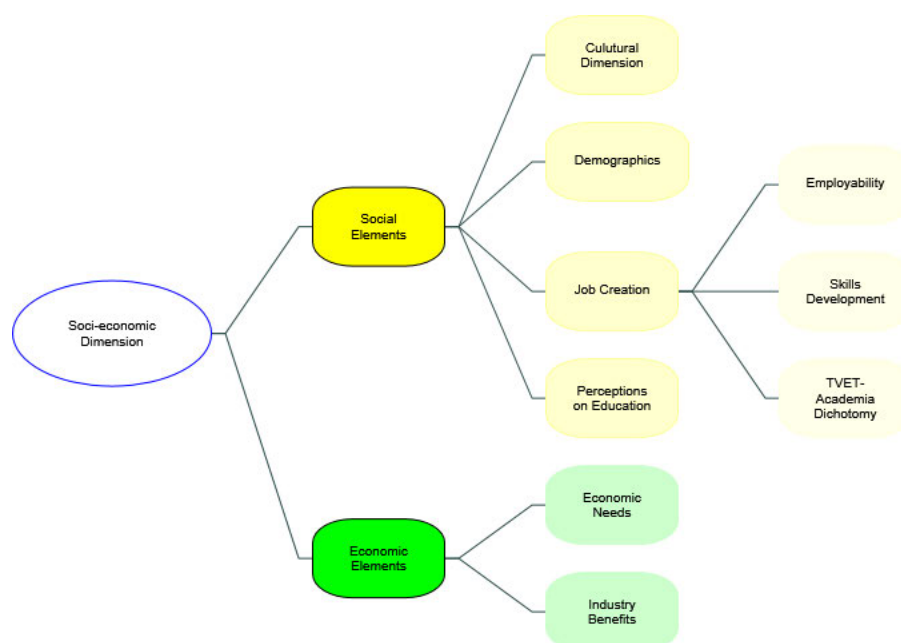
“The chambers have the responsibility of administrating final exams of VET students. In addition to the active role of employers and public authorities, unions having a strong voice play an important role in [the] skill formation process” (Tasli, 2018:1676).

This study found that the German government acknowledges unions as critical stakeholders and respects their buy-in (Tasli, 2018).

### 4.4.2. Theme 2: Socio-economic Dimension

Two sub-themes generated Theme 2: Social Dimension and Economic Dimension. As seen in Figure 4-11, multi-level codes and nodes led to these sub-themes.

**Figure 4-11: Case C-Socio-economic Dimension Mind Map**



#### 4.4.2.1. Social Elements

Notwithstanding that demand and supply of education are linked to the economy, Burhan & Duruhan (2020:804) emphasise that education must develop students both at an individual and social dimension.

“In short, education is a system that has functions such as socialisation, transferring cultural heritage from generation to generation, developing the economy and raising human capital power” (Burhan & Duruhan (2020:805).

This sub-section presents the results on the codes: cultural dimension, demographical data, perceptions about education and job creation. Nodes that led to job creation are employability, skill development and the TVET-Academia dichotomy.

##### (i) Cultural Dimension

“Culture is the acquired knowledge people use to interpret experience and generate behaviour.”- James Spradley

The study found that culture is passed down from generation to generation through socialisation and thus forms the national identity. Therefore, the culture is taught. Yu (2019:151) argues that the education system is a product of national identity and *vice versa*. The Yu (2019) study found that globalisation had altered the worldview on national identity and the education culture. According to Liu (2020:13), the Germans have a resilient “nationalist ideology” and place significance on VET. Hence, they link national prosperity to the quality of manufactured products “made in Germany”; and value their VET system, which is key to Germany’s manufacturing success (Liu (2020:13). Lastly, it is noteworthy that the cultural dimension and education directly affect Germany’s economic trajectory and prosperity (Burhan & Duruhan 2020:803).

##### (ii) Demographical Dimension

This study found that policymakers must consider demographical dynamics when developing TVET policies. Yu (2019:135) discovered that in Germany, the demographic indicators point to a challenge regarding the success of the TVET system. There is a decline in the birth rate, while twenty percent (20%) of citizens are of foreign descent. Consequently, the German government must come up with mitigating factors to the above-mentioned threat.

##### (iii) Perception of TVET in Germany

“A key education policy objective is that TVET should remain attractive to school leavers and provide training that is also appealing to the well qualified” (Haasler, 2020:65)

Typically, German citizens value the extent of social contribution of the qualification and do not regard academia as prestigious (Liu 2020:13). According to Tasli (2018:1675), Germans do not perceive VET status as inferior. Likewise, the dual VET system has been the popular choice among the youth, especially the post-secondary students. Nonetheless, Haasler (2020:65) notes an emerging paradigm shift: there is growth in students enrolling at universities, putting the dominance of the dual VET system at risk.

#### (iv) Job Creation

This section will discuss job creation under three nodes: (1) Employability, (2) Skills Development, and (3) TVET-Academia Dichotomy, which emerged during data analysis, driven by the data collection protocols described in Chapter Three.

**Employability:** This study found that the DVETS is designed to enhance employability, and there is a high probability of its graduates securing good-quality jobs (Pinnow, 2019:1). The labour market demands inform the curriculum. The curriculum is designed to ensure in-depth career-oriented content and cultivate initiatives (Li, Zhong & Xu, 2020:157). According to Herr & Nettekoven (2018:14), DVETS is a significant factor in Germany's "lowest youth unemployment rates" among both Global North and Global South economies. However, Haasler (2020:66) confirms that jobs classified as low-skilled, like agriculture, construction and other service occupations, are plagued by poor working conditions and low wages.

Furthermore, literature shows that Germany ensures the employability of its citizens by mapping skills. According to Bahl (2019:314), skills mapping enables the German government to anticipate possible future skills shortages. This allows the promotion of socio-economic inclusivity and prevention of structural unemployment.

**Skills Development:** National skills development must be informed by the societal requirements and corporate life. The quality of skills development determines the quality of human capital and fitness for employability. (Burhan & Duruhan 2020:803). According to Yu (2019:130), the strength of the DVETS is its agile response to globalisation, thus enhancing human capital development.

**TVET-Academia Dichotomy:** Even though a university qualification does not have a high societal status in Germany, this study found that university graduates are paid more than VET graduates. This has resulted in a steady increase in the number of school leavers opting for university qualifications. According to Haasler (2020:65), the proportion of school leavers not opting for VET is currently 30 percent. The preceding phenomenon, coupled with the demographic challenges (discussed in 5.4.2.1.), manifested recruitment problems for companies due to the shortage of skilled candidates. Ebbinghaus (2019:104) reports that over 45% of companies were affected by the lack of skilled candidates, negatively impacting the economy in the long run.

#### 4.4.2.2. Economic Elements

Several nodes led to the sub-theme of economic elements: Economic aspects and industry benefits—Chancellor Kohl sums the interaction of these nodes in the quotation below.

"Youth who go through good vocational training is the biggest capital of our country and the guarantee of our economic stability." –Chancellor Kohl cited in (Chen 2019:1439)

### (i) Economic Aspects

According to Pistrui *et al.* (2017), entrepreneurship catalyses economic growth. Herr & Nettekoven (2018:13) affirm that VET graduates account for nearly half of the “start-ups established by entrepreneurs with vocational training” in Germany, substantiating Chancellor Kohl’s sentiments above. Despite the lack of mineral resources, Germany is the most economically prosperous country in Europe. What Germany lacks in mineral resources the country makes up for in technological strength, primarily through vocational education. According to Li, Zhong & Xu (2020:154), Germany is the global leader in equipment manufacturing, and the DVETS plays a pivotal role.

### (ii) Industry Benefits

This study established during the SR that manufacturing is key to the economic success of Germany, and industries benefit from the DVETS. This line of thinking is advanced by some scholars. These scholars highlight the DVETS as enabling companies to immediately involve graduates in production—according to Boichevska & Veremiuk (2020:11); Haasler (2020:61); Herr & Nettekoven (2018:13) and Pinnow (2019:13), this helps reduce overhead cost and increase the profit margin

“[DVETS] contributes to the professional socialisation of specialists who are learning to maintain their position in the workplace” (Boichevska & Veremiuk, 2020:11).

Furthermore, the effectiveness and efficiency of employees empower innovation, grow the national economy and advance national development (Pinnow, 2019:13).

#### **4.4.3. Theme 3: Ecological Dimension**

According to Bahl (2019:313), the DVETS conventionally serve the interests of capitalistic economic growth. The primary focus has been on producing skilled workers for optimal production. Notably, there has been minimal concern about the cost of production on environmental sustainability (Lensing, Dieball, & Pittich, 2018; Bahl 2019). However, in Germany’s Länder federal states, there has been a provision of Environmental Sustainability Education (ESD) as part of DVETS (Lambini *et al.*, 2021:2). The objective of ESD is to develop cross-cutting sustainability competencies to “produce specific cognitive, socio-emotional, and behavioural learning outcomes” and to conscientise learners about environmental sustainability (Lambini *et al.*, 2021:2). Lensing *et al.* (2018) echo the significance of ethics and prescriptive facets of environmental sustainability in a TVET system.

This chapter now turns to the final case study.

#### **4.5. Findings for Case D: Nigeria**

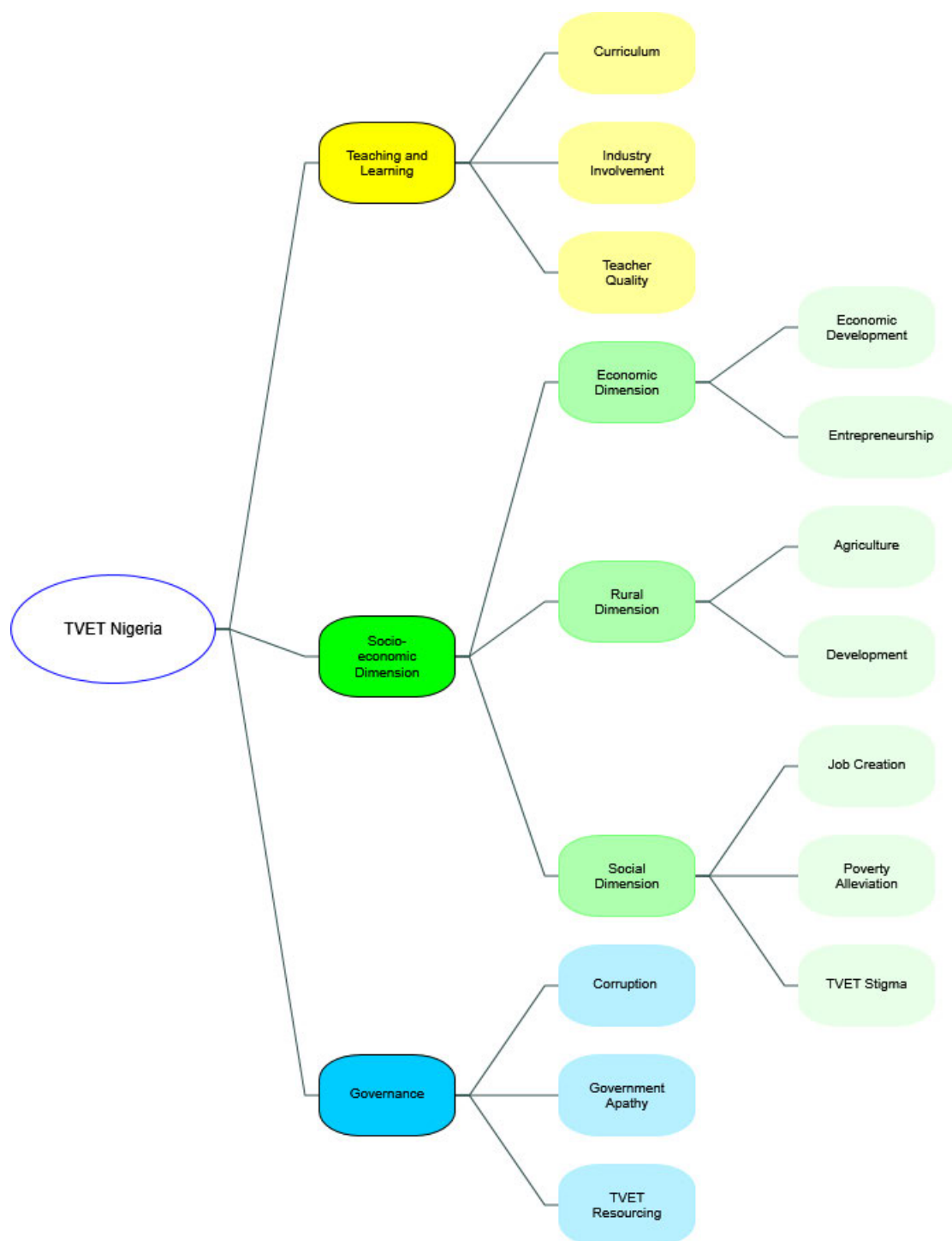
This section presents findings from Case D; Table 4-7 summarises the included studies. Three themes emerged from Case D as follows: (1) Dual VET System, (2) Socio-economic Dimension and (3) Governance.

