

**TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING (TVET)
COLLEGES IN SOUTH AFRICA:
A FRAMEWORK FOR LEADING CURRICULUM CHANGE**

by

TERCIA ELAINE (Du Plessis) TERBLANCHE

Dissertation presented for the degree of Doctor in Philosophy



Supervisor: Prof EM Bitzer

Co-Supervisor: Prof BL Frick

December 2017

DECLARATION

By submitting this thesis/dissertation electronically, I declare that the entirety of the work contained therein is my own, original work, that I am the sole author thereof (save to the extent explicitly otherwise stated), that reproduction and publication thereof by Stellenbosch University will not infringe any third party rights and that I have not previously in its entirety or in part submitted it for obtaining any qualification.

Name: Tercia Elaine Terblanche

Date: December 2017

Copyright © 2017 Stellenbosch University

All rights reserved

ABSTRACT

It seems imperative that the college curriculum, which is at the heart of the South African vocational education and training system, be restructured to enhance responsiveness to industry needs and requirements and to improve Technical and Vocational Education and Training (TVET) standards. This study has identified a knowledge gap indicating the need to investigate possible strategies for leading changes faced by TVET colleges, with focal attention on sustainable curriculum change. The ultimate outcome of the study was to develop a framework for leading curriculum change in the South African TVET college sector.

A document review, a questionnaire survey and interviews were used for data collection in four phases to analyse the trends, attitudes and beliefs of college employees located within five TVET colleges in the Western Cape, South Africa. Phase one comprised a review of documents such as policies, theses, government publications, books, journals, and reports related to the research problem. In phase two a survey was conducted among 116 TVET college respondents. This was followed by fourteen focus group interviews conducted among 90 TVET college respondents during phase three. Finally, phase four of the study incorporated the findings from the previous three phases of the study into a conceptual framework that aims to potentially assist in leading curriculum change in the TVET college sector.

For the empirical part of the study a deductive approach was employed to describe, compare and tabulate data collected from TVET college staff, utilising a questionnaire and focus group interviews. An analysis of the non-numeric data was conducted through open coding. Semi-structured focus group interviews were recorded, transcribed and analysed by using levels and categories of responses. Respondents' data were graphically displayed for the closed question section of the survey, while a narrative format was used to describe the findings of the open-ended question section. Possible statistical relationships were drawn between the biographical characteristics of the respondents and three questions, using Pearson values.

The findings from the study indicate that TVET college curriculum reform is eminent. Such reform has the potential to contribute in various ways to improved employability, productivity and success rates of TVET college graduates. The findings emphasise the crucial need for change in management strategies to prepare for current and future TVET curriculum

challenges. What also emerged is the need for stronger industry involvement in the TVET curriculum review process to enhance responsiveness to industry needs and requirements. Furthermore, the findings on leadership capacity in the TVET institutions represented in this study indicate that the TVET college sector needs leadership programmes to assist leaders in bringing about curriculum change. In addition, the findings show various cognitive and social competencies required by curriculum leaders to effectively lead curriculum change and its accompanying challenges.

The study concludes that many TVET college leaders are in need of being capacitated with management strategies for current and future curriculum challenges, such as curriculum design and development. Industry support and involvement in the TVET college sector seem critical to curriculum renewal, enhancing student employability and kerbing the lack of industry knowledge and experience of college leaders. Also, poor articulation opportunities of TVET college graduates to enter higher education programmes currently seem to exist. Based on the results of the study, as well as the success of TVET in Germany, a parallel- or two-stream curriculum is suggested to better address current and future TVET training needs. The study contributes to new knowledge on TVET curriculum leadership and advances a better conceptual understanding of vocational and occupational education in general. More specifically, the study contributes to enhancing the understanding of key factors and leadership features needed for TVET college leaders in South Africa to lead curriculum change.

OPSOMMING

Die herstrukturering van die kollege-kurrikulum, wat die kern van Suid-Afrika se beroepsonderwys- en opleidingstelsel uitmaak, blyk noodsaaklik te wees ten einde die standaard van Tegniese en Beroepsonderwys en Opleiding (TBOO-) te verbeter en aan die industriebehoefte en -vereistes te voldoen. Die studie dui op 'n behoefte aan strategieë vir die hantering van die veranderinge waarmee TBOO-kolleges gekonfronteer word, met die hoofklem op volhoubare kurrikulumverandering. Die uiteindelige doel van die studie was om 'n raamwerk te ontwikkel waarvolgens kurrikulumverandering in die Suid-Afrikaanse TBOO-kollegesektor gerig kan word.

Met behulp van 'n dokumentoorsig, 'n vraelysondersoek en onderhoude met rolspelers het dataversameling in vier fases plaasgevind ten einde die tendense, houdings en menings van kollegewerknemers by vyf TBOO-kolleges in die Wes-Kaap, Suid-Afrika, te ontleed. Fase een het bestaan uit 'n oorsig van dokumente soos beleide, tesse, staatspublikasies, boeke, joernale, en verslae wat op die navorsingsprobleem betrekking het. In fase twee is 'n peiling deur middel van 'n vraelys aan 116 TBOO-kollegesrespondente gedoen, waarna 14 fokusgroeponderhoude met 90 TBOO-kollegesrespondente tydens fase 3 gevoer is. Tydens die vierde en laaste fase is die bevindings van die vorige drie fases van die studie by 'n konseptuele raamwerk geïnkorporeer, met die doel om kurrikulumverandering in die TBOO-kollegesektor potensieel te rig.

Met behulp van 'n vraelys en fokusgroeponderhoude is 'n deduktiewe benadering vir die empiriese gedeelte van die studie gebruik om data wat van TBOO-kollegepersoneel versamel is te beskryf, te vergelyk en te tabuleer. 'n Ontleding van die nie-numeriese data is deur oop kodering gedoen. Semigestruktureerde fokusgroeponderhoude is opgeneem, getranskribeer, en ontleed deur gebruik te maak van responsvlakke en -kategorieë. Die terugvoerdata van respondente in die geslotevraag gedeelte van die opname is grafies weergegee, terwyl 'n verteltrantformaat gebruik is om die bevindings van die oopvraag gedeelte te beskryf. Moontlike statistiese verbande tussen die biografiese karaktereienskappe van die respondente en drie vrae is met behulp van Pearson-waardes getrek.

Die bevindings van die studie dui daarop dat herstrukturering van die TBOO-kurrikulum onontbeerlik is. Herstrukturering kan op verskeie maniere bydra tot beter aanwendbaarheid, produktiwiteit en suksessyfers van TBOO-kollegegegradueerdes. Die bevindings dui op 'n kritieke behoefte aan verandering ten opsigte van bestuurstrategieë, ten einde huidige en toekomstige TBOO-kurrikulumuitdagings te hanteer. 'n Duidelike behoefte aan groter industriebetrokkenheid by die TBOO-kurrikulumoorsigproses, ten einde bewusmaking van industriebehoefes en -vereistes te bevorder, is ook geïdentifiseer. Voorts dui die bevindings oor leierskapkapasiteit by die TBOO-inrigtings wat in die studie verteenwoordig is op 'n behoefte aan leierskapsprogramme in die TBOO-kollegesektor om leiers in staat te stel om leiding te neem ten opsigte van kurrikulumverandering. Hierbenewens toon die bevindings dat kurrikulumleiers verskeie kognitiewe en sosiale vaardighede benodig om kurrikulumverandering, met die gepaartgaande uitdagings, doeltreffend te lei.

Die studie kom tot die gevolgtrekking dat bestuurstrategieë ontwikkel moet word ten einde TBOO-kollegeleiers voor te berei vir huidige en toekomstige kurrikulumuitdagings, soos byvoorbeeld kurrikulumontwerp en -ontwikkeling. Industrie-ondersteuning en -betrokkenheid by die TBOO-kollegesektor blyk ook van kardinale belang te wees vir kurrikulumvernuwing, beter studenteaanwendbaarheid, en beter industriekennis en -ervaring van kollegeleiers. Verder blyk dit dat TBOO-kollegegegradueerdes dit moeilik vind om tot hoëronderwysprogramme toegelaat te word. Gegronde op die uitslae van die studie, asook die sukses van TBOO in Duitsland, word 'n parallelle of tweestroomkurrikulum voorgestel om aan die huidige en toekomstige TBOO-opleidingsbehoefes te voldoen. Die studie dra by tot nuwe kennis ten opsigte van TBOO-kurrikulumleierskap en tref 'n onderskeid tussen die konsepte beroepsonderwys en arbeidsonderwys. Meer spesifiek dra die studie by tot 'n beter begrip van die sleutelfaktore en leierskapeienskappe wat TBOO-kollegeleiers in Suid-Afrika in staat sal stel om kurrikulumverandering te lei.

DEDICATION

I dedicate this thesis to my supportive husband, Christopher, and my two precious children, Keenan and Kelsey. Thank you so much for your unconditional love, patience, support and belief in me to complete and obtained the PhD.

ACKNOWLEDGEMENTS

This journey was long and met with many hardships, which taught me renewed humility and endurance for future endeavours. I wish to thank my Lord, Jesus Christ, for the strength, wisdom and courage to persevere when I felt so weak and wanted to give up so many times over the past 5 years. A special thanks to my mother Sarah, mother-in-law, Valerie, our helper Ann, and my entire extended family for their support and encouragement. My late grandparents, Lesley and Sarah Du Plessis for their unconditional love, care and guidance during my childhood.

My supervisor, Professor Eli Bitzer, you are such a genius! It was indeed a privilege and honour for me to be mentored by an academic guru of your calibre. Words cannot describe how eternally grateful I am for continuous professional, high quality standards, advice, motivation, constructive feedback and support that assisted me to complete my PhD. Thank you so much for believing in me. I truly appreciate all the extra efforts of mentoring and coaching. You are a true inspiration to me and I can only dream of ever walking in your footsteps. Thanks and appreciation to Prof Liezel Frick (co-supervisor), and Prof Kidd for his support and assistance with the online survey data processing.

My sincere gratitude to all the principals of the Western Cape Province TVET colleges (Leon, Louis, Cassie, Osma and Corrie), as well as the DG (Qwebs) at DHET who granted permission for this research study to be conducted. Ms Penny Vineyevold for granting me special study leave. Thank you to all the deputy principals, lecturers and academic managers of the Western Cape TVET colleges and DHET officials for sacrificing their valuable time to complete the online questionnaire survey and participated in the focus group interviews. Without your support there would not have been a research study.

My colleagues at South Cape TVET college, Theresia, Sarah, Charlton, William, Luvuyo, Elsie, Felicity, Terry, Garfield, Carina, Valerie, Lynette and all my colleagues: You granted me study leave and accepted extra responsibilities during my periods of study leave, assisted me with technical and administrative matters, and motivated and supported me throughout this journey. I will remain forever indebted to all of you for achieving this milestone in my life.

I salute all of you!

TABLE OF CONTENTS

| | |
|--------------------------------|--------------|
| <i>DECLARATION</i> | <i>ii</i> |
| <i>ABSTRACT</i> | <i>iii</i> |
| <i>OPSOMMING</i> | <i>v</i> |
| <i>DEDICATION</i> | <i>vii</i> |
| <i>ACKNOWLEDGEMENTS</i> | <i>viii</i> |
| <i>TABLE OF CONTENTS</i> | <i>x</i> |
| <i>LIST OF ACRONYMS</i> | <i>xvi</i> |
| <i>LIST OF FIGURES</i> | <i>xviii</i> |
| <i>LIST OF TABLES</i> | <i>xix</i> |
| <i>LIST OF ADDENDA</i> | <i>xx</i> |

| | |
|---|----|
| CHAPTER 1: ORIENTATION TO THE RESEARCH | 1 |
| 1.1 INTRODUCTION..... | 1 |
| 1.2 BACKGROUND AND OVERVIEW OF TVET HISTORIC LANDSCAPE AND POLICY CONTEXT | 2 |
| 1.3 MOTIVATION FOR THE STUDY..... | 5 |
| 1.3.1 The impact of policy deficiencies on TVET college curriculum change..... | 5 |
| 1.3.2 The impact of policy deficiencies on TVET college leadership | 8 |
| 1.4 STATEMENT OF THE PROBLEM..... | 10 |
| 1.5 SCOPE OF THE RESEARCH..... | 11 |
| 1.6 RESEARCH METHODOLOGY | 11 |
| 1.6.1 Research Design | 11 |
| 1.6.2 Research population | 12 |
| 1.6.3 Data collection and analysis | 12 |
| 1.6.4 Data quality | 13 |
| 1.7 ETHICAL CONSIDERATIONS | 14 |

| | | |
|---|--|----|
| 1.8 | CHAPTER DEMARCATION | 15 |
| 1.9 | CONCLUSION | 17 |
| CHAPTER 2: THEORETICAL PERSPECTIVES | | 18 |
| 2.1 | THE CONCEPTS OF EDUCATION AND TRAINING | 18 |
| 2.1.1 | Education as concept | 18 |
| 2.1.2 | Training as concept | 19 |
| 2.1.3 | Technical education as concept | 19 |
| 2.1.4 | Vocational education as concept | 20 |
| 2.1.5 | Occupational education as concept | 22 |
| 2.2 | THE CONCEPT OF CURRICULUM | 23 |
| 2.2.1 | Curriculum..... | 23 |
| 2.2.2 | Curriculum design, curriculum development and curriculum framework | 25 |
| 2.3 | THE CONCEPT OF CHANGE | 28 |
| 2.3.1 | Defining the concept of change | 28 |
| 2.3.2 | Implications of change | 30 |
| 2.3.3 | The concept of curriculum change and leadership | 31 |
| 2.3.4 | Change models and strategies | 33 |
| 2.4 | THE CONCEPT OF LEADERSHIP..... | 37 |
| 2.4.1 | Defining leadership | 37 |
| 2.4.2 | Leadership theories..... | 39 |
| 2.4.2.1 | Transformational leadership | 39 |
| 2.4.2.2 | Academic, curriculum or educational leadership..... | 41 |
| 2.4.2.3 | Shared, innovative and participative leadership..... | 45 |
| 2.5 | LEADERSHIP STYLES AND TRAIT THEORIES | 47 |
| 2.5.1 | Leadership styles | 47 |
| 2.5.2 | Trait theories..... | 49 |
| 2.5.2.1 | Behaviourial theories | 53 |

| | | |
|---|--|-----|
| 2.5.2.2 | Contingency theories (Situational theories) | 54 |
| 2.5.2.3 | Power and influence theories | 55 |
| 2.6 | LEARNING THEORIES | 59 |
| 2.6.1 | Constructivist learning | 59 |
| 2.6.2 | Cognitive theory | 60 |
| 2.7 | SYNTHESIS..... | 61 |
| CHAPTER 3: CONTEXUALISING CURRICULA IN TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING.....65 | | |
| 3.1 | INTERNATIONAL PERSPECTIVES OF VOCATIONAL EDUCATION AND TRAINING..... | 65 |
| 3.1.1 | Vocational education and training in the United Kingdom (UK) | 65 |
| 3.1.2 | Vocational education and training in Germany | 69 |
| 3.1.3 | Vocational education and training in Australia | 72 |
| 3.2 | SYNTHESIS OF UK, AUSTRALIA AND GERMAN VET | 76 |
| 3.3 | SOUTH AFRICAN CONTEXT OF VOCATIONAL EDUCATION AND TRAINING..... | 76 |
| 3.3.1 | Historic overview and legislation impacting on the origin and transformation of TVET colleges in South Africa | 78 |
| 3.3.1.1 | The first era before 1990..... | 78 |
| 3.3.1.2 | The second era 1991 to 2009 | 85 |
| 3.3.1.3 | The third era 2010 to 2013..... | 98 |
| 3.4 | SUMMARY OF SA LEGISLATIVE CHANGES..... | 103 |
| 3.5 | COMPARISON BETWEEN SOUTH AFRICAN VOCATIONAL EDUCATION AND TRAINING AND AN INTERNATIONAL PERSPECTIVE (UNITED KINGDOM, GERMANY AND AUSTRALIA)..... | 104 |
| 3.6 | CHALLENGES FACED BY TVET COLLEGES..... | 106 |
| 3.6.1 | Lack of coherence and articulation within the post-school system..... | 106 |
| 3.6.2 | Inadequacies in the quality, quantity and diversity of programme provision | 107 |
| 3.6.3 | Leadership capacity and abilities to lead curriculum change..... | 109 |
| 3.7 | A PRELIMINARY CONCEPTUAL FRAMEWORK | 111 |
| 3.8 | CONCLUSION | 114 |

| | |
|--|-----|
| CHAPTER 4: RESEARCH METHODOLOGY AND DESIGN | 115 |
| 4.1 INTRODUCTION | 115 |
| 4.2 RESEARCH METHODOLOGY | 116 |
| 4.2.1 Research paradigm | 116 |
| 4.2.2 Mixed methods design..... | 116 |
| 4.2.3 Target population and sampling | 119 |
| 4.2.3.1 Data generation | 121 |
| 4.2.3.2 Instrumentation | 121 |
| 4.2.3.3 Data analysis | 124 |
| 4.2.4 Strategies for data quality | 129 |
| 4.2.4.1 Triangulation..... | 129 |
| 4.2.4.2 Trustworthiness, credibility and validity..... | 130 |
| 4.3 CONCLUSION | 131 |
| CHAPTER 5: FINDINGS AND DISCUSSION OF THEME 1: ‘CURRICULUM AND CURRICULUM CHALLENGES’ | 133 |
| 5.1 INTRODUCTION..... | 133 |
| 5.2 SURVEY RESPONDENTS’ AND GROUP INTERVIEW PARTICIPANTS’ BIOGRAPHICAL INFORMATION | 133 |
| 5.2.1 Summative findings of respondents’ biographical information | 135 |
| 5.2.2 Synthesis of respondents’ biographical information for the questionnaire survey and group interviews | 137 |
| 5.3 FINDINGS FROM THE QUESTIONNAIRE SURVEY (CLOSED QUESTIONS) FOR ‘CURRICULUM AND CURRICULUM CHALLENGES’ | 138 |
| 5.3.1 Curriculum, curriculum challenges and correlated curriculum variables | 139 |
| 5.3.1.1 Curriculum | 139 |
| 5.3.1.2 Curriculum Challenges | 141 |
| 5.3.1.3 Correlated curriculum variables..... | 145 |
| 5.3.2 Summative findings from the closed questions for ‘Curriculum and Curriculum Challenges’ | 149 |
| 5.4 FINDINGS FROM QUESTIONNAIRE SURVEY (OPEN-ENDED QUESTIONS) OF ‘CURRICULUM AND CURRICULUM CHALLENGES’ | 149 |
| 5.4.1 ‘Curriculum’ and ‘Curriculum Challenges’ | 150 |

| | | |
|------------|---|-----|
| 5.4.1.1 | Curriculum | 150 |
| 5.4.1.2 | Curriculum Challenges | 152 |
| 5.4.2 | Summative findings from open-ended questions on ‘Curriculum and Curriculum Challenges’ | 154 |
| 5.5 | FINDINGS FROM SEMI-STRUCTURED FOCUS GROUP INTERVIEWS ON ‘CURRICULUM AND CURRICULUM CHALLENGES’ | 155 |
| 5.5.1 | Summative findings from group interviews on ‘Curriculum and Curriculum Challenges’ | 160 |
| 5.6 | DISCUSSION OF THE FINDINGS FROM ‘CURRICULUM AND CURRICULUM CHALLENGES’ | 161 |
| 5.6.1 | ‘Curriculum’ and ‘Curriculum challenges’ | 161 |
| 5.6.1.1 | Curriculum | 161 |
| 5.6.1.2 | Curriculum Challenges | 172 |
| 5.6.2 | Synthesis of findings on ‘Curriculum and Curriculum Challenges’ | 181 |
| 5.7 | CONCLUSION | 182 |
| CHAPTER 6: | FINDINGS ON AND DISCUSSION OF THEME 2: ‘CURRICULUM CHANGE AND CURRICULUM LEADERSHIP’ | 184 |
| 6.1 | INTRODUCTION | 184 |
| 6.2 | FINDINGS FROM QUESTIONNAIRE SURVEY (CLOSED QUESTIONS) ON ‘CURRICULUM CHANGE AND CURRICULUM LEADERSHIP’ | 184 |
| 6.2.1 | ‘Curriculum Change’ and ‘Curriculum Leadership’ | 185 |
| 6.2.1.1 | Curriculum Change | 185 |
| 6.2.1.2 | Curriculum Leadership | 186 |
| 6.2.2 | Summative findings from the questionnaire survey (closed questions) on ‘Curriculum Change and Curriculum Leadership’ | 188 |
| 6.3 | FINDINGS FROM QUESTIONNAIRE SURVEY (OPEN-ENDED QUESTIONS) OF ‘CURRICULUM CHANGE AND CURRICULUM LEADERSHIP’ | 188 |
| 6.3.1 | ‘Curriculum Change’ and ‘Curriculum Leadership’ | 189 |
| 6.3.1.1 | Curriculum Change | 189 |
| 6.3.1.2 | Curriculum Leadership | 194 |
| 6.3.2 | Summative findings from the questionnaire survey (open-ended questions) for ‘Curriculum Change and Curriculum Leadership’ | 198 |
| 6.4 | FINDINGS FROM SEMI-STRUCTURED FOCUS GROUP INTERVIEWS FOR THEME 2: ‘CURRICULUM CHANGE AND CURRICULUM LEADERSHIP’ | 198 |

| | | |
|---|---|-----|
| 6.4.1 | ‘Curriculum Change’ and ‘Curriculum Leadership’ | 199 |
| 6.4.1.1 | Curriculum Change | 199 |
| 6.4.1.2 | Curriculum Leadership | 203 |
| 6.4.2 | Summative findings from semi-structured group interviews on ‘Curriculum Change and Curriculum Leadership’ | 206 |
| 6.5 | DISCUSSION OF THE FINDINGS ON ‘CURRICULUM CHANGE AND CURRICULUM LEADERSHIP’ | 207 |
| 6.5.1 | ‘Curriculum Change’ and ‘Curriculum leadership’ | 207 |
| 6.5.1.1 | Curriculum Change | 207 |
| 6.5.1.2 | Curriculum Leadership | 216 |
| 6.5.2 | Synthesis of the findings on ‘Curriculum Change and Curriculum Leadership’ | 223 |
| 6.6 | CONCLUSION | 224 |
| CHAPTER 7: CONCLUSIONS AND IMPLICATIONS | | 226 |
| 7.1 | INTRODUCTION | 226 |
| 7.2 | CONCLUSIONS | 228 |
| 7.2.1 | Conclusion 1 | 228 |
| 7.2.2 | Conclusion 2 | 229 |
| 7.2.3 | Conclusion 3 | 231 |
| 7.2.4 | Conclusion 4 | 231 |
| 7.3 | IMPLICATIONS | 232 |
| 7.3.1 | Possible implications for curriculum leadership theory | 232 |
| 7.3.1.1 | Power and influence | 232 |
| 7.3.1.2 | Curriculum leadership | 234 |
| 7.3.2 | Possible implications for policy | 235 |
| 7.3.2.1 | Curriculum review policy | 236 |
| 7.3.2.2 | Student admission requirements, assessment, certification and articulation policy | 236 |
| 7.3.2.3 | Funding norms policy | 237 |
| 7.3.3 | Possible implications for practice | 237 |
| 7.3.3.1 | A suggested framework for curriculum leadership | 238 |
| 7.4 | DISCUSSION OF A CURRICULUM LEADERSHIP FRAMEWORK | 240 |

| | | |
|-----------------|---------------------------------------|-----|
| 7.5 | IMPLICATIONS FOR FUTURE RESEARCH..... | 244 |
| 7.6 | LIMITATIONS | 245 |
| 7.7 | CONCLUSION | 246 |
| REFERENCES..... | | 247 |
| ADDENDA..... | | 287 |

LIST OF ACRONYMS

| | |
|-------|---|
| AQF | Australian Qualifications Framework |
| AQP | Assessment Quality Partner |
| CACE | Central Advisory Council for Education |
| CETCs | Continuous Education and Training Centres |
| CHE | Council on Higher Education |
| COAG | Council of Australian Government |
| COTT | Central Organisation of Technical Training |
| DEEWR | Department of Education, Employment and Workplace Relations |
| DBE | Department of Basic Education |
| DHET | Department of Higher Education and Training |
| DoE | Department of Education |
| DoL | Department of Labour |
| FE | Further Education |
| FET | Further Education and Training |
| FETCs | Further Education and Training Colleges |
| GET | General Education and Training |

| | |
|-------|--|
| HE | Higher Education |
| HET | Higher Education and Training |
| HEIs | Higher Education Institutions |
| HRDSA | Human Resource Development of South Africa |
| HSRC | Human Science Research Council |
| IPPS | Institute for Post School Studies |
| NAMB | National Artisan Development Body |
| NATED | National Accredited Technical Education |
| NC(V) | National Certificate (Vocational) |
| NCFE | National Committee on Further Education |
| NQF | National Qualifications Framework |
| NSC | National Senior Certificate |
| NSCA | National Senior Certificate for Adults |
| NSF | National Skills Fund |
| NSFAS | National Student Financial Aid Scheme |
| NTSI | National Training Strategy Initiative |
| NVQs | National Vocational Qualifications |
| OC | Occupational Certificates |
| PQM | Programme Qualifications Mix |
| PSET | Post-School Education and Training |
| QCTO | Quality Council for Trades and Occupations |
| RSA | Republic of South Africa |
| RTOs | Registered Training Organisations |

| | |
|---------|--|
| SA | South Africa |
| SACPO | South African College Principals Organisations |
| SAIVCET | South African Institute for Vocational and Continuous Education and Training |
| SAQA | South African Qualifications Authority |
| SARS | South African Revenue Services |
| SDLA | Skills Development Levy Act |
| SETA | Sector Education and Training Authority |
| TVET | Technical and Vocational Education and Training |
| TVSD | Technical and Vocational skills development |
| UK | United Kingdom |
| UNESCO | United Nations Educational, Science and Cultural Organisation |
| VET | Vocational Education and Training |