**Table 4-7: Studies Reviewed for Case D**

No.	Study	Title	Codes
1	Abutu et al., 2017	Technical and Vocational Education and Training: The antidote for alleviating poverty and enhancing employability of youths in Nigeria.	20
2	Agha et al., 2020	Establishing the Nexus between Technical Education and Industrial Developments in Nigeria.	15
3	Akanbi, 2017	Prospects for technical and vocational education and training (TVET) in Nigeria: Bridging the gap between policy document and implementation.	36
4	Boyi, 2019	Vocational/Technical Education in Nigeria: An Indispensable Tool for Resolving National Conflicts and Economic Development.	35
5	Chioke, Babalola & Jibir, 2018	Challenges of Quality Technical Education in Yobe State	21
6	Danladi, et al., 2020	Challenges and Opportunities in Technical and Vocational Education (TVET) in Nigeria.	23
7	Edward & Mkinbari, 2021	Funding of Vocational Education for National Development in the 21st Century.	12
8	Ezeugwu et al., 2020	TVET Policies and Implementation in Higher Institutions in Enugu State Nigeria.	31
9	Fabi & Bashir, 2020	Rethinking Technical and Vocational Education in Nigeria for Global Competitiveness.	27
10	Idjawe, 2020	Critical Issues that Impede the Quality of Learning Outcomes in Technical Vocational Education and Training (TVET) in Nigeria.	17
11	Isaac & Ayodele, 2020	Impact of Technical and Vocational Education and Training (TVET) on National Development. (A Study of Selected SMEs Operators in Lagos, Nigeria)	6
12	Johnson, & Folahan, 2020	Critique of the National Policy on Technical, Vocational Education and Training (TVET) in Nigeria.	18
13	Kennedy, Ufot, Ikpe, 2017	Entrepreneurial Skill for Lifelong Education in Colleges of Education in Nigeria: The Way Forward	14
14	Lanre, 2020	Wealth Creation, Poverty Alleviation and Economic Growth in TVET with Particular Reference to Nigeria	6
15	Mbamaluikem & Balogun, 2020	Unemployment Reduction Among the Youth in Nigeria Through Technical and Vocational Education and Training	6

Figure 4-12 on overleaf shows the country-specific thematic framework for Nigeria.

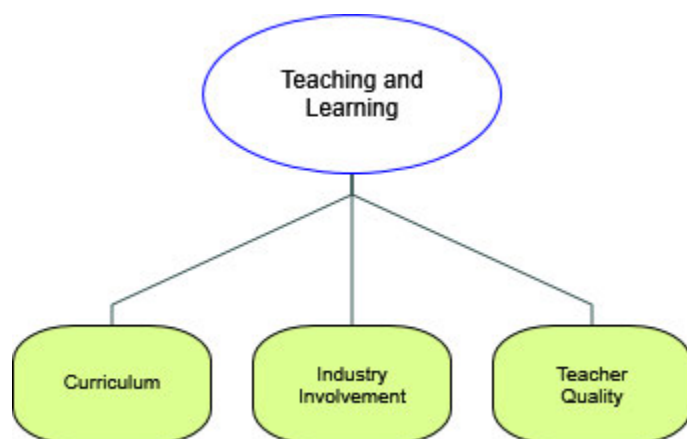
**Figure 4-12: Case D Thematic Framework (Mind Map)**



#### **4.5.1. Theme 1: Teaching and Learning**

Figure 4-13 on overleaf represents the mind map of the theme and sub-themes, whilst Figure 4-12 includes the sub-themes and nodes that gave rise to those sub-themes.

**Figure 4-13: Case D-Theme 1 Mind Map**



#### 4.5.1.1. Curriculum

This study found a disjuncture between the TVET curriculum, social and industry needs and indigenous knowledge (Fabi & Bashir, 2020; Boyi 2019:27; Akanbi, 2017:7). Likewise, Chioke, Babalola & Jibir (2018:193-194) highlight the lack of teachers with indigenous knowledge and that the Nigerian TVET system is solely based on a foreign model. Akanbi (2017:10) maintains that infusion of indigenous content would enhance the “Made in Nigeria” brand. Moreover, this study found that the curriculum is predominantly theoretical; on average, students spend two-thirds of the time in class and one-third in a workshop (Fabi & Bashir, 2020:1129). Kennedy, Ufot & Ikpe (2017:40) cautioned that too much focus on the theory might inhibit creativity and innovation.

#### 4.5.1.2. Teacher Quality

According to Johnson & Folahan (2020), teachers are insufficiently trained, TVET institutions do not empower them with labour market-relevant skills. Similarly, Danladi *et al.* (2020:76) point out the lack of professional development for teachers.

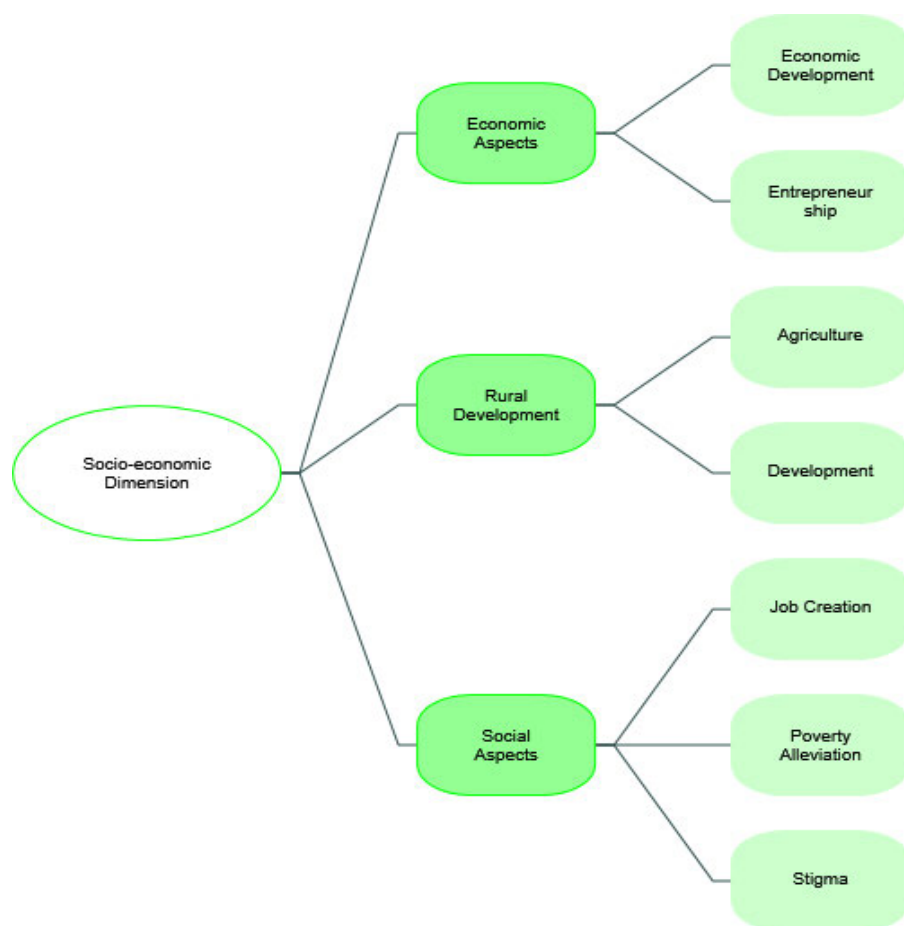
#### 4.5.1.3. Industry Involvement

In Nigeria, there is a lack of industry participation in the TVET system (Abutu *et al.*, 2017; Akanbi, 2017:7). Collaboration with the labour market could enhance the quality of TVET. Hence, Kennedy, Ufot & Ikpe (2017:40) and Ezeugwu *et al.* (2020:125) maintain that industry-school collaboration would result in a TVET system that responds to the socio-economic needs of the country.

### **4.5.2. Theme 2: Socio-economic Dimension**

Figure 4-14 represents the mind map of Theme 1 which consists of three sub-themes: Economic Aspects, Rural Development and Social Aspects.

**Figure 4-14: Case D-Theme 2 (Socio-economic Dimension) Mind Map**



#### 4.5.2.1. Economic Aspects

Seven studies covered the economic aspects: Lanre, 2020; Kennedy, Ufot & Ikpe, 2017; Isaac & Ayodele, 2020; Idjawe, 2020; Boyi, 2019; Akanbi, 2017 and Agha *et al.*, 2020. This section discusses the finding based on two nodes giving rise to the sub-theme of Economic Aspects: Economic Development and Entrepreneurship.

##### (i) Economic Development

Despite the Nigerian economy being the largest in Africa, it is “industrially underdeveloped and technologically backward[s]” (Agha *et al.*, 2020:39). Hence, Lanre (2020:1933) submits that the solution is for the government to develop a well-structured TVET system to enhance industrial productivity. Furthermore, Agha *et al.* (2020:39) maintain that transforming the TVET system would result in a technologically advanced economy leading to national prosperity. The preceding assertion places human capital development through TVET at the centre of development (Idjawe, 2020:131). Additionally, Akanbi (2017:10) concurs but accentuates stimulation of indigenous technology and enhancement of local economic development through the “Made in Nigeria” brand for products. Lastly, Boyi highlights the role of TVET in curtailing conflicts:



“When people are gainfully and economically engaged, they have less time for conflict” (Boyi, 2019:26)

To conclude, this study established the following causal chain through the Nigerian-specific SR: well-functioning TVET→economic development→prosperity.

#### (ii) Entrepreneurship

Isaac & Ayodele (2020) call for infusing entrepreneurship into the TVET system to attain economic growth and reduce crime. In much the same vein, Kennedy, Ufot & Ikpe (2017) point to entrepreneurship as a mechanism to enable self-employment, thus reducing unemployment and poverty.

#### 4.5.2.2. Rural Development

Six studies explored Nigerian rural development: Fabi & Bashir, 2020; Danladi *et al.*, 2020; Boyi, 2019; Akanbi, 2017; Agha *et al.*, 2020 and Abutu *et al.*, 2017. Two nodes emerged during the SR, leading to the sub-theme of rural development embedded in the theme of socio-economic: Agriculture and Development.

##### (i) Agriculture

This study found that the Nigerian rural agricultural industry is stagnant. The agricultural industry uses outdated methods and equipment and is insufficiently incorporated into TVET. Agha *et al.* (2020:39) aver that Nigerian agriculture has not been advancing; hence it is still labour intensive. Moreover, the farming sector imports spare parts.

##### (ii) Development

“Development is all about anything that can positively bring about changes in societies” (Boyi 2019:25)

Approximately eighty-five percent (85%) of poor Nigerians live in rural areas (Abutu *et al.*, 2017:5), making rural development a critical policy issue. The Nigerian government identified the lack of technical skills as the primary cause of the aforementioned policy issue as far back as 1977. The government responded by establishing the National Board for Technical Education (Akanbi, 2017:5). Forty-four years on, the challenge persists as TVET is still dysfunctional (Akanbi, 2017:7). Some scholars attribute the persistence of the challenge to brain drain or migration of skilled personnel (Fabi & Bashir, 2020:1129; Danladi *et al.*, 2020:75). According to Fabi & Bashir (2020:1129), “45% of all Nigerian professionals including technical educators have left the Nigerian shores over the years.”

#### 4.5.2.3. Social Dimension

Ten studies (63%) discussed the social dimension of the TVET experience: Mbamaluikem & Balogun, 2020; Johnson & Folahan, 2020; Fabi & Bashir, 2020; Ezeugwu *et al.*, 2020; Edward & Mkinbari, 2021; Danladi *et al.*, 2020; Chioke, Babalola & Jibir, 2018; Boyi, 2019; Akanbi, 2017 and Agha *et al.*, 2020. Three discussion points emerged from this sub-theme: TVET Stigma, Job Creation and Poverty Alleviation.

#### (i) Stigma

Generally, a TVET qualification is not a preferred choice in Nigeria due to the low social status of TVET (Ezeugwu *et al.*, 2020:130; Akanbi, 2017:7). Various causes of the phenomenon of stigma emerged. Boyi (2019:27) argued that “parents have a negative attitude towards TVET. Furthermore, a university qualification in Nigeria has a high societal status (Chioke, Babalola & Jibir 2018:193-194; Danladi *et al.*, 2020:76; Fabi & Bashir, 2020:1129). Nigerians have perceived TVET as suitable for people who are not proficient in science and arts. Thus, the notion that TVET is for unintelligent people is part of the national psyche (Johnson & Folahan, 2020:690). Consequently, TVET is uptaken by those with inadequate grades to meet the university entry requirements (Johnson & Folahan, 2020:690). Additionally, Mbamaluikem & Balogun (2020:369) assert that most TVET students desire to further their studies at a university—meaning they are not psychologically attuned to the TVET experience.

#### (ii) Job Creation

“A contemporary problem of technical and vocational education in Nigeria is the poor training of both the provider and the receiver” (Agha *et al.*, 2020:46)

This study found that the Nigerian TVET system is confronted by numerous sustained challenges resulting in its dysfunctionality; consequently, it barely contributes to job creation (Agha *et al.*, 2020). Likewise, Edward & Mkinbari (2021) conclude that the funding of the TVET system has resulted in it not attaining its objective of job creation. Lastly, Ezeugwu *et al.* (2020) conclude that poor policy implementation has resulted in poorly trained TVET graduates that are unemployable.

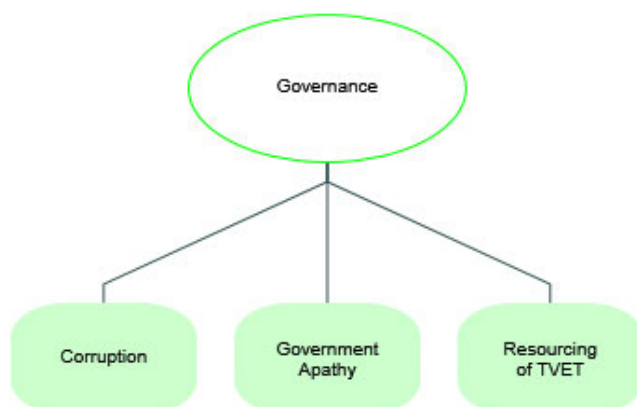
#### (iii) Poverty Alleviation

Due to the challenges mentioned above, the Nigerian TVET experience has not contributed to poverty alleviation. Boyi (2019:27) also attributes the high unemployment rate to the Nigerian TVET system’s shared challenges. Furthermore, Boyi (2019:27) argues that the high number of malnourished people results from the lack of nutritious food, which could be offset by the infusion of home economics in the TVET curriculum.

### **4.5.3. Theme 3: Governance**

Theme 3: Corruption, Government Apathy and Resourcing of TVET are the three sub-themes of governance, as shown in Figure 4-15 on overleaf.

**Figure 4-15: Case D Theme 3 Mind Map (Governance)**



#### 4.5.3.1. Government Apathy

“Appointment of non TVET personnel as a leader or head of a TVET institution, such a leader, may have no idea of what TVET entails” (Idjawe 2020:135)

The Nigerian government does not acknowledge the significance of TVET (Abutu *et al.*, 2017). TVET administrators have a massive challenge of persuading the government to prioritise the resourcing of the TVET system (Chioke, Babalola & Jibir, 2018:194). In conclusion, due to government apathy, TVET institutions are under-resourced and incompetent; politically linked individuals get deployment in leadership positions (Idjawe 2020:135).

#### 4.5.3.2. Corruption

Some scholars cite corruption as the root cause of the current state of the Nigerian TVET system. Fabi & Bashir (2020) note the misappropriation of education funds, hence the lack of development of the TVET system. Likewise, Ezeugwu *et al.* (2020:124) highlight that “many implementers corruptly divert much of the funds and educational resources to serve personal interests.” Boyi (2019:27) confirms that corruption through bribery leads to mismanagement of resources and is the primary cause of the appalling state of TVET in Nigeria. Furthermore, Akanabi (2017:8) identifies fruitless expenditure emanating from contracts that are never concluded as a considerable challenge. For example, there was a TVET construction programme in fifteen (15) states, but all were left at a foundation level from 2014 to date, with not one of the construction projects completed. In summing up: “Corruption has been a [significant] problem, and the list of corrupt practices is inexhaustible in Nigeria” (Akanabi 2017:8).

#### 4.5.3.3. Resourcing of TVET

Investment by the Nigerian government in TVET is inadequate (Chioke, Babalola & Jibir, 2018; Abutu *et al.*, 2017). Moreover, there is infrastructure decay, lack of workshops, lack of training materials in the workshops, lack of qualified teachers and under remuneration of qualified teachers (Akanbi, 2017:7; Boyi 2019:27; Chioke, Babalola & Jibir, 2018:193-194; Danladi *et al.*, 2020:75; Ezeugwu *et al.*, 2020:130; Fabi & Bashir, 2020:1128; Idjawe, 2020:132). Yet, there is an overwhelming demand for TVET. The overall

government expenditure on education is about 7%, and TVET gets a small portion of that allocation (Edward & Mkinabari, 2021:5; Idjawa 2020:132). In summing up, the lack of resources hinders the overall quality of teaching and learning and inhibits the government to accomplish broad economic goals through TVET (Johnson & Folahan 2020:692).

#### **4.6. Chapter Synopsis**

This chapter presented the findings from the review of studies that survived the screening process explained in Chapter Three. This study conducted an inductive analysis of the results using the NVIVO software. The study found that all cases discussed teaching and learning and socio-economic development. Moreover, Finland and Nigeria did not discuss the ecological dimension, and only Nigeria had a poor governance theme. The study developed thematic frameworks from the included studies for each case through inductive coding, ensuring a rigorous data analysis process. The upcoming final chapter discusses the findings, draws conclusions and makes recommendations on how the TVET model could be shaped as a policy instrument that helps lead to a prosperous South Africa.

## CHAPTER FIVE

### 5. DISCUSSION OF KEY FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

#### 5.1. Introduction

This chapter discusses findings from the studies included in the SR. The discussion is framed on the central research question and three broad sub-research questions, which mirror the primary and secondary objectives. The discussion is informed by the theoretical framework discussed in Chapter Two. Section 5.2 summarises the research problem and the resulting research questions, whilst section 5.3 summarises the emerging themes before demonstrating responsiveness to research questions. Section 5.4 presents conclusions and recommendations, thereby showing how the research objectives were achieved. Furthermore, the chapter considers the limitations of the study in section 5.5 and proposes opportunities for future research in 5.6. Additionally, sections 5.7 and 5.8 point out the significance of the findings and policy implications, respectively. Lastly, Section 5.9 will provide a succinct summary to conclude this chapter and the dissertation.

#### 5.2. Summary of the Research Problem and Research Questions

Poverty alleviation has been the SA government's central policy issue since the end of Apartheid without success. The government has been using job creation as a policy instrument to deal with poverty challenges. In other words, job creation has been the means to an end, the end being alleviated poverty. Paradoxically, there is a chronic mismatch between the work opportunities and the available skills. In contrast, some countries have enacted TVET and used it as a central policy mechanism for poverty alleviation—poverty alleviation has been the means to an end, and the end has been prosperity. However, in SA, currently, there is no holistic policy framework for TVET implementation across basic education, tertiary education, and industry, resulting in coordination challenges. Hence, the study explored TVET policies from the selected cases to assess the best-fit elements. Next, this section reiterates the research questions which arose from the research problem.

#### **The central research question (CRQ):**

How can a TVET policy enable prosperity?

Hitherto, specifically, in section 2.2.1. the study conceptualised prosperity as not merely a matter of wealth or income but a more extensive phenomenon, encompassing “health, ecological well-being, opportunity and quality of life.”

The research sub-questions (RSQs) are as follows:

- How can TVET a policy enable employability?
- How can a TVET policy enable entrepreneurship?
- How can a TVET curriculum enable development?

Sections 5.3 briefly responds to these research questions, drawing upon data adduced in Chapter Four after a summary of the themes that emerged during the study.

### 5.3. Summary of Emerged Themes and Responsiveness to Research Questions

The study developed thematic frameworks from the included studies for each case through inductive coding, ensuring a rigorous data analysis process. The thematic frameworks assisted in collecting the disjointed data into a coherent record and clarified the connections between categories.

**Table 5-1: Summary of Emerged Themes**

Themes	Cases			
	China	Finland	Germany	Nigeria
Teaching and Learning	✓	✓	✓	✓
Socio-economic Development	✓	✓	✓	✓
Ecological Dimension	✓		✓	
Poor Governance				✓

The inductive analysis of the results found that all cases discussed teaching and learning and socio-economic development. Moreover, the ecological dimension emanated only from China and Germany, while only Nigeria experienced the poor governance theme. The discussion now turns to the CRQ and RSQs.

#### 5.3.1. How can a TVET Policy Enable Prosperity?

The data indicate that a TVET policy can stimulate prosperity by enabling sustainable socio-economic development. Socio-economic development could result from a curriculum that enables entrepreneurship, employability and economic development. This shows the interaction between the dependent and independent variables of the study complemented by good governance. Sustainability can be achieved when a TVET policy advances the implementation of curricula developed by all affected stakeholders—curricula inclusive of both good governance and the ecological dimension.

Taking the latter first, TVET curricula should conscientise the future entrepreneurs and industrial workers to conserve ecological resources. This means harnessing skills to attain environmentally sustainable development. This is consistent with Pavlova’s (2018:5) assertion that the essence of green skills preparation is to conscientise the future labour force about “green growth and greening of the economy”. Thus, the TVET curriculum must incorporate the ecological dimension to link environmentalism, geographical elements, and product awareness, deepening the ecological revolution cognition, thus engendering prosperity.

Good Governance is also essential for the prosperity discourse. In chapter 2, the study adopted the principles of good governance championed by Nzimakwe & Pillay (2014:5): “accountability, transparency,

responsiveness, equitable and inclusiveness, consensus-oriented and participatory government, follows the rule of law and should be effective and efficient”, (see Table 5-2)

**Table 5-2: Findings on Good Governance of the TVET Model**

<b>Good Governance Principle</b>	<b>Study Findings</b>
Accountability	In Nigeria, government apathy and corruption inhibit good governance due to a lack of accountability, resulting in ineffective and inefficient management of resources. TVET succeeds in China due to school-community cooperation, which possibly enhances accountability, while Germany and Finland involve civic society, including trade unions, in oversight.
Transparency	There is decentralisation of TVET to local municipal and school levels in Finland and Germany, which possibly enhances transparency.
Responsiveness	In Germany and Finland, local municipalities, industry and civic society are involved in curriculum development to ensure responsiveness to local economic development and industry requirements.
Equitability and inclusiveness	In Finland, there is free, equal education regardless of socio-economic class. In contrast, there is a gap in resource allocation between rural and urban areas in China.
Consensus-oriented	In Finland, the TVET policy provides for an individualised curriculum, which entails a skills audit undertaken by a school TVET specialist, local municipal officials and the student. There is a consensus between all the parties about the individualised curriculum. Similarly, there is a consensus between TVET institutions and the industry about the curriculum in Germany.
Participatory governance	In Germany and Finland, business chambers and organised labour participate in the monitoring and evaluation of the TVET system, while in Finland, students participate in the curriculum development.

The principles in Table 5-2 possibly reciprocate to students; however, they ensure good governance on an observed level, as shown in Figure 3-1. Underpinned by critical realism, the study drew upon that worldview to understand deeper realities of how the TVET model could enable good governance by aiding patriotism, morals and ethics. Firstly, in Germany, a nationalist ideology is infused into the curriculum; consequently, the Germans pride themselves on the “made in Germany” brand, invigorating patriotism. Secondly, in Finland, the curriculum incorporates a rich nationalist ethos that citizens are national assets, possibly stimulating moral regeneration. Lastly, in China, the curriculum incorporates the spiritual culture and ethics. The combination of the factors mentioned above may enable a national value system that curtails corruption and consequently facilitate good governance.