LIST OF FIGURES

| | | |
|------------|---|-----|
| Figure 2.1 | Comparisons of planned change models..... | 34 |
| Figure 3.1 | A preliminary conceptual framework for leading curriculum change..... | 112 |
| Figure 4.1 | The FraIM | 117 |
| Figure 4.2 | From codes to categories | 125 |
| Figure 4.3 | From codes to categories to meaning..... | 126 |
| Figure 5.1 | Vocational programmes contribute to the skills workforce of the country. | 140 |
| Figure 5.2 | The lack of flexible modes of delivery for vocational programmes | 141 |
| Figure 5.3 | Curriculum content relevancy of Report 191 (N1-N3)..... | 141 |
| Figure 5.4 | Curriculum design relevancy of Report 191 (N1-N3)..... | 142 |
| Figure 5.5 | Curriculum relevancy of Report 191 business and general studies (N4-N6) .. | 142 |
| Figure 5.6 | Curriculum content relevancy of NC (V) L2-L4 | 143 |

| | | |
|-------------|---|-----|
| Figure 5.7 | Curriculum design relevancy of NC(V) L2-L4 | 143 |
| Figure 5.8 | Articulation of vocational programmes | 144 |
| Figure 5.9 | Articulation of occupational programmes | 144 |
| Figure 5.10 | Work experience related to respondents' view on competencies of lecturers to deliver post school programmes | 146 |
| Figure 5.11 | Work experience related to Report 191 (N1-N3) engineering programmes being relevant to artisan development | 148 |
| Figure 5.12 | Job title related to Report 191 (N1-N3) Engineering programmes as relevant to artisan development | 148 |
| Figure 6.1 | Increased student employability through curriculum change | 185 |
| Figure 6.2 | Change management strategies' existence in TVET colleges as a contribution to curriculum change | 186 |
| Figure 6.3 | Leadership skills needed to lead curriculum change | 187 |
| Figure 6.4 | Lack of leadership programmes to capacitate TVET college leaders to lead curriculum change | 187 |
| Figure 7.1 | A simplified framework for developing capacity in leading curriculum change | 239 |

LIST OF TABLES

| | | |
|------------|---|----|
| Table 2.1 | Steps in managing organisational change | 35 |
| Table 2.2 | Leadership skills and roles | 44 |
| Table 2.3 | Comparison of theory 'X' and theory 'Y' leaders | 48 |
| Table 2.4 | Examples of leadership styles | 49 |
| Table 2.5 | Overview of twentieth century thought on leadership | 50 |
| Table 2.6 | Early leadership trait research findings | 50 |
| Table 2.7 | Traits and skills found most frequently to be characteristic of successful leaders | 51 |
| Table 2.8 | Personal, interpersonal abilities and technical skills of successful academic leaders | 52 |
| Table 2.9 | Two key aspects of leadership behaviour | 53 |
| Table 2.10 | Social power approaches | 57 |

| | | |
|-----------|--|-----|
| Table 5.1 | Comparison of survey respondents' and interview participants' biographical information..... | 134 |
| Table 5.2 | Variables related to curriculum | 145 |
| Table 5.3 | Respondents' understanding of vocational, occupational and academic education..... | 154 |
| Table 5.4 | Respondents' perceptions of current curriculum challenges..... | 157 |
| Table 6.1 | Respondents' proposed curriculum changes | 199 |
| Table 6.2 | Competencies which are needed to manage required curriculum change (as suggested by interviewees)..... | 202 |
| Table 6.3 | Respondents' perceived current curriculum leadership challenges | 203 |
| Table 6.4 | Leadership features to enhance curriculum change as proposed by interviewees..... | 205 |
| Table 6.5 | Leadership skills needed for enhancing curriculum change | 219 |
| Table 6.6 | Comparison between current and future leadership capacity training needs... | 220 |
| Table 6.7 | Current curriculum challenges and proposed current leadership capacity training needs | 222 |
| Table 7.1 | Potential elements or modules of a framework for curriculum leadership | 240 |

LIST OF ADDENDA

| | |
|-------------|--|
| Addendum 1: | Request letter to the Department of Higher Education and Training (DHET) to conduct the research |
| Addendum 2: | Department of Higher Education and Training (DHET) permission letter |
| Addendum 3: | Example of an institutional permission letter |
| Addendum 4: | Ethical clearance approval letter: Human Research Ethics Committee (Humanities) |
| Addendum 5: | Participant consent form |
| Addendum 6: | Questionnaire survey |
| Addendum 7: | Semi-structured interview schedule |
| Addendum 8: | Example of a group interview transcript |

CHAPTER 1: ORIENTATION TO THE RESEARCH

INTRODUCTION

In 1994 the new South African democratic government inherited an unequal education system that had been based on racial classification during the apartheid era. The Technical and Vocational Education and Training (TVET)¹ college sector in South Africa was established in 2002 in terms of the FET Act 98 of 1998. The merging process constituted 152 former technical colleges (state and state-aided) into fifty TVET multi-site colleges across nine South African provinces. As reported by the Department of Education (DoE, 2001), former technical colleges, providing technical and vocational education, were established according to the historical legacy of apartheid education. Levels of resource and funding investment in these institutions reflected the legacy of disparate and unfair funding (DoE, 2001).

College leaders of historically white and black colleges narrowly focused on the interest of the race groups linked to their respective colleges and led the implementation of the curriculum without considering the diverse backgrounds and needs of all people living in South Africa. The Department of Education (DoE, 1997:1) declared that “[T]he curriculum is at the heart of the education and training system. In the past the curriculum has perpetuated race, gender and ethnic divisions and has emphasised separateness, rather than a common citizenship and nationhood. It is imperative that the curriculum be restructured to reflect the values and principles of our new democratic society”.

This statement, among others, gave rise to the urgent need for TVET college curriculum reform, as well as the need for strong college level leadership that is critical to ensure equal opportunity to access technical and vocational education and training opportunities for all South African citizens.

¹ The Technical and Vocational Education and Training (TVET) college sector has faced major policy and governance changes since the onset of democracy in South Africa in 1994. These changes have also resulted in name changes within and of the sector (such as moving from Further Education and Training [FET] to TVET). For the purposes of this dissertation the term TVET will be used consistently throughout for the sake of coherence, unless explicitly stated otherwise.

BACKGROUND AND OVERVIEW OF TVET HISTORIC LANDSCAPE AND POLICY CONTEXT

The demand for technical education to be made available to the youth was an outgrowth of industrial development that happened in the late 1800s. This demand was linked to an evolving mining industry and the development of railways, harbours and small engineering workshops in urban centres. Historians note that technical education referred to ‘a type of education which had reference to manufacturing and industrial pursuits and the scientific principles underlying these’ (Smuts, 1937:97). According to Gamble (2003:11), a historical development perspective shows that, from its earliest beginnings, technical and vocational education has included three forms of educational provision. Firstly, technical education referred to science instruction as found in general education, where it functioned as a foundation for practical knowledge. Secondly, vocational education referred to forms of compensatory education, with a practical aim. Finally, industrial education focused on the imparting of skills in some form of handcraft, as well as the inculcation of discipline, obedience and regular work habits. Although these forms of provision served their purpose within particular historical eras, the current demands of a dynamic and complex work environment necessitate a re-evaluation of the purpose and mechanisms of vocational education, as well as of the policies that support this educational environment.

The current increasingly complex and unpredictable policy environment suggests that success might only come to those organisations that are capable of continually reinventing themselves, anticipating and responding to challenges on all fronts. This responsiveness requires a significant shift in management focus from operational to strategic issues that inevitably involve coping with change (Graetz, Rimmer, Lawrence & Smith, 2006:231-241). Coghlan and McAuliffe (2003) also explain that the most important element in implementing change is a smooth transition from an outdated system to a new one.

The purpose and mission of South African TVET colleges are to respond to the human resource needs of the country for personal, social, civic and economic development. A transformed, high quality, responsive TVET system is a vitally important investment in the future South Africa and all its people (White Paper 4: Department of Education, 1998a). A successful TVET system has to provide diversified programme offerings that promote the knowledge, skills, attitudes and values required by South Africans as individuals and citizens, as lifelong learners and as

economically productive members of society. Such a system could provide the vital intermediate to higher-level skills and competencies the country needs to chart its own course in the global competitive world of the 21st century (DoE, 1998a; RSA, 2016:iii).

The new TVET system, as envisaged in White Paper 4 (Department of Education, 1998a), involves a new governance framework: a new framework for programmes and qualifications, a new quality improvement and assurance institution, and a new funding system, envisaged as a key lever for system change (also see RSA, 2016:iv). This governance framework is envisaged to drive the development of the new system and to ensure its responsiveness to the education and training needs of the people of South Africa. Since the publication of White Paper 4, TVET colleges have been moved from the further education and training (FET) sector to the higher education and training sector (RSA, 2012), which has created new challenges, among others, challenges regarding the college curriculum. A new TVET curriculum potentially offers multiple entry and exit points and a diversity of learning programmes and qualifications to meet the varied needs of students in different fields and at different stages of their lives. Furthermore, a new curriculum might overcome the outdated divisions between ‘academic’ and ‘vocational education’, and between ‘education’ and ‘training’. Thus, the curriculum would not be characterised by the ‘vocationalisation’ of education, but by a sound foundation of general knowledge, combined with practical relevance.

The South African Department of Education (2001) reported that the rationale for restructuring the institutional landscape in the TVET college sector (then still called the FET college sector) was informed by the National Human Resource Development Strategy (HRD), labour market needs as identified in the Provincial Skills Plan 2001 of the Department of Labour (DoL), the FET Act 98 of 1998, and educational needs as identified in the Situational Analysis Report for Colleges in the nine provinces (National Business Initiative, 2000). According to the Department of Education (DoE, 2007a), some of the negative features of the then technical colleges included programmes that were outdated and unresponsive to an emerging economy. It also included low throughput rates and negligible industry take-up of students, since those teaching in TVET colleges had mostly lost contact with industry and had little knowledge of new trends, new technology and the new shape of business in South Africa and beyond. In addition, education policies for the sector bore little relationship to new demands, funding was inadequate, and colleges largely resembled schools that merely offered training workshops.

The national curriculum framework for the TVET band (DoE, 1998d) suggested that some of Government's key reasons for introducing these new policies had been to address the weaknesses and deficiencies of the TVET college curriculum. These weaknesses and deficiencies included TVET qualifications and programmes offered by colleges that fail to prepare students adequately for success in further learning, for productive employment, or for social, economic and cultural change. A further concern related to the inefficiencies of TVET curricula included the separation between theory and practice, poorly articulated TVET programmes, and programmes that differed widely with respect to quality, standards of provision, outcomes and curriculum implementation (DoE, 1998d).

These challenges also prompted the Department of Education (DoE, 2006a) to promulgate some measures (Government Gazette number 28677) on 29 March 2006 to repeal policy in terms of a number of documents. This included the Norms and Standards for Instructional Programmes and the examination and certification thereof in technical education (Report 190 [92/04]), as well as formal technical college instructional programmes (RSA, Report 191 [97/07]). In the same Government Gazette the Minister announced the implementation dates of the new National Certificates (Vocational) qualifications at levels 2 to 4 to be introduced and sequentially replace the Report 191 (97/07) old technical college programmes per level as from January 2007. This meant that the old national accredited technical education (NATED) N1 to N3 qualifications were to be phased out systematically over three years and the new National Certificates (Vocational) qualifications would subsequently replace them, starting with level 2 from January 2007, and ending with the implementation of level 4 in 2009.

The promulgation of Government Gazette number 31711 (12 December 2008) followed suit where the Department (DoE, 2008a) also announced the phasing out of the National N Certificates N4 to N6 and the National N Diploma qualifications offered at TVET colleges (see Report 191 [97/07] and Report 190 [92/04] respectively). The phase-out dates would have commenced as from January 2009 with N4, ending in January 2011 with N6 national certificates. The last date to award National N Diplomas would have been by December 2014. Although the new NCV level 2 to 4 qualifications were introduced in 2007, the funding norms (Government Gazette number 32010) were only promulgated by 16 March 2009. The late promulgation of the funding norms in 2009 meant that colleges had to implement the NCV qualifications from 2007 until 2009 without full state subsidy, which caused severe financial challenges.

Furthermore, the South African Department of Education (DoE, 2009) announced (in Government Gazette number 32810) on 14 December 2009 the first extension of the phasing out of the National N Certificates N4 to N6 (business and utility studies). The Government Gazette (number 33793 and 33794, dated 23 November 2010) finally announced the amendment to all previous gazetted amendments and notices to phase out the National N Certificates N4 to N6 and N1 to N3 (engineering studies) until further notice from the DHET. The Government Gazette (2010b) also referred to the newly launched Quality Council for Trades and Occupations (QCTO) that would have been established by the end of 2011. The QCTO was envisaged to be responsible for the establishment of a new occupational qualifications sub-framework as an integral part of the National Qualifications Framework (NQF). The extension of the national N-certificates was linked to the new mandate given to the launched QCTO to revise the N1 to N3 engineering qualifications to develop qualified artisans, also including the N4 to N6 business and utility qualifications (DHET, 2010b; RSA, 2016:v).

The brief historic TVET college background, dating back to the 1800s of the industrial revolution of the mining sector, and the relevant curriculum related policy background sketch a picture of a number of new or revised policy developments which had minimal, and in some instances no implementation impact on addressing the curriculum reform issues of the TVET college sector. Some of the promulgated policies were repealed by the Department of Higher Education and Training (DHET) for various reasons pertaining to the phase-out of the Report 191 curricula, some of which date back to the early 1980s and are currently still on offer at all fifty TVET colleges. It is against this brief background and description of particular curriculum policy related challenges faced by the TVET colleges of South Africa that the need for stronger curriculum leadership is motivated and problematized. This is done in an effort to enable the development of a curriculum leadership framework that will capacitate the TVET college leaders for sustainable curriculum change.

MOTIVATION FOR THE STUDY

1.1.1 The impact of policy deficiencies on TVET college curriculum change

Change is a process through which organisations acquire, grow and utilise resources, such as human and financial resources, and knowledge-based data. These constitute pivotal assets that can be combined in unique and powerful ways in order to bring about change, according to

Graetz, Rimmer, Lawrence, and Smith (2006:12). Similarly, Lachiver and Tardif (2002) postulate effective change factors such as strong leadership accepted by the academic staff, sharing and accepting the need for change, engaging in curricular change, as well as the degree of flexibility demonstrated by departmental staff in educational institutions.

The new democratic South Africa has seen “unprecedented reform across all sectors and institutions of society” (RSA, 2015:1; Kraak, Paterson & Boka, 2016:viii, xi). Accordingly, the TVET college sector has experienced extensive change, which has become a constant feature since 1994. The phasing out of the N1 to N3 (engineering) qualifications (as announced in the Government Gazette number 28677 on 29 March 2006) created a substantial decrease in the number of qualified artisans in various occupations needed in South Africa. The engineering N1 to N3 curriculum was established during the 1980s and formed an integral compulsory component of the apprenticeship system, to produce qualified artisans for the various occupations. The NCV level 2 to 4 engineering curricula was intended to replace the old N1 to N3 national N certificates, but, due to industry rejection and numerous implementation challenges, it produced minimum impact on artisan development. The department of higher education and training (DHET, 2010d:26; DHET, 2013b:14-15) reported that the “N-courses are fundamentally outdated and lagged behind in applied disciplinary knowledge”. According to Kraak, Paterson and Boka (2016:35), “The N1–N3 Engineering programmes, which had traditionally served the apprenticeship systems, grew off a base of 8 000 in 2010 to 117 000 in 2013 (DHET enrolment data). While N1–N3 Engineering had been reintroduced to provide a supply of candidates into artisan training, these students would be unlikely to find workplaces where they could undertake apprenticeships”.

In addition, the National Certificate Vocational (NCV) level 2 to 4 qualifications, as the only Department of Higher Education and Training (DHET) funded qualifications, through the funding norms and standards guideline and the national student financial scheme (NSFAS), excluded the majority of youth to receive Government subsidized education and training opportunities. During the FET Round Table hosted by the DHET in collaboration with a number of strategic partners, such as professional bodies and industry partners, a discussion and working document (dated 9 April 2010) pointed out that programme-based funding geared towards NCV only was a mismatch with the policy goal of funding a mix of programme offerings. It was also indicated that the system was ill-developed, and caused major challenges

to college functionality, which required urgent attention (DHET, 2010a:34; DHET, 2013b:14-15; Kraak *et al.*, 2016:30).

Subsequently, the phasing out of the NATED N4 to N6 and diploma (business and general study) qualifications (as announced in the Government Gazette number 31711 on 12 December 2008), without a curriculum that replaced it, created a gap which affected the education and training needs of post matric students (DHET, 2013b:14-15). Moreover, in 2010 the TVET funding norms and standards guideline was issued by DHET, which was limited to NCV funding. Therefore, colleges were restricted to responding to student needs through the offering of a variety of DHET funded qualifications as envisaged by the Department of Education (White Paper 4, 1998a). Legislation on TVET colleges as described above (DoE, 1998a; Kraak *et al.*, 2016:32-34) espoused that the NCV levels 2 to 4 qualifications were to be put into place to solve the problems of poor quality programmes, the lack of relevance to the economy, as well as the low technical and cognitive skills of TVET graduates. Unfortunately such legislation did not meet the all needs of vocational programmes and did not enjoy the universal support of industry, especially the support for artisan training. Due to pressures from various stakeholders, the Minister of Higher Education and Training ultimately decided to reverse the decision to phase out the national N certificates (N1 to N3) and (N4 to N6) qualifications.

A growth in the delivery of occupational qualifications funded and quality assured by Sector Education and Training Authorities (SETAs) remained a challenge for TVET colleges, owing to fierce competition with private providers and poor industry links to secure funding contracts and programme accreditation status, in order to become eligible to offer these types of programmes. While the FET Act 2006 (DoE, 2006a) mandates TVET colleges to offer occupational programmes, the funding resides with the SETAs. Occupational qualifications, such as learnerships and skills qualifications, could address the needs of the majority of unemployed youth and benefit industry. Furthermore it could enhance the employability and self-employment opportunities of students. The decision by Government in 2009 to form one department where SETAs, universities and TVET colleges are governed under the same Ministry created a potential third stream income to TVET colleges and universities. The various SETAs award funding to these sub-sectors based on their applications to deliver specific occupational qualifications against specific accreditation requirements of the SETAs. However, the SETA funding is not a guaranteed ministerial grant or subsidy, hence the three sub-sectors must apply and compete with private institutions for the delivery of occupational

programmes. The DHET envisage to establish new funding frameworks and planning systems between SETAs and TVET colleges to achieve a new funding regime which could be more beneficial to TVET colleges regarding occupational programme delivery (DHET, 2010a:38-39; DHET, 2013b:18).

Yet, as to date, TVET colleges remain in a state of flux and are faced with numerous challenges as they persist with the implementation of the NCV curriculum while the process of reinstating the old national N certificate qualifications with its outdated curricula content and design are forging ahead. Poor access to funded occupational qualifications from SETAs further exacerbates the ability of TVET colleges to respond to the changing demands of the labour market and students. Since the first policy changes were pronounced by Government in 1998, the overall impact on curriculum change in TVET colleges signals minimal evidence against the set objectives. According to the Department of Education (DoE, 2001; Gewer, 2002; RSA, 2016), TVET colleges are functioning in an environment rife with challenging institutional and curricular changes.

1.1.2 The impact of policy deficiencies on TVET college leadership

Binney, Wilke and Williams (2005:66-71) maintain that the hardest part of leadership is tolerating uncertainty, which is partially driven by external expectations of predictability and partially by the need for internal performance. Maxwell (2004:11), in turn, says that “[T]he true measure of leadership is influence – nothing more, nothing less”. Leithwood, Louis, Anderson and Wahlstrom (2004:6) agree that leadership is about “... helping the organisation set a defensible set of directions and influencing members to move in those directions”. In addition, Yukl (1998) suggests that the influence process between a leader and a follower is not unidirectional, but reciprocal, as followers can also have some influence over leaders. Such reciprocity is also mentioned by Green and McDade (1991), who indicate that a reciprocal process paves the way for academic staff to create opportunities for developing new curricula and take related action.

Owing to the historical legacy of South African education, former technical college principals had varied backgrounds regarding the management of colleges, their infrastructure, programme offerings, funding, staff and student profiles (Powell & Hall, 2000:19). Also, the roles of TVET college leaders have changed significantly over the past number of years due to the

transformation of the college sector (DHET, 2010d: 25; RSA, 2016:iv). Some of the new roles of college leaders included the implementation of systemic changes and development in curricula such as the National Certificate Vocational (NCV) programmes and occupational programmes, the establishment and maintenance of partnerships, financial management, the management of programme based funding, the drafting of strategic and operational plans, the establishment and implementation of quality assurance and improvement processes, the implementation of student and academic support services, and human resource management (DoE, 1999:11,20; RSA, 2016:iv). Earlier, White Paper 4 (DoE, 1998) indicated a dearth of managerial skills and capacity in TVET institutions (DoE, 1998a:13). Furthermore, the Finance and Fiscal Commission observed that “[T]he sector is facing governance and management problems, especially with regard to financial management. Financial accountability in the sector needs serious attention, to ensure that any additional funding to the sector will be used effectively and efficiently” (Finance and Fiscal Commission, 2013:36). The Department of Education (DoE, 1998d:35) further stated that the “co-ordination and planning, as well as the need to promote flexibility and responsiveness will place new demands upon TVET leadership and management at national, provincial and institutional levels”.

Evidently, strong leadership is required to effectively lead the current key change drivers (see section 1.3.1). These issues pose some of the biggest challenges of the 21st century for the TVET college sector in South Africa. For instance, Raelin (2003:5) mentions that in the twenty-first-century organisation there is a need to establish communities where everyone shares the experience of serving as a leader, not serially, but concurrently and collectively. Binney *et al.* (2005:6-13) support this view by asserting that many people can and need to be leaders, not just a few. Very often people without formal power over others are more able to lead in the moment than those in positions of authority.

The current college leadership are faced with various curriculum leadership challenges, such as the dependence on DHET to revise or replace the old National N Certificates and National Certificates Vocational (NCV) curricula, revision of the funding norms and standards, a lack of infrastructure development provision, poor sector-industry relationships, un-funded occupational programmes, and the lack of building a positive TVET college brand. Such past and present challenges prompted the need for this study, as the statement of the research problem will indicate next.

STATEMENT OF THE PROBLEM

The South African Department of Higher Education and Training (DHET, 2010b:1), in a report submitted to the Further Education and Training Summit (31 August 2010), almost exclusively focussed on the National Certificate Vocational (NCV) qualifications in the National Plan of 2008 and the reinforcement thereof by the 2009 funding norms. This has assisted in at least addressing the needs of one part of the target audience of colleges and has also directed colleges away from the desired goals of differentiation and diversity as envisaged in the FET Act of 2006. The report also stated that colleges have become increasingly de-linked from the worlds of skills development and occupational training, and created a cul-de-sac for students hoping to progress into higher education (DHET, 2010b:1-2).

According to the Department of Higher Education and Training (DHET, 2010b:1), the NCV levels 2 to 4 qualifications currently being offered at TVET colleges are not achieving the curriculum objectives as envisaged by the FET Act of 2006 (DoE, 2006a) and the National Plan for Further Education and Training (DoE, 2008b). In addition, some authors (e.g. Stumph, Papier, Needham & Nel, 2009:7-9) contend that one of the key problems identified in the post-DHET establishment period is a lack of further learning opportunities at levels 2 to 5 on the National Qualifications Framework (NQF) for youth who leave school, either with a General Education and Training (GET) certificate, or with a National Senior Certificate (NSC) (also see Lolwana, 2010; DHET, 2012b:9; DHET, 2013b:14-15).

Against this background I have observed a conceptual gap, namely a need to better understand the leadership challenges associated with TVET curriculum renewal. As such, the possible strategies for effectively leading sustainable change faced by TVET colleges, with focal attention on curriculum change, need to be investigated. The final aim of this study is therefore to investigate possible strategies that can potentially assist college leaders to lead sustainable curriculum change in the TVET college sector.

The need for guidelines towards competent leadership gave rise to the primary research question for the study, namely: *What are the leadership features needed for enhancing curriculum change in the South African TVET college sector?*

In order to address the primary research question, the following subsidiary questions were posed:

- What are current and future curriculum leadership challenges faced by TVET college leaders?
- What leadership capacity is needed to address current and future curriculum challenges?
- What strategies might be beneficial to capacitate TVET leaders for current and future curriculum challenges?