Furthermore, findings suggest that TVET enables socio-economic development when the social dimension entails a positive status perception of TVET. In comparison, the economic dimension requires industry-driven and entrepreneurship-enabling TVET curricula. At the same time, innovation enables market-creating and entrepreneurship when responsive to local economic development opportunities and employment creation. Here again, the interaction between the dependent and independent variables comes to light along

with the theoretical proposition stated in section 2.9.3 that prosperity is attainable when there are market-creating innovations and the custom of common reciprocity in society. These independent variables of employability, entrepreneurship and development are further discussed in response to the research sub-questions, which can be seen as building blocks of prosperity.

### **5.3.2. How Can a TVET Policy Enable Employability?**

The findings of the study uncovered that a TVET system is crucial for enabling employment creation. Confirming Jones' assertion that the skills mismatch is one reason for persistent structural unemployment—high-quality education accessible to everyone is the solution (Jones, 2020).

The results indicate that it is crucial for governments to deliberately facilitate skills development consistent with labour market demands to reduce the unemployment levels. This means overcoming and preventing the mismatch in the demand and supply of skills. This finding is consistent with Ngcwangu's (2014) assertion that education has an ideological undertone within the rubric of capitalist accumulation strategies and maximisation of profits. Thus, Germany enacted the dual TVET model, tailor-made to prepare students for the labour market through collaboration between TVET schools and the industry. Since labour markets are the primary beneficiaries of skilled human capital, the German TVET legislation ensures a significant role for industry in the TVET experience (BBiG, 2005).

In contrast, Finland implements a demand-driven individualised competence-based decentralised TVET system to facilitate the employability of graduates. The government decentralises curriculum development to the local municipal and school levels. The research revealed that decentralisation enables the TVET system to respond to industry needs and local economic development opportunities. Students are not subjected to an abstract curriculum of fruitless content that has no bearing on career prospects. This finding of TVET responsiveness to industry needs and local economic development contrasts Chomsky's affirmation that, universally, education is primarily designed for passivity (Chomsky 1995). Rather than designing educational opportunities that inculcate passivity in students, both Finland and Germany have skills portals that serve as a dashboard of the skills profile, enabling informed curriculum development that facilitates employability. Consistent with Lechman's (2010:4) argument that SM[M]Es play an essential role in government for stimulating job creation, findings also indicate that entrepreneurship enables employability, especially self-employment.

### **5.3.3. How Can a TVET Policy Enable Entrepreneurship?**

Chapter 2 (Table 2-3) highlighted the NDP's expectation of entrepreneurship to enable the SMME sector to create 90% of the targeted 11 million jobs by 2030. Furthermore, the NDP emphasises the significance of embedding the entrepreneurial spirit in the schools' curriculum (RSA 2012:469). This study established that TVET graduates account for nearly half of the start-ups established by entrepreneurs with vocational training in Germany. Literature shows that Germany produces high-quality industry-ready specialists,



inspiring the confidence to start up their enterprises. Furthermore, the German DVETS requires students to spend up to eighty percent (80%) of their time in practical training. Therefore, the context is ripe for innovation, stimulating the entrepreneurial spirit.

Next, this study found that the Finnish decentralised individualised competence-based system is conducive for entrepreneurship. Individualism is ripe for innovation and decentralisation for market-creating as it responds to local economic opportunities. This is consistent with arguments from Frederick *et al.* (2016:10), who posit that an entrepreneur is a “social or business innovator” who identifies local opportunities and converts them into enterprises.

#### **5.3.4. How Can a TVET Curriculum Enable Development?**

The analysis of findings revealed that a TVET curriculum enables development, and there are three dimensions to it: social, economic, and ecological dimensions. These dimensions circle back to prosperity attainment.

##### **5.3.4.1. Social Dimension**

In Chapter 2, the study highlighted rural development as a mechanism for prosperity. According to World Bank (2019c), more than eighty percent (80%) of poor people in Africa live in rural areas. This study established that a similar phenomenon is prevalent in China. However, as of 2019, China had reduced poverty levels to 0.7% by strengthening rural TVET. Eighty percent (80%) of Chinese TVET institutions are in rural areas. This study further determined that in developing countries, the TVET cost is 265% higher than the cost of general education.

Next, this study found that TVET is underfunded in China, especially in rural areas, resulting in the rural-urban dichotomy in resource allocation. Consequently, rural TVET institutions cannot attract quality teachers. There is a brain drain due to the rural-urban migration of teachers, resulting in a high student-teacher ratio, compromising TVET quality. Simultaneously, there is outward migration of rural students, resulting in slow rural development. The study further noted an over-emphasis on agriculture in rural TVET in China, inhibiting the development of other sectors that could catalyse development. On the one hand, the study found that, generally, industries are primarily concerned with material culture. On the other hand, the Chinese TVET curriculum incorporates spiritual culture and ethical consciousness so that the curricula transcend materiality. This cultivates wisdom, morality and nationalism, essential for good governance and national development.

Furthermore, the study found that, generally, globalisation tends to alter the worldview on national identities and education culture. The Finnish context brings contradictory realities to the forefront, using a critical realism lens. Finland has enabled an education policy seemingly resistant to global neoliberal influences, which enhances nationalism. The Finnish TVET policy is framed on the rich national ethos that citizens are a national asset, and that education enables development. Free basic education, including meals, is

accessible to all Finnish citizens and is of the same standard regardless of socio-economic class. Yet, unexpectedly, the study found that the Finnish individualised TVET system yields inequalities by disregarding socio-economic diversity. Thus, it appears that the Finnish education policy possibly causes inter-generational inequality. Turning to Germany, the study found that the strength of the German TVET system is its agile response to globalisation which enhances human capital development. Unlike other countries studied, the Nigerian TVET experience does not result in social development due to poor governance apparently emanating from government apathy and corruption.

#### 5.3.4.2. Economic Dimension

The study established that despite the lack of mineral resources, Germany is the global leader in equipment manufacturing and is the most economically prosperous country in Europe. The study further found that what Germany lacks in mineral resources makes up for in a TVET-centered technological strength. Hence the “Made in Germany” brand is the global model. China wants to emulate this model through “Made in China 2025”, underpinned by TVET-produced world-class technical personnel. Further findings indicated that China intends to ride the 4IR wave by turning to TVET 4.0. to evolve from labour-intensive to technological intensive initiatives.

With regard to Nigeria, the study found that, despite the Nigerian economy being the largest in Africa, the TVET system is poorly governed, which tends to lead to underdeveloped industrial and technological initiatives. Consequently, the “Made in Nigeria” brand of products are of low quality. In addition, Nigeria relies on importing most manufactured goods, resulting in economic leakages and low national growth.

#### 5.3.4.3. Ecological Dimension

The study found that sustainable development is critical for prosperity attainment. On the one hand, the Chinese government achieves it by incorporating environmentalism, geographical elements and product awareness in the curriculum. On the other hand, the study found that the German TVET system orthodoxly serves the interests of capitalistic economic growth, and there has been minimal concern about the cost of production on environmental sustainability. However, the study noted an emerging paradigm shift in Germany as Länder federal states have begun to provide for ESD as part of the TVET system. The objective is to conscientise learners about environmental sustainability.

### 5.4. Conclusions and Recommendations

Section 5.3 discussed the key findings in reference to the research questions. This section presents high-level findings related to the achievement of the research objectives as the basis for drawing conclusions and making recommendations. The study’s primary objective was to explore how a TVET policy can be an instrument for prosperity attainment. The secondary objectives are to: (1) discover elements of TVET policies that can enable employability, (2) examine elements of TVET policies that can enable entrepreneurship and (3) determine mechanisms in TVET policies that can enable development.

### 5.4.1. Findings and conclusions that achieve the research objectives

This section demonstrates how the primary and secondary research objectives were achieved. Section 5.4.1.1. refers to the achievement of the primary research objectives, whereas sections 5.4.1.2. to 5.4.1.4 refer to the secondary research objectives, which serve as building blocks toward the achievement of the primary research objective. A series of tables are linked to the discussion of the secondary data, briefly highlighting relevant data leading to the findings, conclusions and recommendations.

#### 5.4.1.1. Exploration of how a TVET policy can be an instrument for prosperity attainment

The primary objective of the study was to explore how TVET can be an instrument for prosperity realisation. Significantly, the study established that the primary objective could be obtained when an underlying layer of good governance and ecological sustainability exists in a TVET policy.

The findings suggest that TVET may enable good governance when a curriculum infuses a nationalist ideology, spiritual culture and ethics—incorporating environmental sustainability through deepening ecological revolution could enable sustainability. Moreover, a TVET curriculum may facilitate economic and social sustainability. Additionally, the results suggest that a TVET policy could enable economic development through entrepreneurship. Lastly, TVET could enable social sustainability through employability, which entails self-employment and industrial employment.

**Conclusion:** Based on the synthesis of findings, it is concluded that TVET policy could enable sustainable socio-economic development, thus enabling prosperity.

#### 5.4.1.2. Discovery of how mechanisms in TVET policies can enable employability

The study aimed to confirm the adeptness of TVET policy mechanisms in enabling employability. The analytical exploration of the selected cases revealed the key findings exhibited in Table 5-3.

**Table 5-3: Mechanisms within a TVET policy that enable employability**

No.	Employability Finding	Summary
1.	Duality in the TVET policy.	School-industry cooperation enables the production of skills required by the industry averting a mismatch in the supply and demand.
		School-community cooperation enables unqualified skilled local talents to impart indigenous knowledge into practical training.
		Teachers with dual qualifications: professional qualification and teaching qualifications enable inculcation of the professional culture in school, thus producing quality graduates.
2.	Individualised competence-based curriculum.	The individualised competence-based curriculum entails skills audit so that a streamlined individualised curriculum only addresses the skills gap and enhances employability.

The study findings suggest that a triple helix of duality enable the employability of TVET graduates. These are school-industry cooperation, school-community cooperation, and doubling qualified teachers. Unexpectedly, the study found that, even though the individualised competence-based curriculum could enhance

employability, it could simultaneously generate inequalities as it disregards socio-cultural and socio-economic diversities. This finding is worth noting as South Africa is the world's most unequal country.

**Conclusion:** Based on the synthesis of findings, it is concluded that a demand-driven individualised competence-based TVET policy may enhance employability.

#### 5.4.1.3. Examination of TVET curriculum elements that can enable entrepreneurship

The next secondary objective was to establish if TVET curriculum elements can enable entrepreneurship. The examination of the selected cases established the critical findings in Table 5-4.

**Table 5-4: TVET Curriculum Elements Enabling Entrepreneurship**

No.	Entrepreneurship finding	Curriculum Element
1.	Strong practical orientation	A dual TVET system with strong (60% to 80%) industry practical orientation produces high-quality self-reliant industry-ready specialists—students graduate with advanced skills. This enables them to be self-reliant, inspiring confidence to start their businesses and resulting in entrepreneurship.
2.	Decentralisation	Decentralisation enables a curriculum that responds to local economic development opportunities which stimulates entrepreneurship.
3.	Individualism	Student autonomy inspires innovation and results in entrepreneurship.

The key findings shown in Table 5-4 help tease out the theoretical proposition divulged in section 2.9.3 that education which incorporates entrepreneurship and local knowledge is ripe for sustainable development. Decentralisation facilitates curricula responsive to locally available economic opportunities, while individualism inspires the entrepreneurial spirit in a way that meets local needs.

**Conclusion:** Based on the synthesis of the findings, it is concluded that the authorities' decentralisation of an individualised TVET curriculum with strong industry practical orientation to local municipal or school levels could enable entrepreneurship.

#### 5.4.1.4. Determination of development enabling TVET policy mechanisms

The third and final SRO of the study was to explore if mechanisms in TVET policies can enable development. The findings revealed in Table 5-5 emerged.

**Table 5-5: TVET Policy Mechanisms Enabling Development**

No.	Development finding	Policy Element
1.	Social development	TVET-centric rural development based on agriculture alleviates poverty.
		Allocating adequate resources in rural TVET curtails rural-urban migration of teachers and students while attracting quality teachers to rural areas stimulating rural development.
		Offering free, equal TVET regardless of socio-economic and socio-cultural class and providing meals attracts students.

No.	Development finding	Policy Element
2.	Economic development	A technologically focussed TVET strengthens the emulation of the globally modelled “Made in Germany” brand by producing world-class technical personnel.
		Incorporating TVET 4.0 enables the country to ride the 4IR wave and prepare citizens for technological skills.
3.	Environment sustainability development education	Incorporating environmentalism, geographical elements, and product awareness cater to sustainable socio-development.

Findings shown in Table 5-5 demonstrate that a TVET policy may facilitate social development, economic development and environmental sustainability – all of which circle back to national prosperity.

**Conclusion:** Based on the synthesis of findings, it is concluded that a TVET system may enable sustainable socio-economic development.

#### 5.4.2. Recommendations based upon findings and conclusions

The researcher suggests the following recommendations that are based on the findings and conclusions of this study.

- i) The South African government should consider reintegrating basic and higher education to prevent fragmented governance. Bringing the two departments under one ministry could ensure effective pathways and coherent implementation of TVET.
- ii) National Treasury should conduct an expenditure analysis and cost modelling exercise to ensure equitable funding of TVET in rural areas, urban areas and previously disadvantaged communities. This will prevent the asymmetric allocation of resources and curtail the rural-urban dichotomy and concomitant inequalities.
- iii) The government should consider incorporating a nationalist ideology, spiritual culture and ethics in the TVET curriculum as a foundation for future good governance.
- iv) The National Department of Education (basic and higher education) should consider ESD for environmental sustainability consciousness. This entails free, equal basic education, including the provision of nutrition to indigent students for social sustainability.
- v) The government should develop a TVET policy that caters to individual students’ interests and careers prospects founded on recognising prior learning while considering industry requirements.
- vi) The government should decentralise curriculum development to the Local Municipal level to ensure that it responds to local developmental needs and incorporates local knowledge, including indigenous knowledge.

- vii) The authorities should incorporate the 4IR technological elements in the TVET policy (TVET 4.0) to ensure that future entrepreneurs and workers have relevant skills for future economic opportunities.
- viii) Since the labour markets are the primary beneficiaries of skilled human capital, the TVET policy to ensure industry, including state-owned enterprises and government entities, have a more significant role regarding work-based learning, thus enhancing the quality of practical learning.

### **5.5.Limitations of the Study**

As this was a transnational study, the foremost constraint related to budget and time, which hindered the researcher from travelling to the selected countries. Consequently, it was not feasible to triangulate secondary data with the primary data. Nevertheless, this SR is a non-empirical study, so the collection and analysis of primary data were not intended from the outset. Moreover, there was a deliberate bias of excluding documents that were not in English to avoid translational costs. Accordingly, there could be crucial data, which this criterion excluded. Furthermore, the study predominantly sampled primary studies; as a result, it possibly left out essential data from other studies based upon documentary evidence. The last limitation relates to the limited data access; the study only had access to published documents, it could not access documents like meeting minutes.

### **5.6.Recommendations for Future Research**

It is worth mentioning that the study raised some questions through the unexpected findings. The first one was the exponentially high cost of the TVET experience compared to general education in developing countries. Further inquiry into this phenomenon is recommended. The second unexpected finding was regarding the inequalities caused by the individualised competence-based TVET system. It was beyond the scope of this study to explore this phenomenon. Therefore, it is recommended that empirical research investigate this finding. Lastly, the study recommends an empirical study to supplement and enrich the finding of document analysis.

### **5.7.Significance of Findings**

It is worth mentioning that the limitations did not inhibit the research from answering the research questions and addressing the research objectives. As demonstrated below, the findings will add substantial value to the body of knowledge about the phenomenon under investigation.

- A holistic policy framework is absent in SA for TVET implementation across basic education, tertiary education and industry; the study findings could serve as the framework for developing a contextually relevant policy framework.
- Chapter 2 highlighted the NDP's expectation of entrepreneurship to enable the SMME sector to create 90% of the 11 million jobs it targets for creation before 2030. Nevertheless, the NDP did not offer any

policy instruments; the findings suggest that the study may have found a policy instrument to enable the NDP's expectations.

- In the introduction and Chapter 2, the study highlighted how economic growth targeting has failed to enable job creation. The unemployment rates increased whether or not the economy grew. The demand for jobs expected by economic growth did not materialise due to the mismatch between the available job opportunities and skilled human capital. Hence, the study findings could be the basis to conclude that the study unearthed an alternative to GDP growth per capita as a stimulant for employment demand and prosperity attainment.

### **5.8. Policy Implications for South Africa**

The findings have significant policy implications for the SA government. Firstly, the government may be required to develop TVET law and policy. The findings revealed how prosperous countries implemented TVET law and policy to attain prosperity. Furthermore, the findings rebutted the notion that in SA, TVET is predominantly the responsibility of the Department of Higher Education. VET law and policy may enforce coherent implementation of TVET by collective efforts of basic education, private sector, public sector, and state-owned enterprises. These will help enable a developmental state and prosperity attainment. Lastly, there may be a need for the SA government to reinstate Technikons, as the findings demonstrated their international equivalent's essence in producing specialised skills.

### **5.9. Chapter Synopsis**

This chapter discussed the study's findings, which revealed that a TVET system could enable prosperity when supported by the three pillars: sustainability, good governance, and socio-economic development. Additionally, the three pillars must be founded on TVET law and policy. Furthermore, this chapter presented concise high-level findings to address the research questions and objectives, which led to the conclusions and recommendations. Furthermore, the chapter noted the study limitations and proposed prospects for future research. Lastly, the chapter highlighted the significance of the findings and policy implications. This synopsis concludes the dissertation.

## References

- Abutu, F., Raymond, E., Owodunni, A. & Dopemu, O. 2017. Technical and Vocational Education and Training: The antidote for alleviating poverty and enhancing employability of youths in Nigeria.
- Agha, E. O., Ukommi, A. S., Ekpenyong, O. & Effiong, U. U., 2020. Establishing the Nexus between Technical Education and Industrial Development in Nigeria.
- Agostinho, S. (2004). Naturalistic inquiry in e-learning research. *International Journal of Qualitative Methods*, 4(1), Article 2. [Accessed 28 May 2021] from [https://sites.ualberta.ca/~iiqm/back-issues/4\\_1/pdf/agostinho.pdf](https://sites.ualberta.ca/~iiqm/back-issues/4_1/pdf/agostinho.pdf)
- Akanbi, G. O. 2017. Prospects for technical and vocational education and training (TVET) in Nigeria: Bridging the gap between policy document and implementation. *International Education Journal: Comparative Perspectives*, 16, 1-15.
- Akinyode, B.F. and Khan, T.H., 2018. Step by step approach for qualitative data analysis. *International Journal of Built Environment and Sustainability*, 5(3).
- Akoojee, S., 2016. Developmental TVET rhetoric in-action: the white paper for post-school education and training in South Africa. *International journal for research in vocational education and training*, 3(1), pp.1-15.
- Aliber, M., 2003. Chronic poverty in South Africa: Incidence, causes, and policies. *World Development*, 31(3), pp.473-490.
- AL-JUBARI, I. and MOSBAH, A., 2021. Senior Entrepreneurship in Malaysia: Motivations and Barriers. *The Journal of Asian Finance, Economics and Business*, 8(6), pp.277-285.
- Ang, Y.Y., 2016. *How China escaped the poverty trap*: Cornell University Press.
- Annen, S. & Tiemann, M. 2017. Educational pathways and decisions—Comparing the returns to investment in Germany and Canada. *International Journal of Technology and Inclusive Education (IJTIE)*, 6.
- Ansari, S., 2019. The neoliberal incentive structure in post-apartheid South Africa (Doctoral dissertation).
- Archer, M., Bhaskar, R., Collier, A., Lawson, T. and Norrie, A., 2013. *Critical realism: Essential readings*. Routledge
- Archer, M., Decoteau, C., Gorski, P., Little, D., Porpora, D., Rutzou, T., Smith, C., Steinmetz, G., & Vandenberghe, F., 2016. What is critical realism? Perspectives: A Newsletter of the ASA Theory Section, Fall 2017. [Online] Available at: <http://www.asatheory.org/current-newsletter-online/what-is-critical-realism> [Accessed 19th June 2021]



- Arfo, E.B., 2015. A comparative analysis of Technical and Vocational Education and Training policy in selected African countries (Doctoral dissertation).
- Aromataris E, Munn Z (Editors), 2020. *JBIM Manual for Evidence Synthesis*, Available from <https://synthesismanual.jbi.global>. <https://doi.org/10.46658/JBIMES-20-01> [Accessed 17th July 2021]
- Arowolo, D., 2010. The effects of western civilisation and culture on Africa. *Afro Asian Journal of Social Sciences*, 1(1), pp.1-13.
- Aspers, P. and Corte, U., 2019. What is qualitative in qualitative research. *Qualitative Sociology*, 42(2), pp.139-160.
- Baatjes, I., Baduza, U. & Sibiya, A.T., 2014. Building a transformative pedagogy in vocational education in South Africa, pp. 81-102, in S.A. Vally (ed.), *education, society and economy*, UNISA Press, Pretoria.
- Bahl, A. 2019. How Trainers Experience the Structural Dynamics of German Apprenticeship. *Work-based Learning as a Pathway to Competence-based Education*, 203.
- BBiG [Berufsbildungsgesetz], 2005. The 2005 Vocational Training Act. [Online] Retrieved from: [https://www.bibb.de/dokumente/pdf/The\\_2005\\_Vocational\\_Training\\_Act.pdf](https://www.bibb.de/dokumente/pdf/The_2005_Vocational_Training_Act.pdf) [Accessed 18th October 2021]
- BCM [BioMed Central] 2020. Systematic Reviews. [Online] Available at <https://systematicreviewsjournal.biomedcentral.com/> [Accessed 05th July 2021]
- Bergene, A., 2007. Towards a critical realist comparative methodology: Context-sensitive theoretical comparison. *Journal of Critical Realism*, 6(1), pp.5-27
- Birkland, T.A., 2019. An introduction to the policy process: Theories, concepts, and models of public policy making. Routledge.
- Bishop, B. J., Higgins, D., Casella, F., & Contos, N. (2002). Reflections on practice: Ethics, race, and worldviews. *Journal of Community Psychology*, 30(6), 611-621.
- Boichevska, I. & Veremiuk, L. 2020. Dual education: application of Germany's positive experience in Ukrainian reality. *Studies in Comparative Education*, 4-13.
- Bond, P., 2003. *Against Global Apartheid: South Africa meets the World Bank, IMF, and international finance*. Palgrave Macmillan.
- Bonsu, S., 2019. Integrating Community Involvement Programs into the Strategic Management Process. *Journal of Economic Development, Management, IT, Finance & Marketing*, 11(1).

- Borowy, I. and Schmelzer, M. eds., 2017. History of the Future of Economic Growth: Historical Roots of Current Debates on Sustainable Degrowth. Taylor & Francis.
- Bowsher, J., 2020. The South African TRC as Neoliberal Reconciliation: Victim Subjectivities and the Synchronisation of Affects. *Social & Legal Studies*, 29(1), pp.41-64.
- Boyi, A. A. 2019. Vocational/Technical Education in Nigeria: An Indispensable Tool for Resolving National Conflicts and Economic Development. *International Journal*, 6.
- Brauer, S. 2019. Digital open badge-driven learning–Competence-based professional development for vocational teachers, fi= Lapin yliopisto| en= University of Lapland.
- Braun, V. and Clarke, V., 2006. Using thematic analysis in psychology. *Qualitative research in psychology*, 3(2), pp.77-101.
- Büchter, R.B., Weise, A. and Pieper, D., 2020. Development, testing and use of data extraction forms in systematic reviews: a review of methodological guidance. *BMC medical research methodology*, 20(1), pp.1-14.
- Bunt, S., Romme, A.G.L., Castaldi, C., Frericks, G. and Bobelyn, A.S.A., 2019. HIGH-TECH STARTUP MATURITY.
- Burhan, Ü. & Duruhan, K. 2020. Scrutinizing german education system in terms of its effect on social and cultural structure, employment and economy. *OPUS Uluslararası Toplum Araştırmaları Dergisi*, 15, 801-822.
- Čablová, L., Pates, R., Miovský, M. and Noel, J., 2017. How to write a systematic review article and meta-analysis. *Addiction Science: A Guide for the Perplexed*, 173.
- Capano, G. and Howlett, M., 2020. The knowns and unknowns of policy instrument analysis: Policy tools and the current research agenda on policy mixes. *Sage Open*, 10(1), p.2158244019900568.
- CDE, 2015. Centre for Development and Enterprise: Vocational education in South Africa.
- Chen, J. 2019. Enlightenment of German Education of Dual System on Foreign Language Education in China's Applied Universities. 3rd International Conference on Culture, Education and Economic Development of Modern Society (ICCESE 2019), 2019. Atlantis Press, 1439-1442.
- Chioke, E. N., Babalola, A. & Jibir, G. 2018. CHALLENGES OF QUALITY TECHNICAL EDUCATION IN YOBE STATE. *Journal of Pristine*, 14.
- Chomsky, N., 1995. Education is ignorance. *Class warfare: interviews with David Barsamian*, pp.19-31.
- Christensen, C.M., Ojomo, E. and Dillon, K., 2019. The prosperity paradox: How innovation can lift nations out of poverty. HarperCollins.