SCOPE OF THE RESEARCH

The ultimate outcome of the study was to develop a possible framework for leading curriculum change in the TVET college sector that could assist college leaders to bring about sustainable curriculum change. It was envisaged that the proposed framework may potentially contribute to the further development of a curriculum by the relevant authorities which could assist and enhance college leaders to effectively lead curriculum change. Although the study was conducted within the South African TVET college sector, it considered the international vocational education context with a focus on particular relevant countries. Also, to keep the study manageable, only TVET colleges in the Western Cape, South Africa, were included in the empirical part of the research.

RESEARCH METHODOLOGY

The research methodology is described in detail in Chapter 4. What follows is a brief outline of the main methodological concerns of the study.

1.1.3 Research Design

Zikmund (2003:65) states that “a research design is a master plan specifying the methods and procedures for collecting and analysing the needed information”. Non-experimental research in the form of a survey design within a pragmatic knowledge paradigm was firstly used to analyse the trends, attitudes and beliefs of college employees and leaders (Creswell, 2009). A deductive research approach was employed to describe, compare and tabulate data collected from the empirical data sources, which emanated from the survey and from focus group interviews (also see Babbie, 2001:23).

This study is methodologically based on Plowright's (2011) Frameworks for an Integrated Methodology (FraIM) as a mixed methods design. According to Plowright (2011), this methodology integrates qualitative and quantitative methods. He claims that FraIM does not privilege any aspects of the research methodology, but shows a way to integrate a range of methods in a holistic way. Unlike Creswell (2009), who refers to qualitative and quantitative research, Plowright avoids the terms 'quantitative' and 'qualitative', preferring instead to use 'numerical' and 'narrative' as a means of encouraging a more flexible view of working with different types of data. Gorard and Taylor (2004) are in support of Plowright's view, arguing that the most appropriate mix of methods will produce high quality research. Integrating methods appropriately to produce high quality research is thus the ethical duty of researchers.

1.1.4 Research population

Mouton (1998:134) describes a research population as a collection of objects, events or individuals sharing some common characteristics that the researcher is interested in studying. The population for the empirical part of the study was located in the TVET college sector of the Western Cape, South Africa. Purposive sampling was used to select respondents and to ensure that relevant staff with the appropriate knowledge and work experience of pertinent TVET college issues were selected to participate (Cohen, Manion & Morrison, 2007:115).

1.1.5 Data collection and analysis

Birley and Moreland (1998:40) describe the activity of data collection as the "fieldwork where new information is acquired and the assessment of its significance begins". The implementation of the research data plan took place in four phases. Phase one comprised a review of documents, such as policies, theses, government publications, books, journals and reports related to the research problem. The review of these documents provided the researcher with a better insight, interpretation and application of the views of various authors on leadership and curriculum change. This assisted in the formulation of question items for the empirical part of the study. Phase two comprised an online questionnaire, surveying 116 (N=116) TVET college respondents. These respondents provided numeric indications of perceived trends and opinions on a variety of relevant questionnaire items.

The third research phase involved a total of 90 TVET college respondents who participated in semi-structured focus group interviews through purposefully selecting participants from five participating colleges located in the Western Cape, South Africa. Based on the trends from the questionnaire, focus group interviews were conducted with fourteen groups of between four and twenty participants per group. Phase four of the study comprised an integration of the findings from the previous three phases of the study into a framework that could contribute to leading curriculum change in the TVET college sector, with a view to enhance the capacity in the sector for curriculum change.

An analysis of the non-numeric data was conducted through open coding (Henning, Van Rensburg & Smit, 2004), whereby the researcher reads through the entire text in order to get a holistic impression of the content, determining emerging themes prior to the coding process (as described in Chapter 4, section 4.2.3.3). Semi-structured focus group interviews were recorded, transcribed and analysed by using qualitative levels and categories. The biographical information of all participants were displayed in tabular format (see more detail in Chapter 5, section 5.2).

Numerical data from the online questionnaire were analysed using descriptive statistics and categorical variables with the support of the Statistical Service at Stellenbosch University. The differences in opinions, perceptions and experiences of the questionnaire respondents were graphically displayed for the closed question section of the questionnaire, while a narrative format was used to describe the findings of the open-ended question section (see more detail in Chapter 5, sections 5.5 and 5.7, and in Chapter 6, sections 6.2 and 6.4). Descriptive data were used to report on the findings from the closed question section and thereafter possible statistical relationships were drawn between the biographical characteristics of the respondents and three questions by using Pearson values.

1.1.6 Data quality

Creswell (2009:191) recommends the use of multiple strategies to enhance the researcher's ability to assess the accuracy of findings. Strategies such as triangulation of different data sources of information to establish themes, member checking to determine the accuracy of findings, and clarification of researcher bias towards the study were conducted to ensure validity of the study. Since the researcher in this study was also a staff member of a TVET

college in the region where the study was conducted, it was important to declare biases and assumptions and to engage in a process of ongoing self-reflection, as well as clearly indicating the purpose of the study and the planned use of the data to establish trustworthiness. The researcher is currently employed at South Cape TVET college, where she has held the position of Deputy Principal Academic since 2007, and has also acted in the position of Principal. The researcher started her career in the TVET college sector as a business studies lecturer in 1993 and occupied a variety of management positions at the Northern Cape Urban TVET college before her appointment at South Cape TVET college. As a result of her long history of 24 years in TVET colleges, the researcher has intimate knowledge and experience of the research topic and other strategic areas regarding the TVET college curriculum and related legislative issues.

The researcher ensured that her scholarly position was not compromised by separating her roles as curriculum manager and curriculum researcher through the application of relevant strategies to 'bracket' these two roles for the duration of the study. One strategy was to take a critical stance towards literature, TVET college documents and TVET legislation that influenced the composition of the questionnaire and interview questions. Furthermore, the researcher declared her status in the TVET college sector to all research participants and respondents and made it clear that all data collected would culminate into the findings and proposed framework to lead curriculum change, even if it would defy her own opinion of and experiences within the setting.

Several measures to enhance the validity and trustworthiness of data were applied and are described in more detail in Chapter 4, section 4.2.4.2.

ETHICAL CONSIDERATIONS

The researcher obtained permission from the Department of Higher Education and Training (DHET) and the participating TVET colleges in the Western Cape to conduct surveys and interviews. Issues of confidentiality and anonymity were facilitated through the signing of consent forms (see example in Addendum 5) by all respondents. Respondents had the choice to withdraw from the study after factual information was provided that might influence their decision to participate in the group interviews and the completion of the questionnaire (also see Cohen *et al.*, 2007). Audio recorded group interviews were destroyed on completion of the research study.

Ethical clearance was received from Research Ethics Committee of Stellenbosch University (see Addendum 4). Research involving human subjects within institutions, government agencies and universities require specific information to make informed and responsible decisions regarding the ethical acceptability of a proposal (Gillis & Jackson, 2002:336). A letter to seek permission (see Addendum 1) for conducting research within the TVET college sector was submitted to the DHET and the study did not commence until such permission had been granted. The researcher obtained permission (see Addenda 2 and 3) from the Department of Higher Education and Training (DHET) and the participating TVET colleges of the Western Cape (see example in Addendum 8) to conduct the surveys and interviews with the identified staff.

Throughout the study the researcher was mindful of scientific honesty, which refers to the publication of true findings, and avoidance of plagiarism, by acknowledgment of all sources (Mouton, 2001:240). Scientific honesty involves honesty in data collection, analysis and interpretation of the research phenomenon and to present the views of the respondents and not those of the researcher.

CHAPTER DEMARCATION

The thesis is demarcated by seven chapters. Chapter 1 provides an orientation to the study. While Chapter 2 presents some relevant theoretical perspectives, Chapter 3 contextualises TVET curricula. The main reasons for dividing the literature review into two chapters is to clearly distinguish between the theoretical concepts relevant to this study, such as leadership, education and training, curriculum, curriculum change, and curriculum leadership (Chapter 2), and the policy review (Chapter 3). Due to the impact of myriad policy developments on the TVET college sector since the dawn of democracy in South Africa, the policy review was summarized over three eras in Chapter 3. The chapter covers the broader contextual perspectives of the South African TVET sector, discussing the generic origin of the sector, dating back to the 1800s, as well as the historic background of policy, which culminated during the era before 1990, the era from 1991 to 2002, and the era of 2010 to 2013. The impact of policy development on especially governance, human, and financial aspects were profound with the promulgation of the FET Act of 1998 (also see Kraak & Hall, 1999). “Devolution was a general feature of education and training reform following international trends throughout

the system, and devolution in TVET colleges was similar to, albeit more radical than, the school reforms” (RSA, 2016:8).

The main reasons for focusing the international perspective of vocational education on developed countries such as the United Kingdom, Australia and Germany, and not on developing countries such as Nigeria, Ghana and Tanzania, is that there is a dearth of literature available in developing countries, including South Africa (also see Papier, 2017; RSA, 2016). The choice was further influenced by the South African governments’ relationships with developed countries that shaped wider international discourse, such as the “new vocationalisation” discourse. This discourse emphasised the need for some educational sectors to contribute to national economic imperatives. It also influenced policy formation, such as the FET Act of 1998 and the establishment of The South African Institute for Vocational and Continuous Education and Training (SAIVCET) (also see Chappell, 2003; DHET, 2013b:25). Yet, although the development of skills for employment remain a challenge that could be strengthened via sharing of data and other available funding opportunities, co-operation between emerging economies such as Brazil, China, India and South Africa is still reluctant (Carbonnier, Carton & King, 2014:31-33).

The last reason for focusing the international perspective on the above mentioned developed countries, is the number of key similarities that exist between these three countries, especially with regards to the origin of technical and vocational education in South Africa (see sections 3.1-3.2 for more detail). Chapter 4 describes the research methodology, and Chapters 5 and 6 present the findings. Chapter 5 provides the findings of the study in terms of a discussion of curriculum and curriculum change, while Chapter 6 reports on the findings and discussion of curriculum change and curriculum leadership. The main reason for dividing the findings into two chapters was to separate the magnitude of rich data collected from the respondents in a clear, seamless manner, linked to the questions in the survey and the group interviews. The data obtained formed two themes, each of which is discussed in a separate chapter. Some of the related questions were also grouped together to minimize the various summaries of the findings.

Chapter 5 pertains to theme 1, namely ‘Curriculum and Curriculum Challenges’, and is comprised of the following five sections: findings from survey and interview respondents’ biographical information; findings from questionnaire survey closed questions; findings from

questionnaire survey open questions; findings from semi-structured focus group interviews; and finally, a discussion of findings on ‘Curriculum and Curriculum Challenges’. Chapter 6 pertains to theme 2, namely ‘Curriculum Change and Curriculum Leadership’ and consists of the following four sections: findings from questionnaire survey closed questions; findings from questionnaire survey open questions; findings from semi-structured focus group interviews; and a discussion of findings on ‘Curriculum and Curriculum Challenges’. For ease of reading and understanding Chapters 5 and 6 were formulated in three ways. Firstly, the closed question section of the survey was displayed in bar graphs. Secondly, the open questions were summarized in narrative format. Thirdly, the interview findings were summarized in tabular format.

Chapter 7 concludes the study report by drawing a number of conclusions and pointing out some implications of the study.

CONCLUSION

This first chapter provided a general orientation of the study context which is set within the historic and current landscape of the TVET college sector. The primary and subsidiary research questions were posed and an explanation of the motivation and scope of the study were provided, followed by a brief account of the research design and data methods. The study set out to problematise the apparent lack of clearly defined leadership features for the enhancement of leading sustainable curriculum change within a new TVET college sector dispensation in South Africa. The next chapter aims to provide some theoretical perspectives on key concepts related to the study.

CHAPTER 2: THEORETICAL PERSPECTIVES

The previous chapter provided a general orientation to the study. The literature review that was conducted to generate theoretical perspectives on the study topic is divided into two chapters. This chapter (Chapter 2) focuses on relevant literature, while Chapter 3 contextualises the TVET curriculum and curriculum leadership issues. The rest of this chapter focuses on key concepts such as education, curriculum, change and leadership, as well as various leadership styles and trait theories.

THE CONCEPTS OF EDUCATION AND TRAINING

2.1.1 Education as concept

Kaul (1998:11) points out that education has always been associated with a better quality of life for human beings. Moreover, education has always been regarded as a major means of importing knowledge and skills to individuals and helping the process of social transformation. From a slightly different angle, Giroux (1992:4) indicates that “education must be understood as the production of identities in relation to the ordering, representation and legitimation of specific forms of knowledge and power”. In addition, Hammersley-Fletcher and Brundrett (2008:12) view education as having the flexibility to engage learners in enthusiasm for learning through developing and encompassing their interests (also see the Plowden Report in the Central Advisory Council for Education (CACE), 1967 and Oosterheert & Vermunt, 2003).

From an international perspective, ‘general education seems to develop a deeper understanding of a subject, ‘pre-vocational education mainly introduces students to the world of work and prepare them for entry into vocational or technical education programmes, while ‘vocational or ‘technical education mainly develops students’ practical skills, know-how and understanding necessary for employment in a particular occupation (UNESO 1997:57-90). The aim of general education is thus to create a democratic society, whereas vocational education aims to transmit exploitable knowledge to the market (Feinberg, 1983). Wheeler (1967:11) describes the term ‘formal education as the deliberate attempt by one or more persons to effect changes in the behaviour of one or more persons by promoting certain learning experiences.

2.1.2 Training as concept

In contrast to ‘education’, which is aimed at the development of the ‘whole person, Dearden (1984) defines ‘training’ as the inculcation into a set of usually rigid routines. Sometimes the two terms are used to distinguish skill formation associated with the status of different occupations, where ‘training’ is applied to manual occupations and ‘education’ to professional occupations. According to Middleton, Ziderman and Van Adams (1999:9, 46) training in specific skills is more effective when it builds on a strong foundation of general education. Education and training both seem essential for productivity, yet they are difficult to administer effectively within the same institutional framework. Training is thus more effective when promoted by institutions with a degree of autonomy and flexibility, which is difficult to achieve within formal and rigid systems.

2.1.3 Technical education as concept

One of the earliest descriptions of ‘technical instruction’ is that of the training of the hand, which is contrasted with the education of the mind (Magnus, 1888, cited in Chisholm, 1992:26). Huxley (1895:405, 437) defines technical education as the teaching of handicrafts or trades. A historian of South African education, McKerron, noted in 1934 that “...in technical education more emphasis is laid on the intellectual aspect, on the scientific theory, which is necessary for the proper understanding of the arts and crafts. In its highest form technical education demands superior intelligence on the part of the educand and includes education for such professions as engineering, and other vocational work which may fall within the scope of the university... Industrial education aims rather at imparting skill in some particular handicraft” (McKerron, 1934:101). Similarly, Bennett (1937:257) observes that technical education is applied to general science, engineering, commercial and management studies. In addition, Williams (1963:92) argues that technical education is practical, in contrast to university education, which is by implication more theoretical or academic.

Chisholm (1992:2) writes that technical education refers to programmes based on the traditional craft trades. Technical education is considered education in theoretical principles, while industrial education is instruction in specific practical skills. Both technical and industrial education are therefore considered to provide occupational preparation, but for different social classes. In addition to the relative importance attached to theory and practice, theoretical

technical education is associated with a ‘superior’ working class, while practical industrial education is associated with an ‘inferior’ working class. In South Africa, this definition, commonly accepted in the 1930s and persisting into the 1990s, has confirmed the racial hierarchy of labour and skill established by both the mining industry and the state, confirming the relatively low perceived status of industrial education (Chisholm, 1992:3-4). According to Nwogu and Nwanoruo (2011), technical education leads to the acquisition of practical skills which enable an individual to be generally employed in a chosen occupation, thus to become self-reliant, and to contribute to overall national development.

Williams (1961:101) provides one of the most finely numerically graded classifications of occupations in which to place vocational education, namely trade, post-trade, technician (production maintenance), technician (research design), professional and post-professional. Chisholm (1992:2) cites that vocational education usually means preparation for a particular set of careers, while Stevenson (1997:6-7) views the competences for work as the value of vocational education.

Some contemporary vocational education reformers based the epistemological distinctiveness of technical education on the level of competence. One arm of the definition of vocational and technical education in the US federal education code is that it should “include competency-based applied learning that contributes to the academic knowledge, higher order reasoning and problem solving skills, of an individual” (Legal Information Institute, 2002:6). Similar claims have been made for vocational education in South Africa (DoE, 2006). The national certificate vocational (NCV) that was introduced in South African TVET colleges in 2007 is a prime example of honouring this broader definition of vocational education.

2.1.4 Vocational education as concept

Clarke and Winch (2007:9-10) suggest that, in the Anglo-Saxon world, vocational education is confined to preparing young people and adults for working life, a process often regarded as of a rather technical and practical nature. This type of vocational education embraces both elements of civic and academic education. In contrast, the Dutch vocational education and training (VET) system, as described by Westerhuis (2007), is all about civic education and seen as a means for productive labour (workers and tradespeople) to become productive citizens. Hence, vocational education in the Netherlands is not about practical training alone, but about

personal development and rising above the narrow confines of a trade. Vocational education thus seems to be both a complex and varied concept.

According to Biernacki (1995), there has long been an opposed and no less vigorous tradition that sees vocational education as concerned with personal emancipation as much as economic development. In this sense vocational education is more closely associated with the German 'Arbeitskraft', or labour power. In most Anglo-Saxon countries, however, vocational education is considered as training for particular jobs in order to serve the needs of current employers. Moodie (2008) is in agreement with this view in defining vocational education as the development and application of knowledge and skills for middle level occupations needed by society from time to time. Vocational education is thus closely engaged with industry and the economy and changes as industries change, whilst higher education is engaged more closely with academic disciplines and changes as the disciplines change (Moodie, 2008:172).

Descy and Tessaring (2000:18-21) define vocational education and training (VET) as all organised forms of initial and continuing or further vocational education and training, independent of location, age of participants, or their level of qualification. Hence, the purpose of VET is to prepare for a certain occupation or certain employment and could also include an element of general education, for example the development of basic skills. VET is a broad field that includes initial vocational training, continuing vocational training, and work-based learning (Descy & Tessaring, 2000). Ellström (1999) is of the view that VET is often characterised as a complex social system, because it is located on the edge of two basic human activities, namely learning and working.

Clark and Winch (2007:6) suggest that the aim of VET is to improve the productive capacity of society on the assumption that the greater the effort and investment put into this, the more productive the labour. For the individual, VET is about preparation for working life and about entering into and progressing in the labour market. The employer, on the other hand, has more immediate concerns regarding vocational education as a means of skilling labour to meet the immediate needs of the particular firm. These are conflicting interests and, as a result, the VET system represents a compromise, reflecting the power attached to each of these different interests. Furthermore, Clarke and Winch (2007:62-63) describe vocational education and training as social development of labour, nurturing, advancing and reproducing particular qualities of labour to improve the productive capacity of society. Vocational type of education

is associated with keeping jobless people off the streets, decreasing youth unemployment, and feeding industry with skilled middle-level professionals (Agrawal, 2012; Ziderman, 1997).

According to the Department of Higher Education and Training in South Africa, vocational education and training refers to ‘middle level’ provision of knowledge and skills to assist people in entering the economy through a general broad orientation in vocational areas, as well as general learning in essential areas such as language and mathematics (DHET 2012:1). Vocational education and training (VET) clearly proves to be a complex concept and a subject of research. It is wide-ranging, covering multiple forms of activity, from parts of mainstream initial education to short-term, highly focused, job specific skill development.

Moll, Steinberg and Broekmann (2005:21-22) posit that in order to understand VET in South Africa, it is important to distinguish between general post-school VET, which takes place in an FET college or training institution and is aimed at young school leavers, and occupationally directed VET, which takes place in the workplace or is directed more at adult learners. General post-school VET programmes are based on set national curricula, and offer general vocational skills and knowledge, while occupationally directed VET is aimed more directly at adults and employed workers in the workplace, and generally falls outside of the national curriculum.

The United Nations Educational Scientific and Cultural Organization (UNESCO) points out that TVET focuses on the "acquisition of knowledge and skills for the world of work" (UNESCO 2012:5). This term embodies and draws on the elements of historical educational terms such as 'apprenticeship training', 'vocational education', 'technical education', 'workplace education', and others. UNESCO (2012:5), however, recognises the ongoing conceptual debate around the definition of TVET, including the use of other terms such as “technical and vocational skills development (TVSD)”.

2.1.5 Occupational education as concept

Stark and Lattuca (1997:150-168), suggest that occupational qualifications focus more on training for task performance and less on education for solving unstructured problems. Many occupational programs are developed specifically to meet the workforce needs of a local industry or business. The view of the Department of Higher Education and Training (DHET, 2012b:1) relates with that of Stark and Lattuca, referring to occupational education as educational programmes that are focused on preparation for specific occupations, as well as

on-going professional development and training in the workplace. Middleton, Ziderman and Van Adams (1991:19) cite that a competent and flexible workforce, one that can acquire new skills as economies change, is a necessary prerequisite for economic and social development. The level of general education required for successful training also increases with the level of skills being taught. More broadly, educated and trained workers are better prepared to learn new skills as production technologies change, and as a result are able to move up the occupational ladder and increase their earnings throughout a career (Middleton, Ziderman & Van Adams, 1991). The Department of Higher Education and Training documentation (DHET 2012b:1) sometimes refer to skills programmes or development in a narrow way, limited to occupational qualifications and workplace-based training, and sometimes in a broad way, to refer to education at all levels which is primarily focused on preparation for the world of work.

THE CONCEPT OF CURRICULUM

2.1.6 Curriculum

This study envisaged to develop a theoretical proposed framework for leading curriculum change in TVET colleges. In order to explore the conceptualisation and development of the core elements of the proposed framework, it is important to first review the definitions and concepts related to curriculum design and development.

According to Du Toit (2011:59) and Albashiry, Voogt and Pieters (2015), there is no common understanding of what the concept ‘curriculum’ entails. The viewing, interpretation and implementation of curricula within the same field in different ways are prevalent among academics at higher education institutions. Barnett and Coate (2003:5), for instance, describe curriculum as an “organised set of educational experiences” and pedagogy as the act of teaching brought about by the curriculum, while Koen (2011:26), Diamond (2008) and Taba (1962) all refer to a curriculum as a “plan of action” that organises learning activities. Complex processes, interactions, factors and actors accompany the two realms of planning and learning (Marsh & Willis, 1999; Mckenney, Nieveen & Van den Akker, 2006). The term ‘curriculum’ thus cannot be viewed as having only one meaning. It is evident that ‘curriculum’ is very much a multidimensional and often elusive concept (Bitzer, 2009; Van den Akker, 2003).

Pinar (2003:14) argues that thoughts on and theory of education are concerned with curriculum as the centre of all education. Hence, Zais (1976:4) defines curriculum in two ways, namely to indicate a plan for the education of learners, and to identify a field of study. Curriculum as a field of study is defined by the range of subject matters with which it is concerned and the procedures of inquiry and practice that it follows. The word “curriculum” has Latin roots, implying a race to be run, often accompanied by obstacles. In modern day education, Ross (2000:8) views the concept of curriculum as what needs to be learned, in other words, what is worth knowing. Ross also agrees with Zais and explains that a curriculum implies a course of study or a journey of learning (also see Parkey & Hass, 2000:15). Carl (2012) posits that ‘curriculum’ is often seen as preparing someone for life, where a person’s learning journeys involve starts, learning routes and finishing points of accomplishment.

According to Pinar (2010:177), ‘currere’, or the verb form of curriculum (the noun), emphasises the experience of the journey in an educational context. Parkey and Hass (2000:15) state that curriculum “deals with what is worth experiencing, doing, and being”. The shift away from understanding curriculum as a noun, a given course, to a process (currere) of running is an important orienting move that engages with curriculum as an active practice, but it misses fundamentally what systematic learning within an organised knowledge structure is about – increasing levels of complexity with an underlying increase in automaticity. An integrated approach implies a view of learning which rejects a rigid division between “academic” and “applied,” between “theory” and “practice”, or between “knowledge” and “skills” (Department of Education 1995:15).

Stark and Lattuca (1997:22, 40, 104) view curriculum as a plan for students’ academic development that is situated in a historical, social and political context. The term curriculum is thus a programme of activities designed so that learners will attain, as far as possible, certain educational ends or objectives. The three major sources of data in deciding curriculum objectives are: information about the needs and interests of learners, the social conditions and problems which learners are likely to encounter, and the nature of the subject matter and appropriate forms of learning. Since learners are not identical, methods of teaching or learning cannot be uniform. Wertsch suggests therefore that in order to respond to this diversity, a curriculum should be “dynamic and responsive” (Wertsch, 2007:316).

Similarly, Johnson (1967:130) claims that a curriculum can consist of “a structured series of intended learning outcomes”, with all else being instruction, while Kerr (1968:16) coins the term ‘curriculum’ as all the learning which is planned and guided by the institution, whether it is carried out in groups or individually. Kerr thus proposes that a curriculum consists of four interrelated components, namely curriculum objectives, knowledge, learning experiences and curriculum evaluation. Grumet (1981:19) agrees with Kerr and suggests that curriculum consists of four dimensions which include aims or objectives, content or subject matter, methods or procedures, and evaluation or assessment. Eisner (1985:87), however, asserts that three types of curricula prevail: the explicit, the implicit and the null curriculum.