- Cloete, F., De Coning, C., Wissink, H. and Rabie, B. eds., 2018. *Improving public policy for good governance*. Van Schaik Publishers.
- COSATU (Congress of South African Trade Unions), 2013. *Mangaung and the second phase of the transition*. COSATU, Discussion document for the COSATU CEC.
- Covidence, 2021. How to conduct a Systematic Review from Beginning to End. [Online] Available at [https://www.covidence.org/blog/how-to-conduct-a-systematic-review-from-beginning-to-end/?campaignid=13271466385&adgroupid=123024099579&adid=524233276792&gclid=Cj0KCQjwiqWHBhD2ARIsAP-CDzama0ncIX3SW2Gi-RQwFx-hzHuN5\\_fpaE6r36b7D7aTKqx1h1zPoKrcAioIEALw\\_wcB](https://www.covidence.org/blog/how-to-conduct-a-systematic-review-from-beginning-to-end/?campaignid=13271466385&adgroupid=123024099579&adid=524233276792&gclid=Cj0KCQjwiqWHBhD2ARIsAP-CDzama0ncIX3SW2Gi-RQwFx-hzHuN5_fpaE6r36b7D7aTKqx1h1zPoKrcAioIEALw_wcB) [Accessed 10<sup>th</sup> July 2021]
- Creswell, J.W and Creswell, J.D 2018. *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. (5th edition). London: Sage publications.
- Crouch, T. D., 1987. The Feud Between the Wright Brothers and the Smithsonian. *American Heritage of Invention & Technology*, Spring 1987, pp. 34-46
- CSU [Charles Sturt University], 2021. Literature Review: Developing a Search Strategy. [Online] Available from [https://libguides.csu.edu.au/review/Search\\_Strategies](https://libguides.csu.edu.au/review/Search_Strategies) [Accessed 17th July 2021]
- CU [Curtin University] 2021. Systematic Reviews in the Health Sciences. [Online] Available at <https://libguides.library.curtin.edu.au/systematic-reviews> [Accessed 05<sup>th</sup> July 2021]
- Cullerton, K., Donnet, T., Lee, A. and Gallegos, D., 2018. Effective advocacy strategies for influencing government nutrition policy: a conceptual model. *International Journal of Behavioral Nutrition and Physical Activity*, 15(1), pp.1-11.
- Danladi, J., Adamu, A. A., Usman, N. J. & Doma, S. Y. 2020. CHALLENGES AND OPPORTUNITIES IN TECHNICAL AND VOCATIONAL EDUCATION (TVET) IN NIGERIA. *Capital Journal of Educational Studies (CAJES)*, 6, 71–82-71–82.
- De Coning, C. and Wissink, H., 2018. Nature, role and history of public policy. *Improving Public Policy for good governance*, pp.3-31.
- Deissinger, T. 2018. *Problems and Challenges of Full-time and School-based VET in Germany*, Routledge.
- Delei, Y., Wenqiang, Z., Yamin, L. & Hui, D. 2018. Method and Path Selection for Optimisation and Promotion of Teaching Quality of Applied Courses-Taking Steel Structure Course as an Example. *Educational Sciences: Theory & Practice*, 18, 2742-2749.
- DHET 2012 Further Education and Training Colleges. *Turnaround Strategy*. Pretoria: Department of Higher Education and Training (DHET).

- DHET 2012a. Green Paper for Post-School Education and Training. Pretoria: Department of Higher Education and Training (DHET).
- DHET 2013. White Paper for Post-School Education and Training: Building an expanded, effective and integrated education and training system. Pretoria: Department of Higher Education and Training (DHET).
- Dieterlen, P., 2005. Poverty: a philosophical approach (Vol. 6). Rodopi.
- DU [Deakin University], 2017. Literature Search Planner [Online] Available from <http://www.deakin.edu.au/library/research/search-and-review-literature/effective-search-planning> [Accessed 26th July 2021]
- Dunn, W.N., 2017. Public policy analysis: An integrated approach. Routledge.
- Durazzi, N. & Geyer, L. 2020. Social inclusion in the knowledge economy: unions' strategies and institutional change in the Austrian and German training systems. *Socio-economic review*, 18, 103-124.
- Ebbinghaus, M. 2019. Training marketing by German companies. Which training place characteristics are communicated? *International journal for research in vocational education and training*, 6, 102-131.
- Edward, D. I. & Mkinabari, A. V. 2021. Funding of Vocational Education for National Development in the 21st Century.
- Eicker, F., Haseloff, G., and Lennartz, B., 2017. *Vocational Education and Training in Sub-Saharan Africa*. W. Bertelsmann Verlag.
- Enticott, J., Buck, K. and Shawyer, F., 2018. Finding "hard to find" literature on hard to find groups: A novel technique to search grey literature on refugees and asylum seekers. *International journal of methods in psychiatric research*, 27(1), p.e1580.
- Equality Education (EE), 2016. The three-stream system, A report on the Department of Basic Education's plans to stream learners into either technical, vocational, or general schools. Retrieved from 18 March 2020 from <https://equaleducation.org.za/wp-content/uploads/2018/05/Three-Stream-Report.pdf>
- EUBusiness, 2020. Germany: Country overview [Online] available at <https://www.eubusiness.com/europe/germany> [Accessed 07 May 2020]
- Ezeugwu, J. O., Edeh, N. I., Zaku, V. N. & Pulife, M. C. 2020. TVET Policies and Implementation in Higher Institutions in Enugu State Nigeria. *Vocational and Technical Education Journal*, 2.

Fabi, J. & Bashir, K. RETHINKING TECHNICAL AND VOCATIONAL EDUCATION IN NIGERIA FOR GLOBAL COMPETITIVENESS.

Fletcher, A.J., 2017. Applying critical realism in qualitative research: methodology meets method, *International Journal of Social Research Methodology*, 20:2, 181-194, DOI: 10.1080/13645579.2016.1144401

Fox, L., and Thomas, A., 2016. Africa's got work to do: A diagnostic of youth employment challenges in Sub-Saharan Africa. *Journal of African Economies*, 25(suppl\_1), pp. i16-i36.

Frederick, H., O'Connor, A. and Kuratko, D.F., 2016. *Entrepreneurship*. Cengage AU

FRN [Federal Republic of Nigeria] 1993. National Board for Technical Education Act No. 9 of 1977 (Revised in 1993). Retrieved from <http://www.placng.org/lawsofnigeria/node/217>

Galguera, M.P., 2018. Globalisation, Mass Education and Technical and Vocational Education and Training: The Influence of UNESCO in Botswana and Namibia (Vol. 31). Springer.

Gelb, S., 2006. The RDP, GEAR and all that: reflections ten years later. *Transformation: Critical Perspectives on Southern Africa*, 62(1), pp.1-8.

Gessler, M. 2017. The lack of collaboration between companies and schools in the German dual apprenticeship system: Historical background and recent data. *International Journal for Research in Vocational Education and Training (IJRVET)*, 4, 164-195.

Gong, Z. 2019. Path Reconstruction of the Development of Rural Vocational Education Under the Background of Rural Vitalization Strategy.

Haasler, S. R. 2020. The German system of vocational education and training: challenges of gender, academisation and the integration of low-achieving youth. *Transfer: European Review of Labour and Research*, 26, 57-71.

Haddaway, N.R., Pritchard, C.C., and McGuinness, L.A., 2021. PRISMA2020: R package and ShinyApp for producing PRISMA 2020 compliant flow diagrams (Version 0.0.2). DOI: [10.5281/zenodo.4287835](https://doi.org/10.5281/zenodo.4287835)

Hajdu, F., Jacobson, K., Salomonsson, L. and Friman, E., 2012. But tractors can't fly.

Hardy, I., Heikkinen, H., Pennanen, M., Salo, P. & Kiilakoski, T. 2020. The 'spirit of the times': Fast policy for educational reform in Finland. *Policy Futures in Education*, 1478210320971530.

Hart, C., 2018. *Doing a literature review: Releasing the research imagination*. Sage.

Hart, M.A., 2010. Indigenous worldviews, knowledge, and research: The development of an indigenous research paradigm. *Journal of Indigenous Social Development*, 1(1A).

- Herr, H. & Nettekoven, Z. M. 2018. The role of small and medium-sized enterprises in development: What can be learned from the German experience? : Global Labour University Working Paper.
- Herwig, G., 2004. Aral Sea. [Online] Available at: <https://www.flickr.com/photos/herwig-photo/289428534/> [Accessed 13 July 2020]
- Hongwei, C. 2018. Innovation of Talent Cultivation Education Mode of Modern Apprenticeship Participated by Industry Associations. *Educational Sciences: Theory & Practice*, 18, 3628-3634.
- Hotmart, 2020. What is education, anyway? [Online] Available at <https://blog.hotmart.com/en/what-is-education/> [Accessed on 12 June 2021]
- Hui, J. 2017. The Path to Deepening School-Enterprise Cooperation in Higher Vocational Education. *Chinese Education & Society*, 50, 451-457.
- Hydén, G., 1980. Beyond Ujamaa in Tanzania: underdevelopment and an uncaptured peasantry.
- Idjawe, E. E. 2020. Critical Issues that Impedes the Quality of Learning Outcomes in Technical Vocational Education and Training (TVET) in Nigeria. *Vocational and Technical Education Journal*, 2.
- IMF [International Monetary Fund] (1997): "Good Governance" [Online] Retrieved from <http://www.imf.org/external/pubs/ft/exrp/govem/govindex.htm> [Accessed 16 June 2021]
- Investopedia, 2020. Top twenty economies in the world. [Online] Available at <https://www.investopedia.com/insights/worlds-top-economies/> [Accessed 07 May 2020]
- Isaac, A. B. & Ayodele, B. O., 2020. IMPACT OF TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING (TVET) ON NATIONAL DEVELOPMENT.(A STUDY OF SELECTED SMES OPERATORS IN LAGOS, NIGERIA).
- Isaacs, G., 2014. The myth of “neutrality” and the rhetoric of “stability”: macroeconomic policy in democratic South Africa.
- Ismail, S.A., 2019. Importance and challenges of TVET policy issue in Kurdistan Region-Iraq. *Zanco Journal of Humanity Sciences*, 23(4), pp.285-293.
- Jackson, T. and Senker, P., 2011. Prosperity without growth: Economics for a finite planet. *Energy & Environment*, 22(7), pp.1013-1016.
- Jin, Q., Wei, J., Yang, Z.L. and Lin, P., 2017. Irrigation-induced environmental changes around the Aral Sea: An integrated view from multiple satellite observations. *Remote Sensing*, 9(9), p.900.
- Johnson, A. T. & Folahan, O. O. 2020. Critique of the National Policy on Technical, Vocational Education and Training (TVET) in Nigeria.

- Jones, A., 2020. Unemployment in South Africa: urgent attention required. [Online] Available at: <https://internationalbanker.com/finance/unemployment-in-south-africa-urgent-attention-required/> [Accessed 01 June 2020]
- Kadir, J. and Nimota, A., 2019. Good Governance Issues in Education System and Management of Secondary Schools in Kwara State, Nigeria. *eJEP: eJournal of Education Policy*.
- Kapoor, D. ed., 2011. Critical perspectives on neoliberal globalisation, development and education in Africa and Asia. Rotterdam: Sense Publishers.
- Karstedt, S., 2001. Comparing cultures, comparing crime: Challenges, prospects and problems for a global criminology. *Crime, Law and Social Change*, 36(3), pp.285-308.
- Karttunen, A. 2016. update to the European inventory on validation of non-formal and informal learning. [Online] Retrieved from: [https://globedu.fi/wp-content/uploads/2018/07/2016\\_validate\\_FI.pdf](https://globedu.fi/wp-content/uploads/2018/07/2016_validate_FI.pdf) [Accessed] 20 October 2021
- Keele, S., 2007. *Guidelines for performing systematic literature reviews in software engineering* (Vol. 5). Technical report, Ver. 2.3 EBSE Technical Report. EBSE.
- Kennedy, G. W., Ufot, S. I. & Ikpe, S. A., 2017. Entrepreneurial Skill for Lifelong Education in Colleges of Education in Nigeria: The Way Forward.
- KfW Research, 2019. After a record year, dark clouds are gathering – SMEs between all-time highs and recession fears. [Online] Available at [https://www.kfw.de/PDF/Download-Center/Konzernthemen/Research/PDF-Dokumente-KfW-Mittelstandspanel/PDF-Dateien-Mittelstandspanel-\(EN\)/KfW-SME-Panel-2019\\_EN.pdf](https://www.kfw.de/PDF/Download-Center/Konzernthemen/Research/PDF-Dokumente-KfW-Mittelstandspanel/PDF-Dateien-Mittelstandspanel-(EN)/KfW-SME-Panel-2019_EN.pdf) [Accessed 14 April 2020]
- Kiilakoski, T. 2019. Youth work education in Finland. Internet Publications.
- Kitchenham, B., 2004. Procedures for performing systematic reviews. *Keele, UK, Keele University*, 33(2004), pp.1-26.
- Kothari, C.R., 2004. *Research methodology: Methods and techniques*. New Age International.
- Kouku, A., Kyrö, M., Volmari, K., 2014. Innovation in VET Finland. [Online] Available at <https://www.CEDEFOP.europa.eu/EN/Information-services/vet-in-europe-country-reports.aspx> [Accessed 14 April 2020].
- Kraut, R., 2001. Aristotle's ethics. [Online] Retrieved from: <https://plato.stanford.edu/entries/aristotle-ethics/> [Accessed on 27<sup>th</sup> October 2021]

- LAK [Laki ammatillisesta koulutuksesta 531/2017] 2017. Vocational Education and Training Act 531/2017]. [Online] Retrieved From: <https://www.finlex.fi/fi/laki/alkup/2017/20170531> [Accessed on 18th October 2021]
- Lambini, C. K., Goeschl, A., Wäsch, M. & Wittau, M. 2021. Achieving the Sustainable Development Goals through Company Staff Vocational Training—The Case of the Federal Institute for Vocational Education and Training (BIBB) INEBB Project. *Education Sciences*, 11, 179.
- Lanre, O., 2020. WEALTH CREATION, POVERTY ALLEVIATION AND ECONOMIC GROWTH IN TVET WITH PARTICULAR REFERENCE TO NIGERIA.
- Lawani, A., 2020. Critical realism: what you should know and how to apply it. *Qualitative research journal*. [Online] Available from <https://www.emerald.com/insight/1443-9883.htm> [Accessed 06th August 2021]
- Lechman, E. ed., 2010. *Enterprise in Modern Economy: SMEs and Entrepreneurship*. Gdańsk University of Technology.
- Lensing, K., Dieball, F. & Pittich, D. How to Foster the Awareness for Sustainable Development in Vocational Training with the Help of Audits. 2018 World Engineering Education Forum-Global Engineering Deans Council (WEEF-GEDC), 2018. IEEE, 1-7.
- Leyens, S., 2014. 3 Towards a transcultural definition of prosperity. *Redefining Prosperity*, p.41.
- Li, Y., Zhong, Y. & Xu, J. The “Cradle of German Technical Talents” Re-Analysis of Dual System Mode.
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Beverly Hills, CA: Sage.
- Liu, R. 2020. A Comparative Study of Vocational Education in China and Germany. *Barnard Education Review*, 1, 12-20.
- Lu, B. C., Koo, A. & Pun, N. 2019. Attempting to transgress neoliberal value: Constructing a micro-foundation of social values of working-class youth in vocational schools in China. *Sociological Review*, 67, 1050-1065.
- Madimutsa, C., 2019. The Policy Formulation Process. [Online] Available at [https://www.researchgate.net/publication/336927323\\_The\\_Policy\\_Formulation\\_Process](https://www.researchgate.net/publication/336927323_The_Policy_Formulation_Process) [Accessed 01 April 2021]
- Madukwe, C.I. and Madukwe, H.N., 2010. African value systems and the impact of westernization: a critical analysis. *International Journal of Research in Arts and Social Sciences*, 2, pp.275-286.
- Maguire, M. and Delahunt, B., 2017. Doing a thematic analysis: A practical, step-by-step guide for learning and teaching scholars. *All Ireland Journal of Higher Education*, 9(3).



- Makgato, M. and Moila, O., 2019. Partnerships between TVET colleges and industry to enhance work-related skills. *World Transactions on Engineering and Technology Education*, 17(3), pp.332-337
- Masters, D.M., 2019. Policy-oriented learning and policy change in South Africa between 1994-2006: an assessment of South Africa's economic policies (Doctoral dissertation).
- Mbamaluikem, P. O. & Balogun, A. B., 2020. UNEMPLOYMENT REDUCTION AMONG THE YOUTH IN NIGERIA THROUGH TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING.
- McKenzie JE, Brennan SE, Ryan RE, Thomson HJ, Johnston RV, 2020. Summarising study characteristics and preparing for synthesis. [Online] Available from [www.training.cochrane.org/handbook](http://www.training.cochrane.org/handbook) [Accessed 28<sup>th</sup> July 2021]
- Méda, D., 2014. Can prosperity be disentangled from growth?. In *Redefining Prosperity* (pp. 6-21). Routledge.
- Meriläinen, R., Isacson, A. and Olson, S.J., 2019, October. Secondary Vocational Education in Finland. In *Workforce Education Forum (WEF)* (Vol. 39, No. 1, pp. 43-51). Workforce Education Forum (WEF).
- Mertens, D.M., 2014. Ethical use of qualitative data and findings. *The SAGE handbook of qualitative data analysis*, pp.510-523.
- Mills, A.J., Durepos, G. and Wiebe, E., 2010. *Sage encyclopedia of case study research*.
- Mingjun, C. & Fenglan, L. 2017. Countermeasures for Rural Vocational Education.
- Minglun, W. 2017. An Empirical Analysis of the Development of China's Higher Vocational Education. *Chinese Education & Society*, 50, 429-440.
- Moitus, S., Weimer, L. & Välimaa, J. 2020. Flexible learning pathways in higher education: Finland's country case study for the IIEP-UNESCO SDG4 project in 2018–2021. *Julkaisut/Kansallinen koulutuksen arviointikeskus*.
- Moore, H.L., 2018. Prosperity in crisis and the *longue durée* in Africa. *The Journal of Peasant Studies*, 45(7), pp.1501-1517.
- Morgan, H., 2014. Review of research: the education system in finland: a success story other country can emulate. *Childhood Education*, 90(6), pp.453-457.
- Narsiah, S., 2002. Neoliberalism and privatisation in South Africa. *GeoJournal*, 57(1-2), pp.3-13.
- Ngcwangu, S., 2014. Skills development in post-Apartheid South Africa: Issues, arguments and contestations. *Education, economy, and society*. UNISA Press: Pretoria.

- Nzimakwe, T.I. and Pillay, P., 2014. Enhancing service delivery through decentralisation: a South African experience.
- Nzimande, B., 2020. Interview with Bongani Nkosi for *Jet Education Services*, 15 January 2020. Available at: <https://www.jet.org.za/news/higher-education-opens-300-internships-for-tvet-graduates> [Accessed 29 April 2020]
- O’Callaghan, P., Adapa, L.M. and Buisman, C., 2020. How can innovation theories be applied to water technology innovation?. *Journal of Cleaner Production*, p.122910.
- Okorafor, A.O. and Nnajiifo, F.N., 2017. TVET policies and practices in Nigeria: Why the Gap. *European Journal of Education Studies*.
- Oviawe, J.I., Uwameiye, R. and Uddin, P.S., 2017. Bridging skill gap to meet technical, vocational education and training school-workplace collaboration in the 21st century. *International Journal of vocational education and training research*, 3(1), pp.7-14.
- Pavlova, M. 2018. Fostering inclusive, sustainable economic growth and “green” skills development in learning cities through partnerships. *International Review of Education / Internationale Zeitschrift für Erziehungswissenschaft*, 64, 339-354.
- Petticrew, M. and Roberts, H., 2008. *Systematic reviews in the social sciences: A practical guide*. John Wiley & Sons.
- Philip, E., 2008. Producing workers: employability and quality in higher education. *Quality Education*, p.115.
- Pilz, M. & Fürstenau, B. 2019. Duality and learning fields in vocational education and training: Pedagogy, curriculum, and assessment. *The Wiley handbook of vocational education and training*, 311-327.
- Pilz, M. 2017. *Vocational education and training in times of economic crisis*. Cham: Springer.
- Pinnow, S. 2019. *The German Dual VET System and Approaches to enhance Employer Engagement*.
- PMG [Parliamentary Monitoring Group Three-Stream Model], 2018. Fourth Industrial Revolution: Department progress report [Online] Available at <https://pmg.org.za/committee-meeting/26296/> [Accessed 24 May 2021]
- Postiglione, G. & Min Tang, M., 2019. International experience in TVET-industry cooperation for China’s poorest province, *International Journal of Training Research*, 17:sup1, 131-143, DOI: [10.1080/14480220.2019.1629730](https://doi.org/10.1080/14480220.2019.1629730)
- Prahalad, C. K., 2006. *The Fortune at the Bottom of the Pyramid: Eradicating Poverty Through Profits*. Philadelphia: Wharton School Publishing, 304., ISBN: 013 187 7291, 2006.

- Pylväs, L. & Nokelainen, P. 2017. Finnish WorldSkills achievers' vocational talent development and school-to-work pathways. *International journal for research in vocational education and training*, 4, 95-116.
- Rachel Wai-Yi, C. 2020. Ethics Study in Professional and Vocational Education: Voices from Practitioners. *International Journal of Humanities, Arts & Social Sciences*, 6, 63-68.
- Radujković, M. and Sjekavica, M., 2017. Project management success factors. *Procedia engineering*, 196, pp.607-615.
- Rahi, S., 2017. Research design and methods: A systematic review of research paradigms, sampling issues and instruments development. *International Journal of Economics & Management Sciences*, 6(2), pp.1-5.
- Ramnath, L., 2015. The effectiveness of poverty reduction strategy in post-apartheid South Africa (Doctoral dissertation).
- Rapley, T. and Rees, G., 2018. Collecting documents as data. *The Sage handbook of qualitative data collection*, pp.378-391.
- Remington, T.F., 2018. Public-private partnerships in TVET: adapting the dual system in the United States, *Journal of Vocational Education & Training*, 70:4, 497-523, DOI: 10.1080/13636820.2018.1450776
- Rintala, H. & Nokelainen, P. 2020. Standing and attractiveness of vocational education and training in Finland: Focus on learning environments. *Journal of Vocational Education & Training*, 72, 250-269.
- Rowley, J. and Slack, F., 2004. Conducting a literature review. *Management research news*.
- RSA (Republic of South Africa), 1996. Growth, Employment and Redistribution a macroeconomic strategy. *Department of Finance*.
- RSA [Republic of South Africa], 1996. *Constitution of the Republic of South Africa, 1996 (Act 108 of 1996)*. Pretoria: Government Printer
- RSA [Republic of South Africa], 2012. *National Development Plan, 2030*. [online] Available at: <https://www.gov.za/issues/national-development-plan-2030> [Accessed 2 March 2020].
- Rutatora, D.F. and Nindi, S.F., 2008. Endogenous Development and Moral Economy: A Case of the Matengo Society in Mbinga District, Ruvuma Region, Tanzania. *Contemporary Perspectives on African Moral Economy*.
- Saad-Filho, A. and Johnston, D., 2005. *Neoliberalism: A critical reader*. University of Chicago Press.