Grundy (1987:37, 68, 105) differentiates between three forms of curricula. He firstly describes curriculum as ‘product’, in other words, as a document used to teach. This is also known as the official or intended curriculum and is considered a concrete presentation of the curriculum. Secondly, he states that curriculum as ‘practice’ refers to what is happening in the classroom. This is known as the experienced or implemented curriculum. Thirdly, Grundy refers to the curriculum as ‘praxis’, or as the ‘curriculum as social construct’, where the curriculum is constructed by those involved. This curriculum is portrayed as a social construct and as an extension of the experienced or implemented curriculum. It adds meaning to the experienced curriculum and is more abstract. Therefore, curriculum is “contextually shaped” and cannot be understood or changed without attention to its setting or context, which can be seen as structural and sociocultural (Cornbleth, 1990:6). Curriculum emerges from dynamic interaction of action, reflection, and setting, not action and reflection alone (Cornbleth, 1990:7).

2.1.7 Curriculum design, curriculum development and curriculum framework

Zais (1976:10), supported by Visser-Voerman, Gustafson and Plomp (1999), as well as Gustafson and Branch (2002), refers to curriculum design as the arrangement of the components or elements of a curriculum. The components or elements included in a curriculum are aims, goals, objectives, subject matter or content, learning activities and evaluation. The nature of these elements and the pattern of organisation in which they are brought together as a unified curriculum, constitutes the curriculum design. Grundy (1987:42) postulates that the way in which educationists and non-educationists perceive the form of a curriculum will determine its design.

The fact that ‘curriculum’ is viewed differently by various groups also implies that there are different ways in which a curriculum can be designed. According to Doll (1974:66-82) there are three major representative curriculum designs. Firstly, curricula can be designed around subjects, disciplines or broad fields. The clustering of two or more subjects is an example of a broad-field curriculum design. Secondly, a curriculum can be designed around students. Student-centred and experience-centred curricula are examples of these types of curricula. Thirdly, a curriculum can be designed around social problems such as poverty, social justice, health-related issues or real-life situations. Carl (2012:66) links curriculum design to decision-making with respect to what content should be included, how the curriculum should be presented, and how it should be evaluated. Curriculum design is the planning stage in curriculum development. Barnett and Coate (2005:137) also believe that learners should be involved in curriculum design as “knowers, as actors and as human beings”. According to Barnett and Coate (2005:147) and Carl (2012:67), there seems to be no fixed recipe or blue print for successful curriculum design, because curricula are always changing to adapt to a changing world. Curriculum should, therefore, be a flexible process.

Various other sources have proved to have an influence on curriculum design. Oliva (1998), for instance, refers to disciplines such as philosophy, sociology, history, subject areas, psychology, and technology as sources that might influence the process of curriculum design. A report by UNESCO (2008:1) also emphasises the importance of technology and, in particular, information technology as a force that influences the curriculum. Moreover, it reflects on the challenges posed to teachers and lecturers in an increasingly complex, information rich and knowledge-based society. According to this report, information technology should not only be used as a tool, but rather as a methodology, as a means to an end. Various psychological forces also influence the curriculum. Because of different learning styles students learn in different ways. Lecturers need to address this reality when developing the curriculum at the micro-level. Furthermore, the way in which lecturers and curriculum developers understand the concept of ‘learning’ will also influence both the design of learning activities, learning content and the construction of a learning environment.

In addition, Oliva (1998:23), Van Rooy (1996:107) and Kessels (1999) describe curriculum development as a rational activity and a comprehensive term that incorporates curriculum planning, design, implementation and evaluation. Curriculum development stages range from education planning at macro-level to lesson preparation at micro-level and can be divided into

four phases, namely design, dissemination, implementation and evaluation (Carl, 1995:47-49). Furthermore, curriculum development can be attained at three levels according to Van Rooy (1996:104) and Carl (1995:82), while Marsh (2004) and Van den Akker (2003) add a fourth level named (nano):

- Macro-level curriculum development is at issue when the general and all inclusive educational policy, educational aims and provision of education in a particular country, province or institution are discussed or when the totality of educational activities of a particular didactic environment are scrutinised.
- Meso-level curriculum development gives the responsibilities of curriculum development to authorities, senior administrators and experts (for example at provincial, departmental or regional level). It is mainly subject curricula that are developed at this level.
- Micro-level curriculum development occurs when aspects of curriculum are considered with regard to individual didactic situations, such as planning a scheme of work for an individual lesson or even during a single lesson presentation. The responsibility for micro-level curriculum development is situated at the institutional level.
- Nano-level is about student learning resulting from all the previous curriculum planning and the actual teaching activities. Curriculum challenges is normally a result of gaps and inconsistencies between these four levels (Marsh, 2004; Van den Akker, 2003).

For the purpose of this study the issue of curriculum development primarily focuses on the macro-level of curriculum development, since a proposed framework might point towards changes that involve TVET college sector policy changes.

Ragland and Rosenstein (2014) suggest that the difference between a curriculum (or curriculum model) and a curriculum framework is that a framework is a looser structure, consisting of elements which can only guide the construction of a curriculum. This might include, for instance, why students should learn about certain aspects of a subject and why they should not learn about others at a particular point in time. MacTighe and Wiggins (2010) maintain that a curriculum framework provides a plan and structure for organising a curriculum. Callan (2001) proposes a capability framework for leaders of VET at TAFE colleges which defines what attributes are expected of these leaders at various levels of the organisation. He identifies six

leadership capabilities in areas of corporate vision and direction (which includes being able to communicate the vision, building successful teams, and inspiring people to make a commitment). These leadership capabilities are: strategic thinking and planning, change leadership, communication that influences, business and entrepreneurial skills and the advancement of the interests of VET. These core capabilities are similar to those advocated by the Management and Leadership National Occupation Standards in the United Kingdom (see Coates, Meek, Brown, Friedman, Noonan & Mitchell, 2013; also see Kozlowski, Gully, Salas & Cannon-Bowers, 1996). ‘Capability’ does not only refer to current knowledge, skills, qualities and understanding, but also to an individual’s potential in these areas (Callan, Mitchel, Clayton & Smith, 2007). Callan’s (2001) initial framework was revisited in 2007 and perceptions of effective VET leadership did not appear to have changed, but Callan *et al.* (2007) found that a more systematic approach to leadership development was necessary and that a leadership capability framework was still helpful.

THE CONCEPT OF CHANGE

2.1.8 Defining the concept of change

The South African Department of Education (DoE, 2007a) sees some of the negative features of the then technical colleges as follows: Since 1994 these colleges have tried to overhaul curricula that were outdated and unresponsive to an emerging economy; they have also inadequately addressed low throughput rates and negligible industry take-up of students. Furthermore, those working in colleges had lost contact with industry and had little knowledge of new and emerging workplace needs and trends. Similarly, in Yemen, it was found during a study of the vocational institutions that the mismatch between the outcomes of the institution and student employment opportunities is due to inadequate collaboration with industries (Akomaning, Voogt & Pieters, 2011; Lumby, 2000). Teachers had outdated subject matter knowledge due to inadequate industrial relationships (Bakah, Voogt & Pieters, 2012) and management staff lacked managerial knowledge and skills. Moreover, the curricula had not been reviewed for many years (Gervedink Nijhuis, Voogt & Pieters, 2012).

The re-examination and restructuring of education at all levels were a logical consequence and sequel to the introduction of a new South African political dispensation and the transition from apartheid to democracy (Fourie, 1998:1). Internationally UNESCO (2012:5) also recognises

that new developments and societal challenges linked to the emergence of knowledge societies, the rapid spread of information and communication technologies, the effects of the global financial crisis and the implications of climate change and demographic trends, as well as the emergence of new and often higher level TVET skills have contributed to new thinking about change in technical and vocational education.

Stoner and Freeman (1992:408) define planned change as the deliberate design and implementation of a structural innovation, a new policy or goal, or a change in operation philosophy, climate or style. Drucker (1989:10), on the other hand, defines change as a time “of great opportunity for those who can understand, accept and exploit the new realities”. He further reiterates that “a time for change is above all a time of opportunity for leadership”. Change thus constitutes a process through which organisations acquire, grow and utilize human, financial, and knowledge-based sources, as well as other pivotal assets that can be combined in unique and powerful ways in order to bring about change (Graetz, Rimmer, Lawrence & Smith, 2006:12). Lachiver and Tardif (2002) postulate the following key factors for initiating curriculum change: strong leadership accepted by the academic staff; sharing and accepting the need for change; the extent of the curricular change, whether wide-scale or minor; and lastly the degree of flexibility for departmental staff.

Connor and Lake (1988:18-21) identify the following external sources of change: social change, political or legal change, economic change and technological change. Social changes are in the beliefs, values, attitudes, opinions and life styles of society as a whole. Political or legal changes in the broad political ideology or narrow party political policies of the government in power may be significant sources of change. Economic change refers to national or international economic conditions, such as growth or recession. Technological change refers to how general technological developments, such as computers, affect all organisations. The TVET college sector, as in the case in time, is predominantly affected by political and economic changes, especially in South Africa.

Governments are obviously among the most powerful and persistent forces for change (Green & Hayward, 1997:18; Brock-Utne, 1996:338), as they can influence education systems through policy decisions that affect the amount and distribution of resources, the level of participation, the nature of programmes, and the appointment of personnel (also see Bunting 2007). However, in similar fashion, academic staff members can and have played major roles in the process of

change. They are important actors in the curriculum process, because changes grow out of their work. As teachers and scholars they are acutely aware of changes in their fields, of technological advancement and of new approaches that require restructuring of their fields and their institutions (Clark, 1993:168). Both Bentley (2002) and Burns (2002) support Clark's view, stating that in order for educators to be innovative, new ideas, methods and practices must be generated. Hence it is important that the status of educators is valued and that their capacity for innovation be developed (also see Stevenson, 2007).

The next section will probe into the context of leadership, leadership styles and the effectiveness of leadership to support curriculum change.

2.1.9 Implications of change

The main external driver of change in TVET colleges comes from the government through new and amended policies. However, TVET college leadership capacity is hampered by insufficient physical and human resources (DoE, 2001; DoE, 1998a; DoE, 2008b; DHET, 2010a; Kraak *et al.*, 2016:19-20). McGrath (2005:139) maintains that, while some VET curricula are outdated, some infrastructure is even more outdated and worn-out. VET provision is costly, yet many graduates do not get formal employment. The range of programmes often appears to have little to do with existing and potential labour market opportunities. According to the Department of Education (DoE, 2001), Gewer (2002), TVET colleges are still viewed as underperforming, in spite of functioning in an environment of constant and multiple institutional and curricular change, intended to improve quality and efficiency (Kraak, Paterson & Boka (2016:viii).

Vally and Spreen (1998:14) caution that “concerns over the new educational policy are not just about curriculum change, but also about institutional change”. The implication of change in colleges points to significant impacts on strategic areas such as governance structures, change from provincial to national government competency, human resources, infrastructure, funding norms and standards, curriculum, management of information systems, and student support services (Gewer, 2002; DoE, 2001; Wedekind, 2008; DHET, 2010a; Kraak *et al.*, 2016:x).

For the purpose of this study the focal strategic areas are curriculum change and the leadership features required to implement such change. Connor and Lake (1988:135-138) note that the introduction of organisational change requires the commitment of human resources, time and money. With regard to resource requirements, the activities involved in managing change can

be broadly divided into four phases: diagnosing resource requirements, implementation of resource requirements, the institutionalisation of resource requirements, and the allocation of resources. In each of these phases resources are important and required. Unfortunately organisations do not have unlimited resources and resource availability and allocation become a practical consideration tempering the pursuit of the ideal state of affairs.

Transformation is poorly understood and is a term that is often used as synonym for change. Daszko and Sheinberg (2005) describe transformation as the creation and change of a whole new form, function or structure. These authors emphasise that to transform is to create something new that has never existed before and could not be predicted from the past. Transforming an organisation means having the courage to lead a journey into the unknown, with dedication and passion for learning, and taking actions based on continual new learning. Transformation occurs when leaders create a vision for transformation and a system to continually question and challenge beliefs, assumptions, patterns, habits and paradigms with an aim of continually developing and applying management theory, through the lens of the system of profound knowledge. Furthermore, transformation occurs with intention that provides constancy and purpose. Transformation is change, while not all change is transformation (Daszko & Sheinberg, 2005; Kotter, 1995).

2.1.10 The concept of curriculum change and leadership

The curriculum is at the heart of the education and training system (DoE, 1997:1). In South Africa in particular, the past curriculum has perpetuated race, gender, and ethnic divisions and has emphasised separateness, rather than a common citizenship and nationhood. “It is therefore imperative that the curriculum be restructured to reflect the values and principles of our new democratic society.” (DoE, 1997:1). Badroodien and Kraak (2006:181) cite that curriculum development for vocational education is a national competency and therefore there is minimal room for institutional innovation and curriculum customisation. Centrally determined and rigidly administered curricula prevent institutions from responding to locally identified training needs and from reducing the length of training to lower costs (Middleton, Ziderman & Van Adams, 1991:25).

Naidu, Joubert, Mestry, Mosoge and Ngcobo (2008), Bottery (2007) and Ozga (2005) all highlight the fact that competing demands, resulting from rapidly changing environments, suggest major challenges to management and leadership in education. It is important that educational leaders and managers keep abreast of emerging trends if educational institutions are to transform and provide learners with the best learning opportunities. The challenge for education leaders in the South Africa is therefore to be aware of global educational demands, as well as of the need for transformation within the country. Educational managers and leaders must thus understand the South African education arena and its historical context so that they are able to embrace issues of change and transformation and give effective direction to their institutions. South Africa has, since the inception of the democratic government, focused on addressing the country's educational legacy, and as a result, educational leaders are faced with the challenge of transforming educational institutions to comply with rapidly changing policies. At the same time they have to ensure that the full potential of every learner is unlocked to meet the needs of a changing South African society (Naidu *et al.*, 2008; Bottery, 2007; Ozga, 2005).

Naidu *et al.* (2008:2) further espouse that, contrary to schools, leadership in colleges is a new phenomenon, because in the past colleges were not self-managing and principals were administrators in a highly regulated environment – especially in the so-called state governed colleges. The period of transition to democracy has placed college principals in a dilemma, because they now have to be accountable to both their employer and their community for effective delivery of education that involves, among other roles, developing and sharing the college vision and mission, ensuring sound governance, new policy implementation, human resource development, as well as financial and procurement management. Bush and Glover (2003:10) emphasise that all aspects of management and leadership exist for the purpose of enabling and supporting teaching and learning. The principal and the entire staff need to be leaders and managers of learning, with the principal as the lead learner, to embrace the concept of life-long learning and instil a culture of learning throughout the college. The main goal of the any college should be to continuously improve the delivery of teaching and learning and to ensure that every learner has access to optimum opportunities for achieving the highest quality of education (also see Leithwood, Jantzi & Steinbach, 1999:8).

2.1.11 Change models and strategies

Strategies required for change are normally found in tandem with concepts such as social relevance, quality, improved institutional management and leadership, access to information (which includes the use of information and communication technologies), academic solidarity, and international cooperation (World Bank, 2000:93-94; Mato, 1999:22; Domatob, 1998:115-131; Power & Rienstra, 1999). Lewin (1947:5-42) has pointed earlier to the fact that successful change requires unfreezing the status quo, changing to a new state and refreezing the new change to make it permanent. Lewin's change model, action research and the contemporary approaches to change are well summarized by Cummings and Worley (2001:19) and portrayed in Figure 2.1 below.

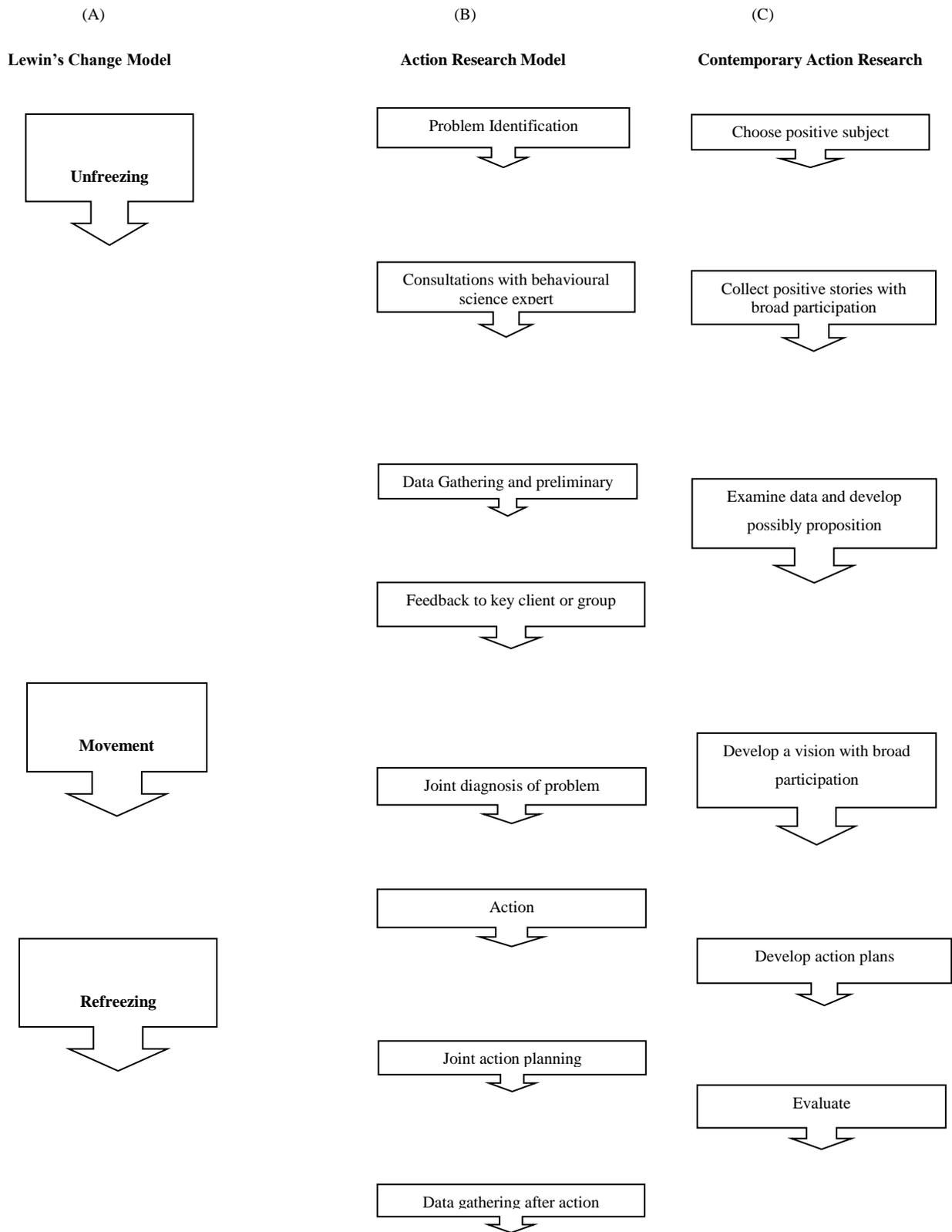


Figure 2.1 Comparisons of planned change models
 (Source: Cummings & Worley, 2001:19)

Figure 2.1 suggests that change leaders should ‘unfreeze’ the status quo of the area affected by the change by using various methods or steps as listed above before attempting to change over to the new state of affairs. Activities to ‘refreeze’ the new state of the affected change initiative must lead to permanency of the new change. Engeström (1999) strongly identifies with Lewin’s model and explains that change becomes difficult where people cannot let go of the past and accept the future. Hence development can only take place once the old has been rejected.

Connor and Lake (1988:145-155) identify five steps as a first major segment which may be described collectively as the initiating process. This segment describes the process of change from the acknowledgement of the problems affecting the organisation to the formulation of an ideal solution (see Table 2.1 below).

Table 2.1 *Steps in managing organisational change*

| | | |
|---------------------------------------|---------|---|
| Segment 1: Initiating process | Step 1 | Acknowledge destabilising forces |
| | Step 2 | Analyse against accepted standards |
| | Step 3 | Formulate problem statements |
| | Step 4 | Suggest solutions |
| | Step 5 | Develop ideal solution (change: objects, methods, agents and targets) |
| Segment 2: Suitability of solution | Step 6 | Describe current organisational state |
| | Step 7 | Describe future organisational state |
| | Step 8 | Describe differences between current and future organisational states |
| | Step 9 | Describe restraining and facilitating factors |
| | Step 10 | Revise vision of future state |
| Segment 3: Formulate change | Step 11 | Construct transition management profile |
| Segment 4: Implement change | Step 12 | Develop strategies and tactics |
| | Step 13 | Implement strategies and tactics |
| | Step 14 | Institutionalise changes |

| | | |
|--|---------|-------------------------|
| | Step 15 | Evaluate the change (s) |
|--|---------|-------------------------|

Source: Connor & Lake, 1988:145, 155

The steps suggested in Table 2.1 may point to the fact that leaders, and TVET college principals in particular, could be seen as leaders in the curriculum change process and have the responsibility to initiate, manage and support curriculum change in their institutions. The four segments could serve as a guide to the TVET college principal for the development of a project plan for managing successful organisational change in a structured manner, with clearly defined steps per segment. Furthermore, organisational change requires from the principal to ensure that the purpose and vision of change is well-defined, that the necessary capacity regarding resources, skills and knowledge for implementing the change exist, and to support the change process and the staff who are at the ‘coal face’ of it. When these requirements are met, TVET college leaders, such as principals and deputy principals, as leader-managers can apply various relevant theories and models when change is implemented.

Van der Westhuizen (1998) suggests that the purpose of the development of an academic leadership model is to provide a structure and process for improved leadership in higher education. According to this author, an academic leadership structure is informed by three sub-structures of leadership, namely institutional leadership, individual leadership and administrative leadership. As the role of an institutional leader normally emerges from an appointed position, it is important to note that the promoted or appointed academic staff member is first and foremost an individual leader. The individual leader has to fulfil specific administrative duties, while the institutional leader has to cope with and fulfil inherent administrative leadership (Van Der Westhuizen, 1998:168, 177). Inherent administrative leadership refers to the overarching setting of organisational strategic direction and vision by the institutional leader to ensure overall institutional effectiveness and compliance. Inherent administrative leadership is linked to, for instance, the development of institutional strategic plans, vision and mission statement, policies and procedures.

A strategy for change provides the space for institutions to enculturate a flexible, innovative and creative strategy for institutional leadership and empowerment (Van der Westhuizen, Mosoge & Van Vuuren, 2004:319). In South Africa, the legislative demands for TVET institutions provide an important impetus towards change and transformation. However, Kotter (1999:1-2) indicates that far too few bright and experienced individuals are providing the

leadership that is necessary. In many instances, organisations lack leadership and too often do not perform according to expectations. Leadership development is therefore imperative for revitalising institutional structures and for promoting academic staff development in higher education institutions. Leadership becomes the central driving axis and the primary force behind successful change (Van der Westhuizen, Mosoge & Van Vuuren, 2004:320). Kotter suggests that institutions often declare victory too soon, indicating the misconception that change is a once off business, not realising the continuity of the process (Kotter 1999:75-90).

Kotter (1999:8, 18) also postulates that institutions may increasingly depend on the creativity of their members for survival. Efficient leaders will be those who find ways to retain and develop their talented and independent-minded staff. Change, which has become a constant feature in the TVET college sector since 1995, has been marked by an accelerated pace and characterised by impermanence, uncertainty and unpredictability for the past decade. It is therefore evident that the leadership role of college leaders in managing and supporting curriculum change is vital. For this reason the concept of leadership will be further explored in the next section.

THE CONCEPT OF LEADERSHIP

2.1.12 Defining leadership

Collinson (2005) points out that the concept of leadership suggests a complex multi-directional mix and is often described as dialectical. The terms leadership and leadership effectiveness also mean different things to different people (Yukl, 1998:2, 5). Maxwell (2003:143) suggests that one widespread misunderstanding is that the functions of leading and managing are one and the same. The main difference between the two is that leadership is about influencing people to follow, while management focuses on maintaining systems and processes. To move people in a new direction, influence is needed (also see Dimmock, 2003:7). This corresponds with Lussier's (2000:452) view which defines leadership as the process of influencing employees to work toward the achievement of organisational objectives. Robbins (1998:347) also held this view earlier by stating that "...leadership is the ability to influence a group toward the achievement of goals". Similarly, Baron (1993:444) views leadership as the process whereby an individual influences individual and group members towards goal setting and goal achievement with no force or coercion (also see Hammersley-Fletcher & Kirkham, 2007;

Lussier, 2000; Robbins, 1998; and Baron, 1993). In addition, Binney, Wilke and Williams (2005:66-71) indicate that the hardest part of leadership is tolerating uncertainty, which is partially driven by external expectations of predictability and partially by the need for internal performance. Along the same vein, Kouzes and Posner (2007:18) assert that leaders are pioneers. They are willing to step out into the unknown and search for opportunities to innovate, grow and improve.

In education institutions this is no different. Kruger (2003:206) describes instructional leadership as "...responsibility to ensure that effective teaching and learning takes place" (also see Stronge, Xu & Leeper 2013 and Jackson, 2013). Similarly, Leithwood and Louis (2011:6, 29) focus on classroom practices where the instructional leader is expected to possess adequate curriculum knowledge to ensure that relevant curriculum content is delivered to students. Leadership in an educational context firstly comprises the ability to understand emerging trends in education, secondly to guide an institution through various challenges by achieving a vision based on shared values, and thirdly to promote best practices to improve student opportunities and achievement (Mestry, 2013; Cotton, 2003; Naidu *et al.*, 2008). Similarly, Leithwood *et al.* (1999:8) cite that educational leadership typically assumes that the critical focus for attention by leaders is the behaviour and development of teachers as they engage in activities directly affecting the growth of students (also see Fullan, 2014; Leithwood, Louis, Walhlstrom & Anderson, 2010; Kruger, 2003; Naidu *et al.*, 2008).

Raelin (2003:5) proposes that in the twenty-first-century organisation, there is a need to establish communities where everyone shares the experience of serving as a leader, not serially, but concurrently and collectively. Binney *et al.* (2005:6-13) echo this view and articulate that living leadership implies that people who are more able to lead in the moment can have formal power over those who are in positions of authority. Other authors (see Quigley 1993; Bennis & Nanus, 1985) suggest that a leader's power is the capacity to translate a vision and supporting values into reality and sustain them. In tandem, Jaworski (1996:182) states that "... leadership is about creating, day by day, a domain in which we and those around us continually deepen our understanding of reality and are able to participate in shaping the future". The leader's vision is regarded as the blueprint for institutional direction and strategy, it is about persuading most of the people most of the time and getting others to articulate their goals and direction clearly (Quigley, 1993; Bennis & Nanus, 1985; Jaworski, 1996).

Kotter (1992:18) argues that to produce change, the setting of direction of that change is fundamental to leadership. Setting direction is not the same as planning; it is more an inductive process that looks for patterns, relationships and linkages that help explain things. To quote Kotter: “The direction-setting aspects of leadership does not produce plans; it creates vision and strategies” (Kotter, 1992:18). Bush (2003:5-6) identifies three dimensions of leadership, namely the ability to influence the actions of individuals or groups, the personal and professional values based on the character of an individual, and the vision and ability to articulate this vision throughout an organisation. Along the same line, Yudelowitz, Koch and Field (2002:2) associate leadership with the ability to direct change and with being future-orientated.

The next section deals with a variety of leadership theories that are related and relevant to educational spheres.

2.1.13 Leadership theories

Leadership theories focused on in this section are transformational, academic, and shared, innovation and participative leadership. These leadership theories were considered most applicable to the phenomenon under scrutiny and were chosen by the researcher for exploration to gain a broad theoretical understanding.

2.1.13.1 Transformational leadership

Transformational leadership is defined as a power and influence theory where the leader acts in mutual ways with the followers, appeals to their higher needs, and inspires and motivates followers to move toward a particular purpose (Bensimon, Neumann, & Birnbaum, 1989; Rost, 1991). Transformational leaders attend to the individual needs of followers and offer inspiration and motivation to organisations and their constituents by providing meaning to their work, rather than just rewards. Rost (1991:69) notes that transformational leadership acts as a bridge between old and new views of leadership, although it remains leader focused and hierarchical. Transformational leadership is characterised by qualities such as inspiration, trust, passion, and commitment. Current concepts related to leadership such as ethics, social change, and empowerment are directly influenced by transformational leadership (Rost, 1991:153).

According to Muijs, Harrid, Lumby, Morrison and Sood (2006), transformational leadership emerged in the late 1970s. It is still popular today, as it is regarded effective, especially in educational institutions. Transformational leadership is viewed as leadership that renews individuals and organisations through an appeal to values and long-term goals. It focuses on the role that leaders play in promoting both personal and organisational change while focusing on motivation and performance of individual employees or followers (Muijs *et al.*, 2006).

According to Seltzer and Bass (1990:695), Burns (1978) was the first person to use the term ‘transformational leadership’. He put transactional leadership at one pole of the continuum and transforming leadership at the other (Seltzer & Bass, 1990). Bass (1985) sees transactional leadership as a lower-order skill where followers may change if their need for safety and security has been removed. Bass views transformational leadership as more of a high-order skill where followers’ concerns may be elevated to a need for recognition and achievement (Seltzer & Bass, 1990:695). The lower-order skills develop as a result of leadership dependent on an exchange process or transaction, but higher-order improvement calls for transformational leadership. Transformational leadership may focus on the leader’s qualities and behaviours but followers in such a relationship “...are willing to identify with the vision articulated by the leader” (Howell & Shamir, 2005:99).

In contrast to transformational leadership, transactional or negotiated leadership involves a transaction or exchange between the leader and his or her followers, or those who agree to be led (Bass & Stogdill, 1990). The leader influences followers to act through compliance and transactions (Eddy, 2010). According to (Van Wart, 2001) these transactions mean that followers can gain in some way for their efforts. The motivation to perform or act can take the form of promises of rewards and benefits. Transactional leaders rely on certain types of power to reach their goals, namely legitimate reward or punishment. They administer and adjust incentives to motivate constituents to perform well (Van Wart, 2011). However, once the reward has been removed, motivation for compliance may disappear if followers have not identified with the underlying value system of the leader (Eddy, 2010).

Bush and West-Burnham (1994:69-70) and Gronn (1996:15-16) support the aforementioned views and provide the following insights into the two contrasting leadership theories: Transactional leadership refers to a contract between the leader and the followers to achieve the organisation’s goals while the leader agrees to good working conditions. This leadership

approach is task-oriented. Transformational leadership, in contrast, ensures ‘commitment’ from the followers where both the leader and the followers want to become the best and work towards higher-level goals common to both. This approach is people-oriented. These two varying ways of viewing and practicing leadership imply that some leaders are predominantly interested in results (task-oriented), while others are mainly interested in relationships (people-oriented).

Den Hartog, House, Hanges, Ruiz-Quintanilla and Dorfman (1999) define transformational leadership as characterised by leaders who are encouraging, positive, motivational, builders of confidence, dynamic, and who demonstrate foresight. In addition, Wolverton and Gmelch (2002) maintains that, while transformational leadership assists in building satisfaction among staff and faculty and increases morale, transactional leadership helps building the infrastructure, capacity and resources. Tichy and Devanna (1990:iv) argue that central to global competitiveness is an institution’s ability to transform continuously, especially in terms of turn-around time and speedier information flow. In their view, therefore, transformational leadership is about change, innovation and entrepreneurship which has to happen at all levels of the organisation and not only at the top. Transformational leadership thus seems to be able to cope with complex situations if transformational practices reside in all members of an organisation (Muijs *et al.*, 2006).

Yukl (2010), however, criticises transformational leadership for reflecting the assumptions associated with the old heroic leadership stereotype theories. One of these assumptions is that followers are influenced by the leader to “make sacrifices and exert exceptional effort” (Yukl, 2010:39). Yukl (2010:33) also warns against dependency on what he calls ‘two-factor models’, namely task-orientated versus relations-orientated leadership, autocratic versus participative leadership, leadership versus management, transformational versus transactional leadership and charismatic versus non-charismatic leadership.

Real leadership transformation is dependent on the nature and quality of educational leadership (Bush, 2007) - a discussion that will follow in the next section (see section 2.4.2.2).

2.1.13.2 Academic, curriculum or educational leadership

Robertson (2005:40) suggests that educational leadership is about “...informed actions that influence the continuous improvement of learning and teaching”. This view is supported by

Gleeson and Knights (2008:57) who perceive leaders to be too distracted from the core purpose of their work, which is to improve teaching and learning. Quinlan (2014) also supports the view of these authors, stating that the focus of educational leadership essentially has to be on the process of learning, such as the holistic development of the learner (also see Fullan, 2014; Mestry, 2013; Leithwood *et al.*, 2010).

An educational leader is faced with a number of tensions, such as meeting government mandates and responding to many demands, and is held accountable while cost pressures create conflict with more altruistic values (Quinlan, 2014; Grogan, 2013; Richard & Catano, 2008). Robertson (2005:45) states that educational leaders are continually in a ‘reactive mode’, since they have to try to balance the administrative aspects of their roles at the behest of others, including policies for which they feel no ownership. Many educational leaders have to become experts in areas such as fiscal and human resource management and public relations, skills in which few are trained or experienced. Yet, they have to take responsibility (also see Grogan, 2013; Richard & Catano, 2008; Robertson, 2005).

Leaders in vocational education have to consider strong, often conflicting forces evident in the sector, namely the drive for ‘entrepreneurial business development and profitability’, the need to demonstrate ‘innovative educational leadership in a community driven by strong pedagogical values’ and the need to meet the ‘objectives, constraints and funding requirements of the bureaucracy that emphasises regulatory compliance and risk management approach’ (Foley & Conole, 2003:25). It has been pointed out (Lambert, 2013) that such practices are in danger of undermining the purpose of education.

Academic institutions (organisations) function significantly different from business or industrial organisations. Lathrop (1990:7) indicates that over the years there has been a tendency to apply general leadership theories and approaches to higher education. However, a number of organisational characteristics of academic institutions make them more difficult to manage (and lead) than businesses (Birnbaum, 1988:29). In addition, Corson (1960:43) earlier supported the notion that higher education presents “... a unique dualism in organisation structure” that can and does present difficulties and problems for academic leadership.

To illustrate the mentioned complexity of higher education leadership, Middlehurst (1993:67, 89,194) maintains that opportunities exist in intellectual leadership that is founded and achieved in research, teaching, and scholarship, as well as in academic leadership which

influences the direction of academic and administrative leadership. She indicates that academic leadership is necessary for at least the following: to guide and develop disciplinary and teaching directions; to develop and implement research programmes; to interpret values, to identify collective purposes and interests; and to respond to change and transformation that takes people and institutions forward. For Middlehurst it is the responsibility of leadership to consider trends, to come up with possible scenarios and to contribute to the shaping of ideas and events.

Leadership in academic settings is often associated with academic excellence and is practiced either collectively or individually. Individual leadership based on the concept of intellectual leadership can be achieved in research, teaching and scholarship. Academic leadership, contrastingly, is associated with influencing the direction of academic activities and areas of studies within departments, schools or faculties. Institutional leadership thus has to provide opportunities for administrative leadership (Middlehurst 1993:69). According to Van der Westhuizen (1998:68) academic leadership is pursued within a value system of academic freedom, critical reflection, rationality, democratic participation and autonomy. Academic staff members are motivated by individual direction and choice to the quest for knowledge and truth in specific disciplines and fields. It is therefore possible to achieve expertise regardless of age and rank and have a voice in academic affairs on the basis of reasoned argument as well as perceived fair and democratic decision processes.

Green and McDade (1991:155) posit that cultivation of individual academic leadership is less straightforward than institutional leadership. Institutional leadership derives from the authority of the position, while individual leadership emerges. They also indicate that the opportunities for academic staff to lead are numerous. Academic staff must take initiative for their own development by taking an active role in creating opportunities, staying active with colleagues in the discipline, developing a contract for personal and leadership development, and taking action (Green & McDade, 1991:165).

A number of leadership skills and roles are important for institutional leaders of academic institutions to earn respect and credibility (Van der Westhuizen, 1998:127-155). Table 2.2 captures examples of such skills and roles.

Table 2.2 Leadership skills and roles

| THE DYNAMIC ACADEMIC LEADERSHIP STRUCTURE | |
|---|---|
| Institutional Leadership | <ul style="list-style-type: none"> ▪ Institutional leaders have a vision ▪ Institutional leaders can define reality ▪ Institutional leaders have a value system ▪ Institutional leaders set direction ▪ Institutional leaders align people ▪ Institutional leaders as Servant Leaders ▪ The institutional leadership skills and roles inform the institutional culture |
| Individual Leadership | <ul style="list-style-type: none"> ▪ Individual leadership and lifelong learning ▪ Individual leadership and action learning ▪ Individual leadership and systems thinking ▪ Individual leadership and creativity and entrepreneurial skills ▪ Personal and professional development ▪ Individual leadership skills and roles inform the institutional culture |
| Administrative Leadership and Management Processes | <ul style="list-style-type: none"> ▪ Policies and strategies ▪ People Management ▪ Resource management ▪ Technology Management ▪ Management Processes |
| Leadership Development and transforming ourselves and our organisations | <ul style="list-style-type: none"> ▪ The concept of self-fulfillment ▪ The autotelic personality and optimal experience ▪ Leadership development and the autotelic experience |

Source: Van der Westhuizen (1998:127-155)

Table 2.2 provides a guide with numerous leadership skills and roles for institutional leaders of academic institutions to enhance their leadership capabilities. These include institutional leadership skills of setting direction and within a value system guided by a clear vision. Individual leadership skills promote lifelong learning, creativity and entrepreneurial skills. Administrative leadership roles include policy and strategy development, resource management and lastly the concept of self-fulfillment.

2.1.13.3 Shared, innovative and participative leadership

The notion of involving all staff in change is hardly a new one. Greater involvement has often been associated with greater likelihood of sustainable success, and, as Harris and Bennett (2001) argue, decentralised and participative leadership has been linked to school improvement (also see Coles & Southworth, 2004; Marzano, Walters, & McNulty, 2005; Gronn, 2002). Leadership is often seen as an inherent team process and has been labelled team, relational, shared, and multilevel leadership. Leadership is therefore defined as a collective and collaborative process, focused on relationships and networks. The focus in a team process is on interconnectedness and working collectively (culture) rather than emphasising individual players and results. All members deserve respect. Team leadership therefore suggests that teams will not be effective unless they have ample time to build relationships and have significant dialogue before working on a task (Bensimon & Neumann, 1993; LaFasto & Larson, 2001; and Riggio, Murphy & Pirozzolo, 2002).

Zaccaro, Rittman and Marks (2001:451-452) assert that “effective leadership processes represent perhaps the most critical factor in the success of organisational teams”. There also seems to be an inextricable relationship between leadership processes and team effectiveness. Individual leaders play an important role in facilitating the cognitive, motivational, affective, and coordination processes of teams. Leaders foster team task cohesion and collective efficacy through the motivational leadership processes of setting goals, providing feedback, and developing individual team members (Zacarro *et al.*, 2001:453). Day, Gronn and Salas (2004) challenge such a traditional “individual input” and instead support a perspective of leadership as an outcome of team processes focused on collaborative achievement of common goals. The emergence of new leadership concepts, such as ethics and spirituality, collaboration, networking and partnering, empowerment, social change, emotions, globalization, entrepreneurialism and accountability, is a result of new paradigms and leadership theories. These concepts reflect the new societal context in which leadership occurs - a context described as ‘postindustrial’ by Rost (1991) and as ‘postmodern’ by others (Palestini, 2003; Parry, 1998).

It is not necessary for leaders to provide solutions to situations to bring about change. They should rather shift the locus of responsibility to the people involved to find their own solutions. Followers must be discouraged from looking up to their leaders to provide answers. Leaders should rather ask tough questions and expose followers to changing markets circumstances and

customer demands (Gleeson & Knights, 2008). Gittens (2008) supports this view, stating that there is a critical need to explicitly develop this type of leaders. However, it is a challenge for leaders to create a culture of shared leadership. According to Schwella (2008:43), leaders should be more ‘facilitative than directive’. Furthermore, Muijs *et al.*, (2006) assert that the efficacy of hierarchies where senior managers are separated from middle managers and classroom practitioners has been questioned. It has been suggested that a more integrated or distributed type of leadership would be more suitable in VET institutions.

Leadership teams serve many important institutional purposes, including planning and completing tasks, providing intellectual discourse and problem solving, drawing people together, providing support, and identifying connections and ways groups can assist each other. Leaders need to foster learning in teams, be aware of the mental models of team members and help teams manage and negotiate complexity and systems problems. Teams should have clear goals, developing a collaborative culture, building confidence among team members, fostering technical competence, setting priorities and measuring performance (Busher, 2006; Grint, 2005; Northouse, 2013; Barth, 1990).

Leadership should thus be more broadly conceptualised as a ‘shared, reciprocal influence process’ than merely an assumption of ‘heroic leadership’ (Yukl, 2010:46). With shared leadership, different people take the lead at different times; the dual role of being a leader and also a follower is recognised. Yukl (2010:42) regards shared or participative leadership as “relations-orientated behaviour”, which differs from “change-orientated behaviour”. There has been a general preference to move the focus away from the leader (who is expected to turn around a failing institution) towards those who are led, proposing a more inclusive, shared or distributed form of leadership (MacFarlane, 2014), as long as distribution means the sharing of power rather than the sharing of operational responsibilities (Gleeson & Knights, 2008). Furthermore, in the twenty-first-century organisation, there seems to be a need to establish communities where everyone shares the experience of serving as a leader, not serially, but concurrently and collectively (also see Van Wart, 2011; Eddy, 2010; Binney *et al.*, 2005; and Raelin, 2003).

The different styles in which different leaders interact with employees are determined by numerous factors. The next section addresses several leadership styles and trait theories.

LEADERSHIP STYLES AND TRAIT THEORIES

Leadership styles and trait theories most suited to the research study is dealt with in this section. These include democratic, supportive, participative and team leadership styles, followed by trait theories such as behavioural, contingency power and influence, and cognitive.

2.1.14 Leadership styles

Lussier (2000:456) defines leadership styles as the combination of traits, skills, behaviour and the fact that managers use to interact with employees. Leaders display different behaviour in particular situations. There is no hard and fast rule for the right leadership style. The choice of leadership style is influenced by numerous factors, such as the situation the leader finds himself or herself in, the type of followers the leader has, the ability the leader displays towards subordinates, the time available for a decision to be taken, and the size and nature of the school or college. In terms of McGregor's Theory 'X' and Theory 'Y' leader, there are certain basic assumptions about human motivation that influence the effectiveness of the organisation and the way it functions. Banathy and Jenks (1990:357) presents a comparison of leadership assumptions related to theories 'X' and 'Y' in Table 2.3 below.

Table 2.3 **Comparison of theory ‘X’ and theory ‘Y’ leaders**

| THEORY ‘X’ | THEORY ‘Y’ |
|--|--|
| People must be controlled at work. | People will be self-motivated and committed to goals. |
| The average person prefers to be directed and avoids responsibility. | Most adults prefer responsibility for their own work. |
| Managers make decisions. | People are a valuable resource and can participate in decisions. |
| Workers need a strong leader. | Participative leadership. |
| Highly specialised job training. | People should have opportunities for growth. |
| People are readily replaced. | People are a valuable resource. |

Source: Banathy & Jenks (1990:357)

Table 2.3 also links to the notion of autocratic and democratic leadership styles. The Theory ‘X’ leader mirrors an autocratic leadership style as it demonstrates that workers need to be controlled and guided and managers take all decisions. In contrast, the Theory ‘Y’ leader emulates a democratic leadership style, as it allows for workers to be viewed as being self-motivated, taking responsibility for their work, and being allowed to participate in decision-making.

According to Hanks and Urdang (1980:444), a style is “the way in which something is done, expressed or performed”. In addition, Currie, Boyett and Suhomlinova (2005:289) argue that “no single leadership approach ... is linked to better school performance”. Table 2.3 below depicts examples of different kinds of leadership styles that could be adopted on the basis of applicable leadership theories for the purpose of this study.

Table 2.4 *Examples of leadership styles*

| LEADERSHIP STYLES | |
|--------------------------|---|
| Democratic style | Muczyk and Reimann (1987:53) view a democratic leadership style as a style that promotes or encourages individual staff members to participate in decision-making. |
| Supportive style | This leadership style includes considering the needs of the subordinates by displaying high concern for their welfare and creating a friendly climate in the group. Hellriegel (1989:89) writes that the facilitator does this by being approachable. |
| Participative style | House and Mitchell (1974:84) write that a participative facilitator or leader consults with subordinates, solicits their suggestions and take these suggestions seriously into consideration before making decisions. |
| Teamwork style | Leaders who adopt this style want to promote conditions that integrate high productivity and high morale through concerned team work (Blake <i>et al.</i> , 1981:240). |

Sources: Adapted from: Muczyk & Reimann (1987:53); Hellriegel (1989:89); House & Mitchell (1974:84); Blake *et al.*, (1981:240)

Table 2.4 explains the meaning and purpose of each of the four listed examples of leadership styles, namely democratic, supportive, participative and teamwork. The leader could apply one or a combination of these leadership styles as determined by each situation. The research phenomenon under investigation (curriculum leadership within the TVET context) seems best supported by these four leadership styles where the leader, for instance, encourages teamwork while fully supporting the teams to deliver on specific tasks. A democratic and participative leadership style seems thus applicable to establish strong and effective working teams.

2.1.15 Trait theories

Bass (1985) suggests that the findings from earlier research on the individual factors related to leadership can be classified into six theories or approaches to leadership, as indicated in Table 2.5 below.

Table 2.5 *Overview of twentieth century thought on leadership*

| PERIOD | THEORIES/APPROACHES | THEME |
|--------------------------|--------------------------------|---|
| Up to date 1940s | Trait theories | Leadership is linked to personal qualities |
| Late 1940s to late 1960s | Behavioural theories | Leadership is associated with behaviour and style |
| Late 1960s to present | Contingency theories | Leadership is affected by the context and situation |
| Late 1960s to present | Power and influence theories | Leadership is associated with the use of power |
| 1970s to present | Cultural and symbolic theories | Leadership is the 'management of meaning' |
| 1980s to present | Cognitive theories | Leadership is a social attribution |

Source: Middlehurst (1993:13) and Birnbaum (1988:23)

Stogdill's 1948 review (cited in Yukl, 1998:236) found that the evidence from earlier research of 124 trait studies from 1904 to 1948 were inconclusive to support the premise of the basic trait approach. Some traits were relevant for different kinds of leaders, but they could not ensure leadership success (Bennis & Nanus, 1985:4). Table 2.6 below depicts the early leadership trait research findings, divided into six trait categories related to individual factors.

Table 2.6 *Early leadership trait research findings*

| Trait Categories | Individual factors |
|-------------------------|--|
| Capacity | <ul style="list-style-type: none"> ▪ Intelligence ▪ Alertness ▪ Verbal facility ▪ Originality ▪ Judgement |
| Achievement | <ul style="list-style-type: none"> ▪ Scholarship ▪ Knowledge ▪ Athletic accomplishment |
| Responsibility | <ul style="list-style-type: none"> ▪ Dependability ▪ Initiative ▪ Persistence |

| | |
|---------------|---|
| | <ul style="list-style-type: none"> ▪ Self-confidence |
| Participation | <ul style="list-style-type: none"> ▪ Activity ▪ Sociability ▪ Cooperation |
| Status | <ul style="list-style-type: none"> ▪ Socio-economic position ▪ Popularity |
| Situation | <ul style="list-style-type: none"> ▪ Mental level ▪ Interest in followers ▪ Objectives |

Source: Bass, 1985 (cited in Nahavandi, 1997:50 and van der Westhuizen 1998:37)

Later, in 1974, Stogdill reviewed 163 trait studies from 1948 to 1970 (cited in Yukl, 1998:236). He found that most of the same traits were related to leader effectiveness. Bass (1985) is of the view that a more balanced view about traits emerged, in that some traits could increase the likelihood of leadership effectiveness, but they do not guarantee effectiveness. The different traits are dependent on the nature of the leadership situation.

Table 2.7 below depicts the traits and skills often linked to successful leaders.

Table 2.7 *Traits and skills found most frequently to be characteristic of successful leaders*

| TRAITS | SKILLS |
|--|--|
| <ul style="list-style-type: none"> ▪ Adaptable to situations ▪ Alert to social environment ▪ Ambitious and achievement-oriented ▪ Assertive ▪ Cooperative ▪ Decisive ▪ Dependable ▪ Dominant (desire to influence others) ▪ Energetic (high activity level) ▪ Persistent ▪ Self-confident ▪ Tolerant of stress | <ul style="list-style-type: none"> ▪ Clever (intelligent) ▪ Conceptually skilled ▪ Creative ▪ Diplomatic and tactful ▪ Fluent in speaking ▪ Knowledgeable about group task ▪ Organised (administrative ability) ▪ Persuasive ▪ Socially skilled |

| | |
|--|--|
| <ul style="list-style-type: none"> ▪ Willing to assume responsibility | |
|--|--|

Source: Stogdill, 1974 (cited in Yukl 1998:237 and van der Westhuizen 1998:38)

From Bennis’s (1984:14-19) five year study of ninety outstanding leaders and their subordinates in the early 1980’s, he identified four common traits (areas of competence) shared by all ninety leaders:

- Ability to communicate a sense of outcome or direction that attracts followers
- Ability to create and communicate meaning with clarity and understanding
- Ability to be reliable and consistent (trustworthiness)
- Ability to know one’s self and to use one’s skills within the limits of personal boundaries (strengths and weaknesses)

Table 2.8 depicts the abilities of successful academic leaders such as personal, interpersonal and technical skills.

Table 2.8 *Personal, interpersonal abilities and technical skills of successful academic leaders*

| PERSONAL ATTRIBUTES | INTERPERSONAL ATTRIBUTES | TECHNICAL MANAGEMENT SKILLS |
|---|--|---|
| <ul style="list-style-type: none"> ▪ Courage ▪ Humour ▪ Judgement ▪ Integrity ▪ Intelligence ▪ Persistence ▪ Hard work ▪ Vision | <ul style="list-style-type: none"> ▪ Being open ▪ Building teams ▪ Empathy ▪ Being compassionate | <ul style="list-style-type: none"> ▪ Goal achievement ▪ Problem solving skills. ▪ Diagnostic and evaluative skills. ▪ Resolve conflict ▪ Shape work environment. |

Source: Adapted from Middlehurst (1993:14) and cited in van der Westhuizen (1998:40)

Middlehurst, Pope and Wray (1992:1) find that certain characteristics and abilities in the perceptions of institutional leadership is also of importance. Skills listed under the leadership skills and abilities include: professional and technical competence, interpersonal skills, intellectual and conceptual abilities, communication skills, and information-processing skills. Due to the complicated nature of people, there is not one trait that will ensure successful and effective leadership. A combination of traits should be applied within the changing context of generations (Middlehurst *et al.*, 1992).