- Sahlberg, P., 2013. The most wanted: Teachers and teacher education in Finland. In *Teacher education around the world* (pp. 15-35). Routledge.
- SAHO, 2013. South African History Online: *Nelson Mandela by Oliver Tambo*, [online], (update 26 August 2019), available at <https://www.sahistory.org.za/> [accessed 01 April 2020]
- Salovaara, V. 2021. Structured Agency: Students' Scope of Action in the Transition Phase from Basic Education to Upper Secondary Education in Finland.
- Satgar, V., 2012. Beyond Marikana: The post-apartheid South African state. *Africa Spectrum*, 47(2-3), pp.33-62.
- Saunders, M., Lewis, P. and Thornhill, A., 2009. Understanding research philosophies and approaches. *Research methods for business students*, 4(106-135).
- Schneider, G.E., 2018. The post-apartheid development debacle in South Africa: how mainstream economics and the vested interests preserved apartheid economic structures. *Journal of Economic Issues*, 52(2), pp.306-322.
- Schönfeld, G., Wenzelmann, F., Pfeifer, H., Risius, P. & Wehner, C. 2020. Training in Germany—an investment to counter the skilled worker shortage.
- Schreier, M., 2018. Sampling and generalisation. *The Sage handbook of qualitative data collection*, pp.84-98
- Simon, F., Pauline, M. and José-Luis, Á.G., 2014. *OECD Reviews of Vocational Education and Training A Skills beyond School Review of South Africa*. OECD Publishing.
- Sithole, M.D., 2019. Enhancing management structure at the TVET colleges: a case study of uMgungundlovu TVET College (Doctoral dissertation).
- Statistics South Africa (StatsSA), 2018. Quarterly labour force survey. Available at: <http://www.statssa.gov.za/publications/P0211/P02111stQuarter2018.pdf#page=16> [Accessed 27 April 2020]
- Statistics South Africa (StatsSA), 2019. Youth graduate unemployment increases in Q1 2019. Available at: <http://www.statssa.gov.za/?p=12121> [Accessed 27 April 2020]
- Stats SA (Statistics South Africa), 2020. SA economy sheds 2,2 million jobs in Q2, but unemployment drops. [Online] Available at <http://www.statssa.gov.za/?p=13633> [Accessed 06 March 2021]
- Stats SA [Statistics South Africa], 2020a. National Poverty Line [Online] Available at: <http://www.statssa.gov.za/publications/P03101/P031012020.pdf> [Accessed 12 June 2021]

- Steger, M.B. and Roy, R.K., 2010. *Neoliberalism: A very short introduction* (Vol. 222). Oxford University Press.
- Stenmark, M., Fuller, S. and Zackariasson, U., 2018. *Relativism and Post-Truth in Contemporary Society*. London: Palgrave Macmillan.
- Stevens, A., 2020. Critical realism and the ‘ontological politics of drug policy’. *International Journal of Drug Policy*, 84, p.102723.
- Sugimura, K., 2007. A Way to Development: Understand African Peasant Moral Economy. *Finance & Common Good*, 28-29(3), 49-57. doi: 10.3917 / fbc.028.0049.
- Suwen, F. 2021. Research on the Cultivation Path of High-Quality Farmers. *Canadian Social Science*, 17, 22-30.
- Tabengwa, D., Okatch, A., and Modisaatsone, N., 2017. Youth Unemployment in Africa: Capacity Building and Innovative Strategies from Botswana, Namibia, South Africa, and Swaziland.
- Taşlı, V. 2018. National skill systems: A comparative analysis of vocational education and training in Germany, Japan and Turkey. *OPUS Uluslararası Toplum Araştırmaları Dergisi*, 9, 1660-1698.
- Teherani, A., Martimianakis, T., Stenfors-Hayes, T., Wadhwa, A. and Varpio, L., 2015. Choosing a qualitative research approach. *Journal of graduate medical education*, 7(4), p.669
- Terry, G., Hayfield, N., Clarke, V. and Braun, V., 2017. Thematic analysis. *The SAGE handbook of qualitative research in psychology*, 2, pp.17-37.
- Tervasmäki, T., Okkolin, M.-A. & Kauppinen, I. 2020. Changing the heart and soul? Inequalities in Finland’s current pursuit of a narrow education policy. *Policy Futures in Education*, 18, 648-661.
- Thabede, D., 2008. The African worldview as the basis of practice in the helping professions. *Social Work/Maatskaplike Werk*, 44(3).
- Toniolo, R., 2019. THE DIFFUSION OF KNOWLEDGE, TECHNOLOGY AND INNOVATION IN NETWORKS.
- Treasury 2006. Press Release. [Online] Available at [http://www.treasury.gov.za/comm\\_media/press/2006/2006090801.pdf](http://www.treasury.gov.za/comm_media/press/2006/2006090801.pdf) [Accessed 24 January 2021]
- UNESCO [United Nations Educational, Scientific and Cultural Organization], no date. TVET Databases. [Online] Available from <https://unevoc.unesco.org/home/TVET+Databases+and+Journals> [Accessed 26th July 2021]

- United Nations (UN), 1996. Office of the High Commissioner on Human Rights. *International Covenant on Economic, Social and Cultural Rights*. Available at [https://www.ohchr.org/EN/Professional-Interest/Pages/CESCR.aspx](https://www.ohchr.org/EN/ProfessionalInterest/Pages/CESCR.aspx) [Accessed 11 June 2020]
- Vally, S. and Motala, E., 2014. Education and economy: Demystifying the skills discourse. *Education, economy and society*, pp.26-48.
- Van der Berg, S., 2017. Interview with **Msindisi Fengu** for *News 24*, 19 March 2017, Available at: <https://www.news24.com/SouthAfrica/News/education-then-transformation-20170318> [Accessed 27 April 2020]
- Vélez, F., 1994. La pobreza en México; causas y políticas para combatirla (No. 04; HV4057, V4.)
- VELPRC [Vocational Education Law of the People's Republic of China], 1999. Chinese Education & Society, 32:3, 47-55, DOI: 10.2753/CED1061-1932320347
- Villoria, M., 2021. Good Governance and Corruption in Latin America\*. *The Emerald Handbook of Public Administration in Latin America*, Emerald Publishing Limited, pp.407-435.
- Virolainen, M. & Heikkinen, H. L. 2018. Vocational Education and Training Institutions' Collaboration with the World of Work from the Perspective of Actor Networks and Ecosystems of Learning. Emergent Issues in Research on Vocational Education and Training.
- Virolainen, M. & Persson Thunqvist, D. 2017. Varieties of universalism: post-1990s developments in the initial school-based model of VET in Finland and Sweden and implications for transitions to the world of work and higher education. *Journal of Vocational Education & Training*, 69, 47-63.
- Virolainen, M. & Persson Thunqvist, D. 2017. Varieties of universalism: post-1990s developments in the initial school-based model of VET in Finland and Sweden and implications for transitions to the world of work and higher education. *Journal of Vocational Education & Training*, 69, 47-63.
- Walker, W.E., 2000. Policy analysis: a systematic approach to supporting policymaking in the public sector. *Journal of Multi-Criteria Decision Analysis*, 9(1-3), pp.11-27.
- Watts, A., 2014. What is reality? [video] YouTube. Available at: <https://www.youtube.com/watch?v=CBQwmV3eQZA> [Accessed 04 May 2021]
- Whyte, D. and Wiegratz, J. eds., 2016. *Neoliberalism and the moral economy of fraud*. Routledge.
- Williams, P. and Taylor, I., 2000. Neoliberalism and the political economy of the 'new' South Africa. *New political economy*, 5(1), pp.21-40.
- Wilson, S., 2001. What is an Indigenous research methodology? *Canadian journal of native education*, 25(2), pp.175-179.

- Winch, C., 2013. The attractiveness of TVET. *Revisiting global trends in TVET: Reflections on theory and practice*, pp.86-122.
- Winch, C., Sahin-Dikmen, M. & Clarke, L. 2020. Transforming vocational education and training for nearly zero-energy building. *Buildings and Cities*, 1, 650-661.
- World Bank 2017. What Kenya's Mobile Money Success could mean for the Arab World. [Online] Available at <https://www.worldbank.org/en/news/feature/2018/10/03/what-kenya-s-mobile-money-success-could-mean-for-the-arab-world> [Accessed 22 07 2020]
- World bank, 2018. Ending Extreme Poverty: Progress, but Uneven and Slowing. [Online] Available at [https://elibrary.worldbank.org/doi/full/10.1596/978-1-4648-1330-6\\_ch1](https://elibrary.worldbank.org/doi/full/10.1596/978-1-4648-1330-6_ch1) [Accessed 18 June 2020]
- World Bank, 2019. Unemployment, total (percent of total labour force) (modelled ILO estimate). [Online] Available at <https://data.worldbank.org/indicator/SL.UEM.TOTL.ZS> [Accessed 09 April 2020]
- World Bank, 2019a. Jumpstarting Inclusive Growth: Unlocking the Productive Potential of Nigeria's People and Resource Endowments. [Online] Available at <http://documents.worldbank.org/curated/en/394091575477674137/pdf/Jumpstarting-Inclusive-Growth-Unlocking-the-Productive-Potential-of-Nigeria-s-People-and-Resource-Endowments.pdf> [Accessed 07 May 2020]
- World Bank, 2019b. The number of extremely poor people continues to rise in Sub-Saharan Africa. [Online] Available at <https://blogs.worldbank.org/opendata/number-extremely-poor-people-continues-rise-sub-saharan-africa> [Accessed 01 June 2020]
- World Bank, 2019c. Accelerating poverty reduction in Africa: In five charts. [Online] Available at: <https://www.worldbank.org/en/region/afr/publication/accelerating-poverty-reduction-in-africa-in-five-charts> [Accessed 01 June 2020]
- World Bank, 2020. The World Bank in China. [Online] Available at <https://www.worldbank.org/en/country/china/overview> [Accessed 07 May 2020]
- World Bank, 2021. World Development Indicators [Online] Available at <https://data-commons.org/place/country/ZAF?topic=Economics> [Accessed 22<sup>nd</sup> February 2021]
- WU [Western University], 2021. How to Conduct A Systematic Review. [Online] Available at [https://www.lib.uwo.ca/tutorials/how\\_to\\_perform\\_a\\_systematic\\_review/index.html](https://www.lib.uwo.ca/tutorials/how_to_perform_a_systematic_review/index.html) [Accessed 10th July 2021]
- Xu, C. & Sun, Y. 2021. Mechanism of vocational education promoting precision poverty alleviation. *International Journal of Electrical Engineering Education*, 1.
- Yin, R.K., 2017. Case study research and applications: Design and methods. Sage publications.

- Yu, P. A. 2019. Germany's dual education system: The assessment by its subjects. *Образование и наука*, 21.
- Zeng, H. & Xiao, X. 2018. The Study on Rural Vocational Education to Keep Within Limits of Poverty in the Era of Post Poverty. 2018 4th International Conference on Social Science and Higher Education (ICSSHE 2018), 2018. Atlantis Press, 317-320.
- Zhang, Y. 2018. *Insights into Chinese agriculture*, Springer.
- Zouliatou, M., 2017. TVET and Economic Development in Cameroon: Lessons from China. *Journal of Education and Practice* [www.iiste.org](http://www.iiste.org) ISSN 2222-1735 (Paper) ISSN 2222-288X Vol.8, No.33, 2017.



## Appendices

### Appendix A: Ethical Clearance



Mr Mlungisi Joseph Mthembu (220112272)  
School Of Man Info Tech & Gov  
Westville

Dear Mr Mlungisi Joseph Mthembu,

Protocol reference number: 00012089

Project title: A comparative analysis of Technical Vocational Education and Training as an instrument for prosperity attainment in South Africa

#### Exemption from Ethics Review

In response to your application received on 11 May 2021, your school has indicated that the protocol has been granted **EXEMPTION FROM ETHICS REVIEW**.

Any alteration/s to the exempted research protocol, e.g., Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through an amendment/modification prior to its implementation. The original exemption number must be cited.

For any changes that could result in potential risk, an ethics application including the proposed amendments must be submitted to the relevant UKZN Research Ethics Committee. The original exemption number must be cited.

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.

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

Yours sincerely,



Prof Maria Isabel De Azevedo Martins  
Academic Leader Research  
School Of Man Info Tech & Gov

UKZN Research Ethics Office  
Westville Campus, Govan Mbeki Building  
Postal Address: Private Bag X54001, Durban 4000  
Website: <http://research.ukzn.ac.za/Research-Ethics/>

Founding Campuses: Edgewood Howard College Medical School Pietermaritzburg Westville

## Appendix B: Data Quality Form

### DATA QUALITY FORM

Questions	Yes	No
1. Are the results “true” for the contributors and the context?		
2. Are the conclusions relevant in other contexts or settings?		
3. Would the findings be similar if the research were repeated with the same or similar participants in the same or similar context?		
4. How much have the researcher’s biases and perspectives influenced the findings.		

## Appendix C: Data Extraction Form

### DATA EXTRACTION FORM

Data extraction No.	
Reference	
Author & year	
Title	
Country	
Objective	
Dependent variables	
Quality assessment	
Outcome	
Comments	