2.1.15.1 Behavioural theories

The focus of leadership research in the late 1940s shifted to that of the behaviour of leaders, what leaders did and how they did it. Behavioural research included looking at leaders' actions and also the styles through which these actions were performed. The notion of particular attributes and abilities did not disappear altogether, but they were more strongly associated with leadership styles (Nahavandi, 1997:30; Middlehurst, 1993:15). Kouzes and Posner (1987:187) find that leaders performing at their best are those that are "modelling the way". Such modelling thus implies leading by example and to practice consistency between words and actions to gain respect and credibility.

Two key aspects of leadership behaviour, namely initiating structure and being considerate of the leadership context, were identified by the Ohio State University Leadership Studies (Yukl, 1998:46; Nahavandi, 1997:31; Middlehurst, 1993:15; Hersey & Blanchard, 1988:91). These two aspects are summarised in Table 2.9 below.

Table 2.9 *Two key aspects of leadership behaviour*

| INITIATING STRUCTURE | CONSIDERATIONS |
|--|---|
| Activities such as: <ul style="list-style-type: none"> ▪ Directing ▪ Coordinating ▪ Planning ▪ Problem solving | Behaviour such as: <ul style="list-style-type: none"> ▪ Supportive ▪ Friendly ▪ Consultative |

Source: Adapted from Hersey & Blanchard (1988:91-92); Middlehurst (1993:15); Nahavandi (1997:31); Yukl (1998:47) as cited in van der Westhuizen, 1998:42)

Table 2.9 links to the notion of a supportive, friendly and consultative environment as a prerequisite to be considered and created by the leader to ensure effective application of the four activities listed under the initiating structure. Activities such as directing, coordinating, planning and problem solving could thus be applied to various strategic areas of an organisation.

A person's leadership style can be identified within at least a range of five leadership styles, as described by Blake and Mouton (1978:11):

- *Impoverished*. Exertion of minimum effort to get required work done is appropriate to sustain organisations' membership.
- *Country Club*. Thoughtful attention to needs of people for satisfying relationships leads to a comfortable, friendly organisation atmosphere and work tempo.
- *Task*. Efficiency in operations results from arranging conditions of work in such a way that human elements interfere to a minimum degree.
- *Middle-of-the-Road*. Adequate organisation performance is possible through balancing the necessity to get out work while maintaining morale of people at a satisfactory level.
- *Team*. Work accomplishment is from committed people: Interdependence through a 'common stake' in organisation purpose leads to relationships of trust and respect.

It seems important for academic leaders to be aware of these different styles of leadership, which they can apply separately or in combination, depending on the leadership situation. For example, a task leadership style will be most effective in cases of high pressure workload to meet deadlines for submission of information, while a team leadership style will be beneficial to build trust relationships through allowing groups of staff to work together on joint projects.

2.1.15.2 Contingency theories (Situational theories)

Situational theories assume that different situations require different patterns of behaviour or traits to be effective (Yukl, 1998:292; Hersey & Blanchard, 1988:106). Fiedler (1993:2) argues that the performance of a group or organisation depends not only on the leader, but also on the situation. The common thread among situational approaches is that all situations require the leader to behave in a flexible manner that will enable the leader to find (diagnose) and apply the appropriate style. Kerr and Jermier (1978:375) developed the leadership substitute theory where they examine substitutes and neutralizers to make leader behaviour unnecessary and redundant. Substitutes render the leader's behaviour unnecessary while neutralizers prevent the leader from acting in specific ways or counteract the effects of leadership.

In addition, Middlehurst (1993:25-27) maintains that, while organisational leadership is important, all leadership does not come only from leaders. This model may provide an explanation why top-down command and control models of leadership are not effective and

sustainable within the norm and practices of academic institutions, where much of the guidance and support are provided by the participants (academic staff members), the nature of the task, or the characteristics of the institution and management philosophies, such as total quality management.

2.1.15.3 Power and influence theories

Hollander (1993:33) argues that power and influence are not the same, but that at times are used as virtual synonyms: “Power is considered to be the ability to exert some degree of control over other persons ... (and) it is associated with authority relationships... Influence involves more persuasion with the recipient having latitude for a free choice.” These processes can become intertwined in so far as leaders may use both, depending upon the circumstances and the particular followers involved (Hollander 1985:489). Yukl (1988:175) states that “... the essence of leadership is influence over followers”. The influence process between a leader and a follower, however, is not unidirectional. Leaders can influence followers and followers can also have some influence over leaders. Handy (1985) clarifies the terms power, influence and authority. He states that influence is the process through which one individual modifies the attitude(s) or behaviour of another and that power is the force that enables him/her to do so. Influence is therefore the use of power and power is the source behind it. The term ‘authority’, on the other hand, is used when the power is seen as legitimate, or when it has some official support (Handy, 1985).

Smith and Peterson (1988:130) suggest that “... a leader’s exercise of power resides in the ability to transmit influence by way of the network of meanings which constitutes the organisation’s culture”. In contrast, Moodie and Eustace (1974) see power and influence as different degrees of a common phenomenon and that these phenomena can be identified through the means by which they are exercised in practice. In addition, Nahavandi (1997:76) emphasises that power is one of the many processes used by leaders to fulfil the primary goal of leadership and that our views of power are greatly influenced by cultures and social environments.

Power and influence theory, as described by Hollander (1993), has been adopted as an appropriate theory to assist TVET college leaders in influencing a change in outdated curricula. Nahavandi (1997:76) emphasises that the role and type of power is much influenced by

(academic and institutional) cultures and social environments. However, as emphasised in this study, power and influence are clearly not the same theoretical constructs (also see Hollander 1993). What is argued in this study is that curriculum leadership has to be associated with the construct of influence, which involves persuasion rather than exerting pressure.

As mentioned before, the influence process between a leader and a follower is not unidirectional (also see Yukl, 1998) but reciprocal, as followers can also have some influence over leaders. This perspective may pave the way for TVET college leaders to use in an attempt to persuade authorities that curriculum change has become inexorable and that action to lead the change in curriculum is urgent. The reciprocal view also paves the way for academic staff to create opportunities for developing new curricula and take action in this respect (see Green & McDade, 1991). In support of Green and McDade, Middlehurst (1993) cites that opportunities exist in intellectual leadership (founded and achieved in research, teaching and scholarship), and academic leadership (influencing the direction of academic and administrative leadership). Middlehurst (1993) indicates that academic leadership is necessary to guide and develop disciplinary and teaching directions, develop and implement research programmes, interpret values, collective purposes and interests. Moreover, leadership must respond to change and transformation and should take people forward.

Subordinates, referred to in this instance as the TVET college-based leaders, comply if they view the use of power as legitimate (Gibson, Ivancevich, Donnelly & Konopaske, 2012). Yet, legitimate power covers a relatively narrow range of influence and therefore it may be inappropriate to overstep the boundaries (Greenberg, 2011). On the contrary, leaders can maximize their own power and opportunities for success by enabling the employees they supervise to achieve their own sense of power and success (Tracy, 2001).

This concept of power is referred to as “empowerment”, where real power, according to Tracy, flows from the bottom up, rather than from the top down: “If you are successful in giving your people power, they will surely lift you on their shoulders to heights of power and success you never dreamed possible...” (Tracy, 1990:1). From a theoretical perspective, the power to change curricula needs to be delegated to institutional level and points to the need for increased academic freedom and authority for TVET college environments. This links to the view held by Van der Westhuizen (1998) that academic leadership can be better pursued within a value system of academic freedom, critical reflection, rationality, democratic participation and

autonomy. In support of Van der Westhuizen’s view, Dearden (1999) posits that education and training is essential to productivity, yet are difficult to administer effectively within the same institutional framework. Training is more effective when delivered by institutions with a degree of autonomy and flexibility, which proves difficult to achieve in formal education systems. Furthermore, Fullan (2001) and Van der Westhuizen and Van Vuuren (2007) view the principal as a passionate leader and role model who resists stagnation and lives out the role of an agent for education renewal through goal-directed self-renewal, continuing academic studies, and professional development.

Within the TVET college context, specific leadership styles, knowledge and skills might better support the “power and influence” theory to capacitate TVET college leaders to influence curriculum change. A curriculum leadership framework is probably best underpinned by a constructivist theory of learning whereby knowledge is actively constructed from within by learners on the basis of interaction with a social environment (Hendry & King, 1994:223; Peterman, 1997:157). In addition, Wertsch (2007) suggests that in order to respond to the diversity of students and the subsequent different use of teaching and learning methods, a curriculum should be ‘dynamic and responsive’. Wertsch (2007) also maintains that people shape and are shaped by historical, social and cultural conditions, where the student and nothing else is the true object in teaching environments. Edwards (2014) echoes this by stating that assisting students to learn and knowing how to use the most relevant knowledge in relation to social power is true empowerment.

Table 2.10 below summarizes some of the proposed classifications for social power approaches by different researchers over a period of forty years.

Table 2.10 *Social power approaches*

| RESEARCHER | CLASSIFICATION |
|-------------------------|--|
| Webb (1948) | <ul style="list-style-type: none"> ▪ Formal / official leaders: use social power to influence ▪ Informal / emergent leaders: use personalities to influence |
| French and Raven (1968) | <ul style="list-style-type: none"> ▪ Legitimate power: influence through position in social / legal system ▪ Reward power: exert influence through ability to provide rewards ▪ Coercive power: exert influence through ability to threaten punishment ▪ Expert power: influence through knowledge and expertise |

| | |
|--------------------|---|
| | <ul style="list-style-type: none"> ▪ Referent power: influence through personality |
| House (1984, 1988) | <ul style="list-style-type: none"> ▪ Charismatic ▪ Expertise ▪ Authority ▪ Political ▪ Influence through the mobilization of resources and controlling the flow of information |
| Yukl (1988) | <p>Position (as a source of) power, influence through:</p> <ul style="list-style-type: none"> ▪ Formal authority ▪ Control of resources and rewards ▪ Control over information ▪ Ecological control <p>Personal (attributes as a source of) power:</p> <ul style="list-style-type: none"> ▪ Expertise ▪ Friendship / loyalty ▪ Charisma <p>Political power (processes for gaining influence):</p> <ul style="list-style-type: none"> ▪ Control over decision processes ▪ Coalition ▪ Co-operation ▪ Institutionalization |

Source: Adapted from Lathrop (1990:18-21); Middlehurst (1993:30; 31); Nahavandi (1997:78); Yukl (1998:179 as cited in Van der Westhuizen, 1998:50)

Table 2.10 depicts some suitable social power approaches relevant to a study of educational and curriculum leadership. Since the framework for leading curriculum change (see Chapter 7 section 7.3.1.1) is supported by power and influence theories, Table 2.9 suggests social, legitimate, expertise, charismatic, coalition, co-operation and institutionalization social power approaches to influence relevant stakeholders in pursuit of achieving educational goals. During the 1960s, and to a lesser extend in the 1980s, leadership was mostly associated with the use of power. Hence the examples of social approaches in Table 2.9 might serve to sensitise academic leaders about the phenomenon of power in leadership.

The next section deals with applicable learning theories, namely constructivist and cognitive theories, which underpin the study from a learning perspective.

LEARNING THEORIES

Although this study does not focus on student or adult learning per sé, it seems important to briefly discuss at least two relevant learning theories in this section since they largely underpin the curriculum framework for developing leadership capacity in leading curriculum change in Chapter 7 (sections 7.3.1.1, 7.3.3.1, 7.4). The development of the framework was contextually shaped by the experiences and knowledge of those related to the TVET college sector, and cognitive skills relevant to leading curriculum change form part of the framework for curriculum change (see Table 7.1).

2.1.16 Constructivist learning

Constructivist learning theory has emerged as a prominent approach that underpins teaching. This paradigm is derived from the field of cognitive psychology and is based on the work of, among others, Dewey, Montessori, Piaget, Vygotsky, Bruner, Gardner, and Goodman. According to Hendry and King (1994:223) and Peterman (1997:157), the main assumption in constructivism is that knowledge is actively constructed from within and from interaction with environments.

Cross (1999) agrees that students learn through making cognitive connections, social connections and experiential connections. Brockbank and McGill (1998: 147) add that when the social context of learning is recognised and collaboration is valued rather than penalized, the significance of relationships in learning makes sense. When this involvement and connection are prioritized, joint endeavours are nurtured, stimulating the creativity of constructed knowledge and thereby encouraging movement towards higher stages of learning. Hence, the curriculum is the result of negotiation, often according to a socio-constructivist approach. According to Barr and Tagg (1995:15), students have to become the co-producers of learning in order that they “can and must, take responsibility for their learning”. Assiter (1995:21) agrees with this view and posits that the idea that “teaching” means more than instructing and performing and extends more broadly to providing a context in which students engage productively with subject matter has become generally accepted.

2.1.17 Cognitive theory

Cognitive learning theory deals with the cognitive abilities of leaders. It focuses on the contribution of individual traits to the development of leadership concepts and behaviours. The notion of cognitive complexity or cognitive power is of importance and it can include the ability to differentiate and integrate large numbers of elements; the ability to adapt to different task and situational demands; and the scale and complexity of what an individual can pattern and construe mentally (Middlehurst, 1993:40). According to Middlehurst (1993:41), cognitive complexity will give leaders the flexibility to understand situations through different and competing scenarios and to act upon them simultaneously while paying attention to different institutional needs.

Hunt (1984) extends cognitive abilities of leaders to a multi ‘organisational-level leadership model’ that takes into account the nature of individual personality characteristics, skills, behaviours, experience, attitudes, values, beliefs and mental abilities; the nature of followers, in groups, in different cultures and organisational circumstances; the nature of organisational circumstances; the nature of the organisational context, internally and externally; and different levels of leadership and different kinds of critical leadership tasks.

Birnbaum (1988:4) describes the information age leading into the 21st century as characterised by an infinite, dynamic and changing mass of information. He identifies specific skills which are required for successful career functioning, such as:

- Cognitive competencies, such as problem-solving, critical thinking, formulating questions, searching for relevant information, making informed judgements, efficient use of information, conducting observations, investigations, inventing and creating new things, analysing data, presenting data communicatively, oral and written expression;
- Social competencies, such as leading discussions, persuading, cooperating, working in groups, et cetera; and
- Affective dispositions such as perseverance, internal motivation, self-efficacy, independence, flexibility or coping with frustrating situations.

Generic skills such as communication, teamwork, and analytical and critical thinking are important elements of leadership (Candy, 2000), a notion also indicated earlier by Teichler (1999:285). Teichler suggests that these generic competencies should be given “greater

attention” in educational leadership, as they need to serve as buffers for increased globalisation and internationalisation. Gnanam (2000:151) posits that the shift in focus towards generic competencies or attributes makes education relevant to any career, as well as to life in modern society. In conclusion, it appears that leaders in higher education can only really be empowered when leadership learning promotes the enhancement of knowledge, skills, values and attitudes to accommodate transformation in higher education (Barnett & Coate, 2005:36; Swartz & Foley, 1996:36).

SYNTHESIS

Since the purpose of this study was to design a framework for leading curriculum change in the TVET college sector, four main concepts were explored in this chapter. These concepts are ‘education’, ‘curriculum’, ‘change’ and ‘leadership’.

The concepts in Chapter 2 were systematically organised so as to provide focus and motivation and understanding of information to be integrated into a broader theoretical framework as suggested in Chapter 3.

The definitions of the various authors on the explored concepts differ, and they seem to use certain terms interchangeably when describing technical, vocational and occupational education and training concepts. For the purpose of this study education types might be defined as follows: ‘Vocational’ education is mainly understood as a combination of applied theory and practical components based on examination subjects within a broad career orientated curriculum for a wider range of industries, containing enough knowledge components to path onto higher education programmes. On the other hand, ‘occupational’ education involves a narrow type of training towards a specific trade within a particular industry, comprising mainly practical skills and technical training, based on unit standards and workplace-based assessments, with career pathing options directly into industry. ‘Academic’ education is defined as being primarily theory-based-learning with the aim to build foundational knowledge and to train people to master disciplinary fields of study, which are predominantly knowledge based, including limited practical components, with a direct career pathing options to higher education for a generic or specific job and industry.

On the issue of curriculum, it became clear that no common understanding exist of the term ‘curriculum’. For the purposes of this study, the concept of ‘curriculum’ seems to involve everything a person needs to learn in a structured and unstructured manner that will prepare him or her for the world of work and to become an economically active citizen. In the context of Technical and Vocational Education and Training (TVET) curriculum, the concept of ‘curriculum’ is viewed as a composition of structured theoretical, practical and workplace learning components. The purpose of the TVET curriculum is to prepare students for a specific job or a broader occupation by equipping them with industry relevant knowledge and skills that will enhance their employability. In addition, the TVET curriculum content must be relevant to address the needs of the labour market through regular research, reviews, as well as industry involvement and support with curriculum development. Furthermore, TVET curriculum must prepare students for low, intermediate, medium and high level skills, linked to their school level academic preparedness to determine admission requirements. Yet, the TVET curriculum must allow for seamless articulation between the different levels of a occupation and at the same time allow access for further studies in the specific occupational study field.

In addition, the concept ‘curriculum design’ provides structure to the further development of content, assessment, learning materials, methodology and other curriculum elements. TVET curriculum design must be flexible through the offering of different modes of delivery such as blended learning, open and e-learning, distance learning as well as part-time and full-time study options. Lastly, TVET curriculum development seems best placed at meso and micro college levels to ensure flexibility and industry responsiveness while DHET could play a central role at macro-level for policy educational policy development for education provision of TVET in South Africa.

As the purpose of this study was to develop a framework for leading curriculum change and to suggest a curriculum leadership framework for capacity building of TVET college leaders, the concepts ‘curriculum’ and ‘curriculum development’ are foundational to the study. ‘Curriculum development’, within the context of this study, is based on the premise that it focuses on a macro-level of curriculum development. To develop a framework for leading curriculum change it seemed important to gain a better understanding of the core concepts that informed the elements of a proposed framework (see Figure 7.1). The proposed framework is perceived as a loose structure, consisting of elements which can guide the construction and

development of a macro TVET college leadership curriculum (also see Ragland & Rosenstein, 2004).

From the study thus far it also seems that a combination of leadership theories and traits are necessary to underpin the capacity of TVET college leaders to bring about curriculum change. Academic and transformational leadership, with their related theories and various approaches to leadership, were explored in this chapter. Furthermore, power and influence theory within a socio-constructivist learning framework for leading curriculum change seems to be appropriate. The experience and environment of college leaders are central in identifying the elements of such a framework. The influence exerted by TVET college leaders thus takes centre stage to bring about curriculum change. After examining the various views on the concept of leadership, one may conclude that leadership in an educational context (such as TVET colleges) comprises the ability to understand emerging trends in education and to guide an institution through various challenges by achieving a vision based on shared values and developing and implementing effective curriculum change strategies.

Due to the multifaceted changes currently faced by the South African TVET sector, the need for different levels of leaders, beside the senior management team, to take charge of various change initiatives seems crucial in order to ensure that leadership responsibilities are shared and participation in leadership functions be promoted. College leaders do not always have to direct and lead from the front, but could also lead 'from behind', allowing middle managers opportunities to lead. In addition, different situations will demand different styles of leadership and power. The styles applicable to this study are democratic, teamwork and supportive leadership styles.

Change without strong leadership is a futile exercise, hence the need for developing a framework for leading curriculum change for the TVET college sector. In times of uncertainty, where change is eminent, there seems to be a heightened need for strong leadership. As the curriculum is the heartbeat of TVET colleges, neglect in this respect might cause the sector to suffer even more. The plea would thus be for a need to reform the outdated curricula dating back from the 1980s by applying leadership and change theories that emerge from this study.

In conclusion, Chapter 2 examined the main theoretical perspectives and emphasised concepts of various leadership theories, curriculum change, forms of education and other related curriculum definitions. Various leadership theories, such as power and influence theory,

constructionist theory, as well as transformational, curriculum or academic, participative and shared leadership styles were explored. The next chapter aims to outline the contextual perspectives of the study and presents an initial theoretical conceptual framework relevant to the purpose of this study.

CHAPTER 3: CONTEXUALISING CURRICULA IN TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING

The previous chapter examined the theoretical perspectives of education, curriculum, change and leadership theories applicable to this study. This chapter aims to firstly outline the contextual issues related to the study, and then to conclude with a suggested initial conceptual framework based on the main conclusions drawn from Chapters 2 and 3.

INTERNATIONAL PERSPECTIVES OF VOCATIONAL EDUCATION AND TRAINING

For the purpose of this study I chose to explore elements of vocational education and training (VET) from the United Kingdom, Germany and Australia, to gain some international perspectives. VET in these countries bears many similarities with the origin and current developments of VET in South Africa. What cannot be ignored is that much of the colonial legacies in South Africa were still intact until 1994 and beyond. Thus the importance of exploring some elements of VET in developed countries by looking, among other things, at some older, original sources.

3.1.1 Vocational education and training in the United Kingdom (UK)

According to Moll, Steinberg and Broekmann (2005:30), the apprenticeship system has undergone substantial changes, and with the decline of manufacturing during the 1980s and 1990s, the traditional apprenticeship system largely disappeared. The ‘modern’ apprenticeship system was introduced in 1995 and broadened the VET route to new sectors of the economy. The new system is funded by government and is aimed at addressing unemployment. The labour market is uncertain and unstable and very much concerned with firm-specific training linked to specific tasks. There is an increased move towards casual work and outsourcing, which limits the commitment of employers to the development of their workforce. Consequently, it also limits access to structured and systematic learning in the workplace. Therefore, the development of further development of skills rests solely with individual capacity, networks and creativity for advancement in the labour market (also see Adams, 2006).

Increased awareness of the need for formal vocational education for apprentices met only a patchy response. One example is the establishment of local trade schools, when local authorities gradually took over the role formerly assumed by the Mechanics Institutes (Lang, 1979). Trade Unions actively encouraged the technical education of apprentices and some system of practical examination (Booth, 1895:103). This was supported in the early 1900s by the Minority Report of the Poor Law Commission and the report on apprenticeship of the Education Committee of the London County Council, which even called for half-time education for 15 to 18 year olds (Bray, 1909:114).

Before the 1930's there was no pressure from industry for an extension of technical education (Cotgrove, 1958:80). The union proposals for reform included joint regulation, the attachment of the apprentice to industry rather than the individual employer, the involvement of education authorities, and day release as a right (Lee, 1979:39 as cited in Clarke *et al.*, 2007:76). The result of these efforts was the establishment of the National Joint Apprenticeship board during World War II; yet, it was still on a voluntary basis, as the government continued to refuse to take responsibility for vocational education (Cotgrove, 1958:61).

The division between education and practical knowledge, knowledge acquired outside the workplace and within, was constantly reaffirmed through this distancing of the state from vocational education, a division already established in the days of the Mechanics Institutes (Cotgrove, 1958:33). However, the 1944 Education Act led to the rapid expansion of technical instruction. Apprentices were educated in the employer's time through day release once a week to technical colleges. In 1956 the White Paper on technical education outlined plans for massive injection of funds into further education and major re-organisation. The levy-grant mechanism, whereby all firms except those below a certain size paid a levy and those providing training received grants, was central to the operation of the boards. The training board system collapsed in 1970 with the exception of the Construction Industry Training Board and Engineering Construction Industry Training Board, which still remain today. The remaining boards have changed into employer-led bodies, catering for employers' specific demands and organised on the basis of a myriad of National Vocational Qualifications (NVQ) occupations rather than sector-wide vocational education and training schemes.

Employers have reasserted managerial prerogative and the right to train and in so doing 'scotched' the traditional link between trade unions and apprenticeship (Gospel, 1995; Lee,

1979:40-46). Left again to voluntarism, apprentice numbers fell dramatically, from 243 700 in 1966 to 53 000 by 1990 (Gospel, 1995). In contrast to countries such as Germany, ‘training’ for ‘skills’ provides the rationale, rather than ‘vocational education’ for the productive enhancement of labour. Clarke and Winch (2007:1-3) echo that the British employer-based system, for instance, is more directed to firm-specific skills than the state-dominated French or German systems, which are built on consensus between the social partners, namely the employers and the employees. The approach to and the development of VET tends to be specific to different societies. The apprenticeship system in many countries is in crisis as employers increasingly abdicate responsibility for training. VET has become increasingly school and college based, giving the state a potentially more extended regulatory role. The school and college-based ‘vocational route’ thereby represents a second route, distinct both from the ‘A’ level or higher education and the work-based apprenticeship routes. Despite the ‘vocational’ label, this second route offers little work experience and is not an automatic route into employment. In further education (FE) colleges the vocational route is often very much more ‘vocational’ than in schools, covering such activities as carpentry, bricklaying and catering, as opposed to the childcare and leisure-related options which tend to be offered in schools. In FE too, vocational education provided is regarded as preparation for work in a particular occupation, given the variable quality and paucity of apprentice places available, though it offers little possibility to obtain the necessary work experience (also see Dearden, McIntosh, Myck & Vignoles, 2000).

A third route, apprenticeship, is underpinned by the employer-led NVQ system, which provides a tool to assess workplace learning. Whilst there are some exemplary high quality apprenticeships available, these are becoming ever rarer and the apprenticeship route is in considerable danger. This is because of both a lack of places, as employers have little incentive and considerable risk and cost in taking on apprentices, and lack of diversity, as apprenticeships remain largely confined to traditional occupations and target groups. The undervaluing of VET in England extends to the workforce itself where the skilled carpenter or engineer shares nothing like the same status in society as his or her equivalent in a country such as Scandinavia or Germany (Clarke & Winch, 2007:1-3).

According to Varoufakis and Hargraves-Heap (1995), a skills equilibrium is seen as a relatively stable state of affairs that satisfies the interests of the concerned parties, namely employers, employees and customers. In Ashton and Green’s (1996) typology of skill equilibria, the United

Kingdom (UK) is characterised as a low skill equilibrium country, whilst Japan and most of northern Europe exemplify a high skill equilibrium, and the United States (US) has a mixed high-low skills equilibrium (also see Finegold 1999). Clarke *et al.* (2007:13-14) claim that the British state constantly intervenes in the institutional arrangements, design, management and funding of VET institutions, but remain reluctant to enforce regulations on employers to take on a mandatory role in the vocational education system. In Britain delivery is voluntary and left to employers who may be unwilling or unable to deliver what is required. This is different from a country such as Germany where the social partners, the employers' federations and trade unions, play a statutory and leading role. Despite the lack of obligation on the part of the employers in Britain, the apprenticeship system has survived in certain sectors and there have been attempts to revive it on a larger scale, including through the 'modern apprenticeship' programme (Gospel & Fuller, 1998).

Since 1994, successive governments have sought to revive apprenticeship in the face of what has been described as the 'employers' retreat' as firms have shown increasing reluctance to make training places available (Keep, 2002). Ali (2002) is of the view that the modern apprenticeship has been devised to cover a wider range of occupations and to be less gender and ethnically exclusive. Modern apprentices were supposed to attain national vocational qualifications (NVQ) level 3, though level 2 is now the norm. Delivery is unspecified, so that candidates can pursue very different routes (on- or off-the job, full- or part-time) and processes to attain the same qualification. Non-completion rates of NVQ level 3 are high among the traditional male sectors and the female sectors of hospitality and retailing. Only forty percent of students graduate with an NVQ level 3 in the male sectors while fifteen percent is reported in the female sectors (Ali, 2002).

According to Clarke and Herrmann (2004), shortcomings in the vocational education system have become increasingly apparent. These shortcomings include the growing problems of overlap and fragmentation of skills as each institution claims exclusive control of a particular area of activity and knowledge. The lack of permeability and underdevelopment of intermediate skill areas only reinforces and reproduces what amounts to class divisions. Class divisions remains largely exclusive and critical to maintaining a gender division of labour (Clarke & Herrmann, 2004). The most enduring feature is the failure of the state to regulate directly vocational education and the social development of labour, even in the face of poorly developed transferable skills or underpinning knowledge (Steedman, 1992). Transferable

skills, as Marsden (1999) has explained, require institutional intervention and investment the most. In the absence of a direct institutional link between further education and industry, the too-close adherence to practical prescriptive application, to firm-specific skills and traditional tasks, persists. In Britain, the state's role is one of governance or supervision, with introducing new sets of rules or laws rather than intervening in relations between capital and labour (Clarke *et al.*, 2007:74).

3.1.2 Vocational education and training in Germany

Hippach-Schneider, Kruase and Woll Wiechert (2007) state that in Germany children enter compulsory full-time schooling aged six and that the compulsory schooling period lasts nine years. On completion, young people who do not attend school full-time any further are required to attend part-time (vocational) school for three years. In practice it means that young people are required to attend school from the ages of six to eighteen. After four years of primary school, pupils move into different educational branches, namely secondary general school (Hauptschule), intermediate school (Realschule), or grammar school (Gymnasium). Often these different pathways merge through the dual system. The dual system (Duales System) is the largest provider of vocational education and training at upper secondary level. On completion of their training in the dual system, the majority of participants then take up employment as skilled workers. After some time, many of them make use of the opportunities for continuing vocational training. The system is described as dual, because training is conducted in two places of learning, namely companies and vocational schools. Training in the dual system normally lasts three years. Compulsory full-time education must have been completed by the time of commencing vocational training. There are no further requirements for access to training in the dual system. It is basically open to everybody, although the majority of trainees hold either the intermediate certificate or the Abitur (a school leaving certificate allowing entrance to higher education) (also see Hippach-Schneider & Wiechert, 2012:5, 21).

Greinert (2007) and Hippach-Schneider and Wiechert (2012:21-22) point out that the apprentice is trained in an enterprise for three to four days a week and at the vocational school for up to two days a week. Training places are offered in both private and public enterprises, in offices of the liberal professions. Training may take place only in training enterprises in which the skills required by the training regulation can be imparted by training personnel who are appropriate, both personally and in terms of specialised knowledge. The suitability of

training enterprises and in-company training personnel is monitored by the relevant autonomous bodies (Chambers). In the dual system, the vocational school is an autonomous place of learning. Its task is to provide basic and specialised vocational training and to extend previously acquired general education. The primary aim of training is to enable young people to acquire comprehensive vocational competence, designed to make them capable of fulfilling their duties as employees efficiently, effectively and innovatively, autonomously and in cooperation with others. Vocational competence is based on subject-based, social and methodological competences. Final training examinations are geared to vocational practice, for example to work requirements and processes of the occupation. Teachers are employed in the various vocational schools, while trainers are skilled workers in enterprises who provide trainees with the knowledge and skills required for an occupation. The German VET system is characterised by a large number of interfaces, namely transitions between training preparation and dual VET, between dual VET and full-time school-based education and training, between initial and continuing VET, between VET and the higher education sector (also see Schmidt, 2010; German Government, 2010; German Government, 2011b; Lauglo, 1993).

Hippach-Schneider and Wiechert (2012:5-8) cite that of vocational schools, the full-time vocational schools (Berufsfachschulen) have the highest numbers of students. These schools prepare students for an occupation or for vocational training, usually in the dual system. Senior technical schools (Fachoberschulen) and senior vocational schools (Berufsoberschulen) normally build on vocational training in the dual system, consolidate vocational knowledge and lead to the academic standard required for entrance to a college. Many points of transition exist between school-based and dual vocational training and from vocational training to colleges. Tertiary education includes colleges and other institutions (Berufsakademien, Fachakademien) offering programmes of study, providing qualifications for students who have completed upper secondary education with an entitlement to study at a college or university of applied science (Fachhochschule) (also see Greinert, 2007; German Government, 2011c).

According to the Federal Institute for Vocational Education and Training (2011b), the role of social partners, such as employers and unions, play a central role in initiatives for change, as the structure of vocational training must meet the demands of industry. Employers and unions have to agree on proposals for the development or revision of training regulations by industry before they are taken up by the Federal Government. As self-governing bodies of industry, the chambers have been assigned public tasks in dual training. Action by all stakeholders in the

dual training system is governed by the federal framework provisions of the Vocational Training Act of 1969. This Act was repeatedly amended and the current Vocational Act came into force on 1 April 2005, with a clear objective of maintaining and improving training opportunities and ensuring that all young people receive high-quality vocational training, irrespective of their social or regional background (also see Hippach-Schneider & Wiechert, 2012:51-91; German Government, 2011a; German Government, 2011c).

Brockmann, Clarke and Winch (2008) and Clarke *et al.* (2007:15-16) mention that in Germany, VET represents a system of ‘qualifications’ to provide a given quality of labour, a system based on social partner consensus and integration into the state apparatus. ‘Skills’ and qualifications are socially constructed, collectively negotiated and recognised. Furthermore they are bound up with the value of labour under legal obligation, a value in turn reflected in a collectively agreed wage and associated with the potential as well as the responsibility to fulfill the particular tasks and activities agreed with a given Beruf. The result, according to Clarke *et al.* (2007), is that, although maintaining a divide between the academic and vocational, VET in Germany has a higher status than it has in a country such as Britain. In contrast, in Britain skills remain individual attributes and qualifications represent, not the end result of a process of VET, but certification of learning outcomes, whether achieved through training or practical experience. The increasing recognition in Britain of the need for a higher and wider range of skills, deeper underpinning knowledge, and a more systematic and comprehensive process of VET for different occupations, supports a move in the German direction.

Georg (1998:181 as cited in Clarke *et al.* 2007:53) alludes to the fact that Germany is the clearest example of a workable form of social partnership, with the state playing a central role in the success of the VET model. This role is dependent on the strength of other institutions in civil society. The state’s role in Germany is therefore the structuring of the labour market by ensuring that social partners are governed by statutory regulations. The relationship between capital and labour is largely determined by the state, which is a unique characteristic that distinguishes the German system of VET from being purely academic or purely enterprise-based (Georg, 1998:181 as cited in Clarke *et al.* 2007:53).

List (1991) has pointed out that a nation’s economic strength is not merely identified by exchange values, but by productive powers or the potential for the production of exchange values - which include knowledge and skills. Thus, vocational education was for a long time

associated with the development of national economic strengths. Other thinkers, such as the Bavarian Georg Kerschensteiner, eventually made the connection between vocational and civic education explicit. The unified German state adapted previously existing apprenticeship forms of education, which were developed for craft-based industries, to the needs for an industry-based economy and, subsequently, for service industries (List, 1991; Schmidt, 2010). Münk (1997:92) suggests that from an international perspective, the last few decades have seen a huge shift in vocational qualifications and, since the 1970's in particular, the privileged, subject-oriented principles of vocational education, humanization, democratization and participation have been pushed aside as VET has been reduced to just one element in socio-economic strategy – a strategy geared around economic efficiency (Münk, 1997; Lauglo, 1993; Greinert, 2001).

3.1.3 Vocational education and training in Australia

Hager (2004a; 2004b) indicates that vocational learning in Australia was for most of its history an on-the-job activity. With the rise of compulsory formal education systems late in the 19th century, vocational learning was gradually absorbed into formal arrangements. Early humans struggled for survival as hunters, the younger family and clan members were inducted into what were literally 'life skills' by their elders. With the rise of agricultural practices the segmentation of the labour force accelerated into diverse occupations and the institution of apprenticeship was born. Industrial revolution further enhanced these trends, and throughout these developments, vocational learning remained an on-the-job phenomenon. It was well into the 19th century before the first moves occurred to shift vocational learning decisively towards off-the-job delivery. This would ultimately lead to the rise of formal vocational education and training (VET). A main theme in this rise of VET was the centrality of morally uplifting knowledge in off-the-job vocational learning. There was no conception that workers were learning skills that would directly enable them to do their job better; rather, the aim was for workers to become better persons by acquiring the scientific, disciplinary knowledge connected with their occupation (Hager, 2004a; 2004b).

This account of the first rise of formal vocational learning in Australia draws on the work of Murray-Smith (1965, 1966), the acknowledged doyen of historians of Australian technical education up until the 1970s. According to Murray-Smith (1965:171), technical education in Australia, as well as in Britain, went through distinct changes until 1965. The New South Wales

education system, from 1788 until about 1850, was marked by “intellectual, middle class ideas on the social usefulness of instructing the intelligent artisan in the scientific principles underlying his trade” (Murray-Smith, 1965:171). The first half of the 19th century saw the establishment of mechanics institutes in many parts of Australia. Slogans such as ‘self-improvement for the labouring classes’ marked the beginnings of formal VET provision, which saw itself as not only providing workers with occupational knowledge and skills, but also as “... a moral and often a charitable question” (Murray-Smith, 1966:5).

The first period of VET in Australia sprung less from a direct and uncomplicated response to a real lack of skills in the community, than from a complex of strongly-held philosophical, moral and social ideas (Murray-Smith, 1966:6). The educational ambitions of the mechanic institutes never succeeded, owing to volunteers teaching what interested them personally, rather than teaching a programme based on what the students might want or need (Clark *et al.*, 2007:106). The focus shifted to an era where education for economic advancement gained momentum, whilst previously the focus had been single-mindedly on knowledge that represents a background to work, rather than on learning how to perform work itself.

By 1914, technical education in Australia had clarified its function and assumed its shape for the next half century (Murray-Smith, 1966:22). In the process, however, as reiterated by Murray-Smith, “...the academic bias of the high schools, and the influence of the state examination systems, tended to impart to technical education a ‘second- class’ prejudice that still linger today” (Murray-Smith, 1965:186). The result of arriving finally within the educational mainstream, but with ‘second-class’ status, was that VET from then on was frequently dubbed the Cinderella of the educational system. According to Clarke *et al.* (2007:109), vocational education and learning became increasingly incorporated into the formal education system and adopted a typical formal education and a supply-side focus. These formal education assumptions became so strong that their unsuitability for vocational learning is now but dimly recognised.

According to the Australian Qualifications Framework Council (Australian Government, 2008) and Chisholm (2012:8), the post-school Australian system of education and training in Australia consists of vocational education and training (VET) and higher education. In international terms VET is known as technical and vocational education and training (TVET). The VET system in Australia is currently directed to providing people with knowledge and

skills to enter the workforce, re-enter the workforce after absences, to train or retrain for new jobs, or to upgrade their skills. It is generally directed at people aged from 15 to 64 years. VET is designed to deliver workplace specific skills and knowledge-based competencies. In Australia there are strong linkages between VET, the labour market, and the economy, which assist employers and individuals in meeting their training and skill needs. The key elements of the Australian national training system are accounted for in the Australian Qualifications Framework (AQF), which defines all nationally recognised qualifications and provides a single framework for qualifications, from senior secondary certifications to higher doctorates (Australian Government, 2008).

The VET Quality Framework is the national set of agreed standards and conditions for training providers to assure nationally consistent registration and monitoring of providers of VET qualifications. The delivery of programmes by registered training organisations (RTOs) are quality assured by National and State Registering authorities. A great deal of flexibility and significant overlaps exist between the various sectors of education and training. VET programmes may be provided by schools in the final years of schooling, while universities may also deliver both VET and higher education programmes. Adult and community education providers, enterprises, and public institutes of Technical and Further Education (TAFEs) also deliver VET programmes. The common attribute of each of these providers is that they must be registered to assess and certificate nationally recognised VET programmes (also see Watson, 2003; Chisholm, 2012; Australian Government, 2008).

According to the Department of Education, Employment and Workplace Relations (DEEWR 2011:5), some of the influences on the Australian labour market include population ageing, an increased participation of women in the workplace (also see Pocock, 1988), greater numbers of young people participating in education, greater labour market flexibility, economic reforms and technological changes (DEEWR, 2011:5). The Council of Australian Government (COAG) Reform cite that employment rates for vocational education and training (VET) graduates in Australia fell significantly between 2009 and 2010, while the skills workforce improved with a small percentage. In addition, labour market research conducted in 2012 by the labour market research and analysis branch, reported that employers were experiencing low levels of 'employability skills' and a lack in the combination of appropriate qualifications (Australian Government, 2011a; Australian Government, 2012; World Bank, 2010).

Skills Australia (2011) points out that employers and industry have a strong role in the governance of the system through their representation on many of the statutory bodies. Industry representatives are also involved in the development of nationally endorsed competency standards, which are included in relevant industry training packages. Their input is organised across the sector through industry forums, Skills Australia and industry skills councils. Furthermore, VET in Australia is regulated by a variety of Australian, state and territory laws. The legal framework for national regulation of the VET sector is the National Vocational Education and Training Regulator Act 2011, No. 12 of 2011c (Australian Government, 2011b; Australian Government, 2011c; Skills Australia, 2011; Chisholm 2012).

Boud and Garrick (1999) indicate that the apprenticeship model is the predominant model for workplace learning opportunities in Australia. Employers can take on Australian apprentices who are trained to understand the specific requirements of their workplace and have the skills that match their business objectives. A formal agreement, named the 'Training Contract', binds the parties and sets out the legal obligations binding the employer and the Australian apprentice. Australian apprentices have the chance to gain valuable work experience, develop skills and acquire a nationally recognised qualification. Moreover, employers can take on Australian apprentices who are trained to understand the specific requirements of their workplace and has the skills that match their business objectives (Boud & Garrick 1999; Chisholm 2012).

Skills Australia (2011) further indicates two main differences between an apprentice and a trainee. An apprentice is trained in a skilled trade and upon successful completion will become a qualified tradesperson. Trades such as electrical, plumbing, cabinet-making and automotive mechanics are just a few that are a part of the apprenticeship system. A school-based apprentice is trained in a skilled trade, and upon successful completion, will also become a qualified tradesperson. A trainee is someone who is being trained in a vocational area that includes areas such as office administration, information technology and hospitality. A variety of arrangements occur between vocational education and universities for progression for those who complete entry-level vocations (Skills Australia 2011; Chisholm 2012).

SYNTHESIS OF UK, AUSTRALIA AND GERMAN VET

Industry and other social and civic bodies' involvement within the VET system form a central component in Germany, Australia and to a lesser extent in the UK. The German government regulates the capital and labour markets to participate in vocational education, while it remains a voluntary system in the other countries. A decline in apprenticeships was experienced in the UK and Australia in the past decade due to labour market and economic changes, whereas Germany continued to produce apprenticeships through the VET dual system. In Australia VET programmes are offered across a wide range of providers. School-based apprenticeships form part of the Australian VET system as well as the offering of higher education qualifications. Government involvement with VET institutions are very strong in the UK, where minimum industry state regulations govern workplace learning. Apprenticeships in Germany are well-respected and, unlike in other countries, apprentices are remunerated citizens. The dual German VET system allows entry into specific vocational streams from a young age, whereas in the other two countries the youth make their career choices at a much later stage.

The following section addresses the context of South African vocational education and training.

SOUTH AFRICAN CONTEXT OF VOCATIONAL EDUCATION AND TRAINING

The origin of technical colleges in South Africa dates as far back as the 1800s. Understanding the origin of these colleges is imperative to the current context and reform of the newly founded TVET colleges (Abedian & Standish, 1992).

The demand for technical education to be made available to the youth was an outgrowth of industrial development in the late 1800s. It was linked to mining and the development of railways, harbours and small engineering workshops in urban centres. The expansion and growth of the railways and development of the mining industry created a demand for railway technicians with appropriate technical skills, while in the mining industry engineers were in huge demand (Abedian & Standish, 1992). Historians note that technical education referred to “a type of education which had reference to manufacturing and industrial pursuits and the scientific principles underlying these” (Smuts, 1937:97). According to Gamble (2003:11), a historical perspective shows that, from its earliest beginnings, technical and vocational education included three forms of educational provision in South Africa. Firstly, technical education was related to science instruction as found in general education, where it functioned

as a foundation for practical knowledge. Secondly, vocational education referred to forms of compensatory education, with a practical aim. Finally, industrial education focused on the imparting of skill in some form of handcraft, as well as the inculcation of discipline, obedience and regular work habits.

During the apartheid era, 'black education' in South Africa has long been vocational, in that it has been concerned with preparing students for limited spheres of work in the wider politicised economy. In South Africa industrial or vocational education has in the past been associated not only with poor white people, but also with education considered appropriate for black people. Technical education in South Africa originated as part of the industrial revolution in the later nineteenth century and was specifically geared to train skilled white workers for the mines and newly-developing industries (Pittendrigh, 1988:167). Industrial education, which precedes provision of technical education, and dates back to the mid-nineteenth century, was the main form in which education was offered to black people by missionary societies. One of the main criticisms of 'Bantu Education' in South Africa has been its concern to educate a black working class in low level skills required by manufacturing industry and the agricultural sector. In the 1950s and 1960s the manufacturing sector was said to require semi-skilled workers with basic literacy and numeracy, while the agricultural and mining sectors relied on manual and migrant workers. It could be said that 'Bantu Education' was geared towards meeting the needs of these sectors (Molteno, 1984; Christie & Collins, 1984).

Since the first democratic elections in 1994, the African National Congress (ANC) released numerous policy documents to address the political, social and economic challenges faced by the country. A policy framework for education and training (ANC, 1994) was released to form the basis for further development of education related policies in future. The White Paper 4 on Education and Training in 1998 followed and provided the core values and vision for the establishment of the new education and training system (DoE, 1998a:6).

This policy document led to the immediate focus of the TVET policy development process. The Minister of Education appointed a National Committee on Further Education (NCFE) in 1996 and tasked the committee to investigate and provide recommendations on all aspects of TVET, such as human resource implications, the funding model, curriculum matters, governance structures, and student counselling services. The NCFE's term of office ended in August 1997 and the findings of the NCFE Report served as a basis for the development the

Green Paper on Further Education and Training. Education White Paper 4: A Programme for the Transformation of Further Education and Training was subsequently released in August 1998 (DoE, 1998a:2).

Once the foundation for the development of TVET policies was laid by the ANC-led government, a number of policies and national strategies were released that had a significant impact on the transformation of technical colleges. These documents included the National Qualifications Framework Act No 95 of 1995, FET Act No 98 of 1998, Skills Development Act No 97 of 1998, Skills Development Levy Act No 9 of 1999, National Skills Development Strategy (NSD) III 2001, National Strategy for Further Education and Training 1999-2001, A new landscape for FET College 1997, FET Colleges Act No 16 of 2006, and the National Certificate Vocational Certificate (NCV) Policy 2006 and FET Colleges Amendment Bill 2011. All these documents will be discussed under three identified eras later in this chapter (see sections 3.2.1-3.2.1.3).

3.1.4 Historic overview and legislation impacting on the origin and transformation of TVET colleges in South Africa

The historic overview and the main legislation that impacted on the origin and transformation of TVET colleges are divided into three different eras for ease of reference and understanding.

3.1.4.1 The first era before 1990

The industrial revolution that occurred in the context of the discovery, first of diamonds in 1867, and then of gold in 1886, laid the foundations for the development of a modern system of education, including technical education. Railway development in the 1880s and 1890s stimulated technical classes for apprentices in Durban, Salt River in the Cape, and in the Witwatersrand (Johannesburg and surroundings) (Pittendrigh, 1988:108; Malherbe, 1977:167-168). The De Beers Mining Company made the attendance of apprentices through evening classes compulsory, which led to the establishment of the School of Mines in Kimberley in 1896. The typical subjects taught in these courses were machine construction, practical mathematics, carriage building, and sketching (Malherbe, 1997).

A resolution was passed at a conference of colonial heads of the four South African education departments in January 1902 that technical schools, in conjunction with higher education,

should be established in order to meet the needs of the colonies (Pittendrigh, 1988). The mining students from Kimberley were transferred to the Transvaal School of Mines upon its establishment in Johannesburg in 1904. Known today as the University of the Witwatersrand, the Transvaal School of Mines underwent numerous name changes, such as Transvaal Technical Institute in 1922 (Malherbe, 1977; Nattrass, 1981).

During 1906 and 1916 a number of new colleges were established. The Pretoria Polytechnic and Durban Institute opened in 1906 and 1907 respectively. During that same time the South African College in Cape Town started with part-time classes. In 1909 the Pretoria Trades School opened and focused mainly on preparing students for mechanics, woodwork, wagon building, printing, blacksmithing, as well as for the plumbing and electrical trades. By 1910, day-time technical schools in Pretoria, Durban, and Pietermaritzburg, with one under construction in Johannesburg, were opened (Pittendrigh, 1988; McKerron, 1934).

The most significant resolutions that were passed in 1911 at a conference on technical, industrial and commercial education, convened by the Minister of Education, included the need for central control of vocational education, a national advisory board on vocational education, central syllabi, examinations, and certification in technical education. Provincial administrators resisted these proposals and guarded the rights granted to provinces in terms of the South African Act of 1909 (Pittendrigh, 1988). Albeit the resistance of provinces, the national Advisory Board for Technical Education was established in September 1912. The national syllabi and national technical examinations were introduced in 1916, with the provision of technical and vocational education still largely in the hands of the four provinces, namely Transvaal, Natal, Orange Free State and Cape.

According to Pittendrigh (1988), an advisor to the Union education department on technical education was appointed in 1914. National technical examinations were instituted in 1916. Furthermore, by 1916, a basic system of technical education for whites only had been set in place. The state intervened after 1922 to re-allocate 'poor whites' to non-skilled manual and semi-skilled positions. Training was provided through the Apprenticeship Act of 1922. The late 1920s was a period of unprecedented growth during which technical colleges were established on the Witwatersrand (1925), in Port Elizabeth and East London (1926), Pretoria and Pietermaritzburg, and also in Bloemfontein (1929) (Chisholm, 1992:7). The significant growth of technical college enrolments of mainly white South Africans was as a result of the

increase in the number of apprenticeship contracts following the Apprenticeship Act of 1922, which required apprentices to attend technical classes (Abedian & Standish, 1992; Natrass, 1981).

The Association of Technical Colleges was established in 1926 to assist in the development of colleges. Technical colleges established during this period were administered under the 1923 Higher Education Act. Malherbe (1977) reports that, at a conference in Durban in October 1924, it was proposed that, in order to adjust the financial relations between the Central Government and the Provincial Administration, the DoE should assume all responsibility for vocational education under provincial control. The Higher Education Act allowed technical colleges to be established in East London, Pietermaritzburg, Port Elizabeth, Pretoria, and Johannesburg, while technical institutes were established in Bloemfontein and Uitenhage. Vigorous developments followed with colleges being established and new buildings erected (Malherbe, 1977).

The conditions of the Apprenticeship Act, which disqualified workers with an education below standard six from receiving training, ensured that technical colleges trained only white and no black apprentices. The Cape and Durban Technical Colleges did, nonetheless, start separate evening classes for coloured and Indian artisans from 1924 and 1929 respectively. However, these opportunities remained extremely limited. The Wall Street crash of 1929 and the ensuing economic depression in South Africa led to the reduction of funds available for technical education. However, the outbreak of World War II in 1939 provided a renewed stimulus to technical education and training. During this period manufacturing, which relied mainly on semi-skilled workers, outstripped mining in its contribution to the gross national product (Chisholm, 1992:8).

The Second World War in 1939 propelled South Africa into its first industrial revolution, and technical colleges were required to provide the Union with 20 000 technicians to maintain the production levels in the country, as well as to man the armed services. Consequently the central organisation of technical training (COTT) was established to train technicians to service the machinery of 'modern' warfare and to determine the syllabi and methods of instruction (Abedian & Standish, 1992; Natrass, 1981; Malherbe, 1977). The (COTT) was founded on the basis of interdepartmental co-operation between Defence, Education and Labour to maintain

the production level necessary to support the war effort, and also to man the armed services appropriately.

Within a very short space of time, facilities to train 5000 people as fitters, machine tool operators, welders, blacksmiths, tool repairers, electricians and sheet metal workers had been established. The course was designed for men between 18 and 40 years of age and lasted for 24 weeks. An important feature of COTT was the introduction of trade testing and national standards (Pittendrigh, 1988:130). When World War II ended it was the task of technical colleges to provide for the retraining of ex-service men. The COTT training programme was terminated in June 1948. Yet, the provision of trade tests contained in the COTT training programme became an essential aspect of the Apprenticeship Act of 1922.

The then De Villiers Commission of Inquiry was appointed by the United Party when they came into power in 1945 to investigate technical and vocational education, but unfortunately the findings of the Commission were never dealt with in depth. Thereafter the importance of technical college education declined in importance, partly because of the ideological agenda to promote school-based technical and vocational education in Afrikaans rural areas. In 1954 the Cabinet decided to take over all technical colleges as full state institutions through the promulgation of the Vocation Education Act, No 70 of 1955 (South African Government, 1955). According to Malherbe (1977: 209), this was “probably the main cause” for the decline of the technical colleges over this period. Colleges suffered severe financial constraints due to the increased investment of the state in higher education at the time. This laid the foundation for the ‘inverted triangle’ of high university enrolments accompanied by lower Technikon and even lower technical college enrolments.

The National Party came into power in 1948 and by then the system of technical colleges for whites only was well-established (Chisholm, 1992:9). During this era, education for African youth was vocationalised through the system of Bantu Education, which sought to make African education more ‘relevant’. Framed in terms of relevance to the community, African education was indeed closely tied to labour market and made more ‘relevant’ mainly to agricultural and mining interests. Technical education for white technicians in commercial high schools and in technical colleges was greatly expanded in the 1950s and 1960s. The most important role of technical colleges was to provide day- and block-release theoretical instruction to apprentices. The Advanced Technical Education Act of 1967 allowed for the

upgrading of the larger technical colleges on the Witwatersrand, in Pretoria, Durban and Cape Town into Colleges for Advanced Technical Education. These were to grow into technikons, known today as universities of technology. Small numbers of Africans had been enrolled in the Cape Technical College, ML Sultan in Durban, and in vocational institutions by the 1950s. State technical colleges specifically for so-called coloured people were also started in the 1960s. Historically African education had a strong vocational, but limited technical component as technical education mainly took the form of trade instruction (Chisholm, 1992:9-10).

As greater numbers of skilled workers were anticipated by big businesses, attempts to develop such workers from within the black population were confounded by the logic of apartheid. The state continued to reserve jobs based on race and people classified as whites were employed as artisans, while black workers could access unskilled or semi-skilled jobs only. The skills development regime based on racial lines began after 1924, when white unions used their representation on industrial councils to sign collective agreements with employers to exclude black workers from skilled jobs (Pittendrigh, 1988; Cross & Chisholm, 1990; Department of Education, 2001). Only towards the end of the 1960s and the early 1970s did industrial capital and the state begin to give the matter some attention (Hyslop, 1987). From the early seventies, under pressure from big business, the state began to provide financial support to schools for black people in urban areas.

The era between 1950 and 1980 was characterised firstly by a relative stagnation of technical colleges and secondly by racial and ideological engineering. The students' revolt of 1976, crystallising a deep 'organic crisis' in the state and economy (Saul & Gelb, 1976), provided a turning-point in state commitment (at least at a rhetorical level) to the provision of technical education for black people. The Soweto uprising in 1976 led to education and training being regarded as a significant "site of struggle" (Samuel, 1990). Important changes in state education and training policies were introduced with the Education and Training Act of 1979, which replaced the Bantu Special Education Act of 1964 (Samuel, 1990; Kallaway, 1984; Nasson & Samuel, 1990).

The state's efforts were characterised by a narrow instrumental concept of 'skills' according to the report of the De Lange Commission, in 1981 (Kallaway, 1990; Davies, 1984). The intensifying political conflict, a decline in economic growth, and a shift away from interventionist economic policies towards more market-oriented viewpoints were prevalent

during the 1970s and 1980s (Abedian & Standish, 1992; Gelb, 1991). The acceptance of African urbanisation necessitated new approaches to the training and advancement of African workers, whilst the country's increasing limited skills base was a major constraint to growth (Nattrass, 1981). The promulgation of the Technical Colleges Act of 1981 (No 104 of 1981) permitted the forty-two technical institutes to become technical colleges, while twenty-nine existing (white) technical colleges were declared state-aided colleges and all other technical colleges were labelled state colleges (RSA, 1981b). State technical colleges for blacks were based on different funding and staffing norms from those of white state-aided technical colleges and were located in townships away from white commerce and industries in cities (Chisholm, 1983).

The history of the origin and development of technical and vocational education in South Africa was instrumental in the development of policy by the newly elected democratic government in 1994, under leadership of the African National Congress (ANC), for restructuring the technical college sector in order to address the past inequalities of the sector and myriad of social challenges.

Gamble (2004:22-29) points out that early forms of formal apprenticeship in South Africa displayed most of the features traditionally associated with apprenticeships in England and other European countries. Apprentices were bound by indentures to a master for a specified time and were provided with food, clothing, shelter and instruction by the master, and in return worked for him during the terms of their apprenticeships. This form of apprenticeship afforded apprentices an opportunity to work under the close supervision of an artisan or journeyman, in all facets of a trade. Many of the formal trades as we know them today were brought to South Africa by Dutch, French, German and British immigrants in the 1700s and 1800s.

Gamble (2003) furthermore postulates that from the mid 1800s the establishment of trade protection societies or craft unions occurred in trades such as engineer, mason, carpenter and printer. The craft unions took control of the apprenticeship system in crafts or trades, even though the nature of apprenticeships remained largely unchanged. However, the introduction of specialised machinery brought about changes in the organisation of work, which in its turn changed the form and nature of apprenticeship. A complaint was presented to the former Transvaal Indigency Commission of 1908 that the apprentice was not taught the complete theory and practical of the trade, because the workshop employees only performed a fractional

part of the manufacturing process. Subsequently state regulation of the apprenticeship system was introduced with the passing of the Apprenticeship Act of 1922.

According to the South African government (1922), this apprenticeship contract replaced the term ‘master’ with ‘employer’, and compulsory attendance of classes in technical education provided by technical colleges was stipulated. The 19th century marked technical and vocational education as a system of workplace apprenticeships. The traditional apprenticeship was on mastering the trade or vocation on-the-job. This mastery was not gained through formal learning in the classroom, but by “learning-through-doing” in the workplace. However, as technology began to change in the early 20th century, the state realised that learning on-the-job was insufficient for adequate VET (SA Government, 1922). Gamble (2003:1-3) indicates that the apprenticeship route was changed to a more formal theory curriculum, with more emphasis placed on the sciences. Consequently apprenticeships declined and some even fell away. Furthermore, the focus shifted more towards the development of knowledge with little or no application of the knowledge in the workplace. By the 20th century the traditional apprenticeship system, where a novice went to live with a master craftsman and learned entirely on-the-job, had largely disappeared. A college based VET system, in which students received a basic theoretical education related to the trade or vocation, became the new model for apprenticeship learning and was conceived as an adjunct to college-based VET education (Union of South Africa, 1922; Gamble, 2003:1-3).

Moll, Steinberg and Broekmann (2005:16-19) explain that a massive shift from jobbing practices to largely semi-skilled production in factories, or what is known as mass production, occurred in the years prior to and during the Second World War. The significance of the apprenticeship system was reduced to such an extent that the De Villiers Commission of 1948 recommended a restructuring of the system. The Central Organisation of Technical Training (COTT) was established at the Pretoria Technical Institute in 1940, under the auspices of the Director-General of War Supplies, to organise training, based on mass production methods, of skilled workers required for work in support of the armed forces fighting in the Second World War. The commission was very impressed with this system of training and recommended the introduction of a trade test that would afford the above-average apprentices the opportunity to shorten their period of training. The apprenticeship curriculum consisted of three components, namely a practical instruction in the workplace, formal theoretical instruction in a technical college, and a formal trade test (Moll *et al.*, 2005:18-19).

The Manpower Training Amendment Act of 1990 devolved responsibility for training from the state to industry and made provision for the establishment of training boards that would be responsible for all training matters in different industry sectors. Financial responsibility for training was redirected from the state to industry. The four components of the apprenticeship curriculum in place from 1990 onwards, but prior to further legislative changes in 1998, include a trade theory taught in a technical college; a modular practical training in an accredited training centre, a practical workplace experience through on-the-job training, and a trade test administered by the Central Organisation for Trade Testing or by an accredited centre (RSA, 1990:8).

3.1.4.2 The second era 1991 to 2009

According to Moll *et al.* (2005:16), separate technical colleges (prior to 1998, TVET colleges were called technical colleges) with different levels of resources were established for white and black students. The apprenticeship system provided a steady flow of white youth into technical trades, which provided the skills base for mines and manufacturing industries. The racially organised education and training system was an important mechanism for preventing black people from acquiring skills suited to competing for jobs in the labour market.

The Skills Development Act no 97 of 1998 replaced apprenticeships with learnerships, as a combination of unit standard-based structured learning and practical work experience that leads to a qualification on one of the levels of the NQF. Learnerships extended the old apprenticeship system into new areas, and with approval of the relevant Sector Education and Training Authority (SETA), the practical work experience component may be obtained at one or more workplaces. The learnership contract signed between employer, learner and registered training provider specifies the unit standards to be achieved by the learner at a certain level of the NQF and sets out the times at which the structured learning component will be provided (Moll *et al.*, 2005:18-19).

The Report 191 National Accredited Technical Education (NATED) N1 to N6 engineering studies, provide a variety of optional trade theory subjects such as electrical, mechanical and civil. These college based engineering programmes were introduced from the early 1980s where students receive theoretically based technical education. These outdated theoretical programmes are currently still being offered by TVET colleges. In addition to the engineering

study fields, colleges also began to offer NATED business and general study programmes from the late 1980s to the early 1990s, to cater for the emerging service economy. The outdated curriculum of N4 to N6 business and general study programmes are still in existence and offered by colleges in various study fields, such as financial management, management assistant, business management and human resource management. These mandatory funded programmes by the state do not cater for the diverse range of student needs that enter colleges. The DHET (2010d:26) reports that "...N courses are fundamentally outdated and lagged behind in applied disciplinary knowledge". Various authors, such as Stumph, Papier, Needham and Nel (2009) point out that one of the key problems identified in the post-DHET establishment period is the scantiness of further learning opportunities for youth who leave school, either prematurely or with a national senior certificate (also see Lolwana, 2010). According to the Department of Higher Education and Training (DHET, 2012b:9), there are inadequate financial resources to allow most school leavers, including matriculants, to successfully enter post-school provision.

Moll *et al.* (2005:21-22) point out that, in order to understand VET in South Africa, it is important to distinguish between general post-school VET, which takes place in an TVET college or training institution and is aimed at young school leavers, and occupationally directed VET, which takes place in the workplace or is directed more at adult learners. Post-school VET, delivered via TVET colleges, is the responsibility of the national Department of Higher Education and Training (DHET). Programmes for young school leavers are offered both within the FET band (levels 2-4) and the Higher Education (HE) band (level 5) of the national qualifications framework (NQF). These programmes are based on set national curricula, and offer general vocational skills and knowledge. Occupationally directed VET, which is aimed more directly at adults and employed workers in the workplace, generally falls outside of the national curriculum. The Skills Development Act 97 of 1998 and the Skills Development Levies Act 9 of 1999 were established by the Department of Labour (DoL) to encourage VET in the workplace by allowing employers to claim back portions of a skills levy paid to government if they provide training to employees. General vocational qualifications, as a learning pathway towards higher education or on-the job training, is primarily provided by TVET colleges to people aged 16 and above who did not make decisions about their careers, or were denied access at higher education institutions, as well as to second chance students that prematurely dropped out of school (Moll *et al.*, 2005:21-22).

Until recently, TVET colleges were not regarded as the primary delivery choice of the Department of Labour for occupationally directed programmes geared towards employed workers or unemployed young people who need occupational skills to enter the labour market. TVET colleges enjoy minimal participation in the offering of occupational directed programmes via entering into agreements with employers and Sector Education and Training Authorities (SETAs). Delivering the same vocational qualifications year after year creates a situation of over-supply of students entering the labour market, while the delivery of occupational programmes challenge colleges to become flexible to the changing needs of employers, which can in turn affect the substance of the programme (Moll *et al.*, 2005).

The DoL funds learnerships and skills programmes for employed workers and unemployed youth. Learnerships were instituted by the DoL to replace the apprenticeship system in South Africa. Learnerships seek to offer people an occupationally directed qualification that incorporates both institutional and workplace learning. It focuses on both theoretical knowledge and skills for the workplace. Through learnerships, young people have the opportunity to experience a real workplace environment, which could contribute to preparation for jobs when they complete the programme. A learnership is a training programme that combines theory at a college or training centre with relevant practice on-the-job. The tripartite agreement between the employer, learner and training provider is intended to spell out the duties of all stakeholders involved, to ensure the quality of the training and to protect the interest of each party (Moll *et al.*, 2005:23).

According to Middleton, Ziderman and Van Adams (1991:25), the effect of employer training on productivity and equity can be limited by a number of factors. These include government intervention in labour markets, which can reduce the incentives to workers and employers to invest in skills development; weak management capacity, resulting in ever weaker training capacity; reluctance of large employers to invest in higher technical skills, increasing the risk of losing both the employee and the training investment; and reduced benefits of employer training to the disadvantaged due to the tendency to hire and provide the most training for the best-educated employees. A variety of occupationally directed VET programmes are registered on the national qualifications framework (NQF), of which not even half were implemented. These programmes are unit standard based and students accumulate credits until a full qualification is achieved. Occupational programmes may be offered as part or full qualifications. Skills or part qualification programmes are focusing on specific unit standards

that are registered within a full qualification. A compulsory workplace component and theoretical component form part of the occupational programme design. One of the major differences between general vocational and occupationally directed VET is that the former has a broader industry focus on the field of study or economic sector, for example generic hospitality studies, while the latter has a narrow focus on industry specific areas or job activities within a field of study, for example on becoming a qualified chef within the hospitality sector (Middleton *et al.*, 1991).

The introduction of the new learnership system, in an attempt to replace the old apprenticeship system, has not been very successful since its inception in 1998. This was due to many challenges, such as poor curriculum design based on unit standards, lack of support from industry, and poor management and administration of learnership implementation. During the past ten years the development of qualified artisans declined substantially and currently there is a shortage of qualified artisans in the country (Middleton *et al.*, 1991:25). According to Badroodien and Kraak (2006:27), registered apprenticeship contracts in South Africa have declined from 33 752 in 1985 to 22 015 in 1994, and the annual indenturing of apprentices has declined from 11 573 to 5 002 during the same period. Recent attempts by the state to revive the system include the reintroduction of the old apprenticeship system. A target of 10 000 qualified artisans was set by DHET for the 2011/2012 academic year. According to the data from SETAs, 24 378 artisan learners entered the system in 2011/12, an increase of 861 over the 2010/11 year. Furthermore, a total of 13 368 qualified as artisans for the 2011/12 academic year, which is 5% more than the previous year.

Apprenticeships are the archetypal vocational education programmes, but they are a small and shrinking proportion of vocational education enrolments in many Anglophone countries. In Canada 80% of vocational education students study full-time, while in Australia only 9 % of vocational education students study full-time. This suggests a much greater transition from school to vocational education institutions in Canada than in Australia (Moodie, 2008:175). Through apprenticeship individuals can acquire the broad range of practical and business skills necessary for self-employment. Apprentices sufficiently learn for commercial survival, but not enough to improve productivity significantly (Middleton *et al.*, 1991:40).

The DHET (2012b:10-11) alludes to the fact that the training of artisans has declined and is only now beginning to grow again and, although colleges are still playing their traditional role

in offering the outdated theoretical component of apprenticeship programmes, the DHET has commenced with the revision of the curriculum. Yet, only few employers have been willing to take on apprentices and give students opportunities for work experience. This is partly due to the policy environment that has caused uncertainty in the area of workplace training and the long-term status of apprenticeships, including the problems with the qualifications leading to learnerships. According to Middleton *et al.* (1991:25, 40), traditional apprenticeship in the unregulated enterprises of the rural and urban informal sectors is a highly efficient way to reproduce the skills of masters. However, it is weak in developing new skills, and access is often restricted by the availability of apprenticeship places and by social barriers that prevent women or minorities from entering certain trades.

General vocational education programmes are currently recognised as the national certificate vocational (NCV) level 2 to 4 programmes. The NCV programmes were developed under the auspices of the DHET and became the key funded mandatory programmes to be offered by TVET colleges since 2007 in various fields of the economic sector. These include hospitality, tourism, engineering, business, information technology and computer science, and safety in society. The aim of these qualifications is to enhance employment and self-employment and to enable access to higher education. These programmes consist of both theory and practical components, with four vocational subjects that link to the field of specialization and three fundamental subjects, namely mathematics or mathematical literacy and life orientation. The NCV programme design lacks a compulsory workplace component that could enhance student employability. Umalusi, as one of the three quality councils in South Africa, certify and quality assure the NCV qualifications. The poor certification and retention rate of the NCV programmes during the past five years tarnished the image of the quality of programme delivery in TVET colleges. That led to many challenges, such as lack of support from industry for student workplace exposure, and reluctance of higher education institutions to enrol NCV level 4 students. After five years of implementing the NCV programmes, the DHET undertook a review study to remedy some of the many challenges, such as the implementation and curriculum design flaws. The outcome of the review study was able to address most of the challenges associated with the current NCV content and curriculum design (DHET, 2012:10-11; RSA, 2017).

What might be highlighted from this account is that TVET colleges, until recently, were not regarded as the primary delivery choice of the Department of Labour for occupationally

directed programmes geared towards employed workers or for unemployed young people in need of occupational skills to enter the labour market. TVET colleges currently enjoy minimal participation in the offering of occupational directed programmes via entering into agreements with employers and Sector Education and Training Authorities (SETAs). Delivering the same vocational qualifications year after year creates a situation of over-supply of students entering the labour market. Therefore, the delivery of occupational programmes challenges colleges to become more flexible to the changing needs of employers. In turn, flexibility can affect the substance of the programmes.

- **The establishment of the South African Qualifications Authority (SAQA) by Act 58 of 1995; The National Qualifications Framework (NQF) by Act No 95 of 1995 and The National Qualifications Framework (NQF) by Act No 67 of 2008**

The primary purpose of SAQA is to oversee the development and the implementation of the National Qualifications Framework (NQF). Some of its key functions include the formulating and publishing of policies and criteria for the establishment of bodies responsible for generating and establishing national standards and qualifications. The NQF was formally established under the South African Qualifications Authority Act of 1995, the first act of the democratic post-apartheid parliament. The key objectives of the national qualifications framework was to create an integrated national framework for learning achievements; facilitate access to and mobility and progression within education, training and career paths; enhance the quality of education and training; accelerate the redress of the past unfair discrimination in education, training and employment opportunities; and to contribute to the full development of each learner and the social and economic development of the nation at large (RSA, 1995b).

The National Qualifications Framework (NQF) of 1995 envisioned to integrate the entire education system into a single framework, comprising three bands and eight levels. This includes all qualifications from the General Education Band (GET Band level 1) to the Further Education Band (FET Band levels 2 to 4), and all other programmes under the Higher Education Band (HET levels 5 to 8). One negative impact of the NQF 1998 on the TVET college sector was that they shared the same band with high schools, which caused major confusion among students and the broader public, as well as employers (RSA, 1995b).

The promulgation of the current NQF No 67 of 2008 came as a result of the splitting of the National Department of Education into two departments: the Department of Higher Education

and Training (DHET) and the Department of Basic Education (DBE). The DHET is responsible for post school education and training, while the DBE focuses on primary and secondary schools. The current NQF 2008 covers all qualifications and consists of ten levels (1-10). NQF level 1 represents the General Education and Training band, which is the equivalent of Grade 9, while NQF levels 2 to 4 represent the Further Education and Training band, the equivalent of Grade 10 to 12. NQF levels 5 to 10 represent the Higher Education and Training band, with national certificates and diplomas, higher diplomas and first degrees, honours degrees, master's and doctorates. The main changes comprise the addition of NCV levels 2 to 4, N1 to N3, and Occupational Certificates (OC) levels 1 to 4, parallel to Grades 10 to 12. N4 to N6 were also added on level 5, while OCs were added as OC level 5 to 8. Master's and Doctoral degrees now reside under levels 9 to 10. Unfortunately the new NQF 2008 is still not addressing the challenges of the NCV levels 2 to 4, since it is still in the same FET band of the schools, and the confusion among students, parents, the industry and the broader community persists.

The first pillar of the new framework is the introduction of a totally new approach to qualifications and programmes, based on the idea of an integrated education and training system that overcomes the historical divides between 'academic and applied learning, theory and practice, knowledge and skills, and head and hand' (DoE, 1995a:2, 34). All TVET college programmes are primarily registered on NQF levels 2 to 4, which fall within the further education and training band of the framework. TVET colleges are also allowed to offer programmes registered on the higher education band under the quality assurance auspices and in partnership with a university (DoE, 1995a).

The system seems to be mainly concerned with credit accumulation, and not so much with transfer. All unit standards and qualifications are accredited for registration on the framework. By August 2007, some 11 489 unit standards and approximately 818 outcomes-based qualifications had been developed and registered on the framework (Allais, 2007: 525), but the framework has not been successful yet. Allais (2007:532) reports in 2007 that in the 12 years since the passage of the legislation for implementing the framework, an estimated 0,3% of qualifications awarded in South Africa were registered on the framework. Moreover, a mere 10% of the new qualifications registered on the framework has ever been awarded. In Allais's words: "... the qualifications framework is a castle in cyberspace – a list of qualifications and unit standards with very little relationship with the real world of educational provision" (Allais,

2007:532). This may be at least partly due to the objections of universities and senior secondary schools to the qualifications framework's specification of qualifications as outcomes, especially competences that are particularly reductive expressions of outcomes (Moodie, 2008:74).

A qualifications framework is a representation of the relations between types of qualification. Qualifications are official, validated statements of successful completion of education or training or of having fulfilled the requirements to enter or progress within an occupation, discharge a function, or hold an office (Coles & Oates, 2005:26). Qualifications frameworks are mostly designed to include occupational as well as academic qualifications, but all current qualifications frameworks are dominated by academic qualifications. Qualifications frameworks are developed by governments to support the coordination, correspondence, coherence, integration, or harmonization of alternative, sometimes competing, qualifications.

According to the DHET (2012:15-16), the system has created a proliferation of qualifications and unit standards; however, there has been no corresponding proliferation of learning or educational provision. According to DHET, a key justification for structures like the NQF in various countries is that they are designed to establish equivalence as an aid to credit recognition and learner progression. Yet, the notion of equivalence is difficult to put into practice and there is little evidence that the South African based NQF has in fact facilitated judgements about equivalence.

- **The National Training Strategy Initiative (1994): A new institutional landscape for FET colleges (2001) and The National Strategy for Further Education and Training (1999-2001)**

The creation of the national qualifications framework (NQF) as the vehicle for articulation of qualifications and learning credit accumulation originated from the national training strategy initiative (NTSI). The NTSI also recommended a single ministry of education and training, but the then government opted to keep the ministries separate and created the Department of Education (DoE) and Department of Labour (DoL) respectively. This decision by the newly elected ANC-led government perpetuated the division between education and training, inherited from apartheid South Africa, and is partly to blame for the fragmented, incoherent system of vocational education and training after seventeen years of democracy.

In 2009 it was decided to combine education and training under one department (DHET) and to create a separate department for basic education (The Department of Education). The DHET is currently responsible for both education and training under the banner of universities, TVET colleges and Sector Education and Training Authorities (SETAs). The recommendation of the National Training Strategy Initiative (NTSI) in 1994 was eventually implemented with education and training residing under one education department. The department of labour, therefore, is no longer responsible for skills training of the private sector. This decision was well received by the broader public as a move into the right direction to streamline and integrate the education and training sector in a meaningful and coherent manner. The newly formed DoE is now solely responsible for basic education, namely the primary and secondary schooling sector (DoE, 2001:3; 1999).

The release of the new institutional landscape for FET colleges in August 2001 ushered in a new era for the TVET college sector. National landscape task teams, consisting of provincial and national representatives, were established to develop the new landscape for TVET colleges. The merger process of the former 152 technical colleges and the declaration of 50 public TVET colleges are indicative of key milestones of the recommendations confined in the new landscape for TVET colleges. Prior to this process, most colleges operated as independent bodies, on both provincial and national levels. The old technical college names were also changed, which was the responsibility of the provincial minister of executive councils (MECs). This process brought the TVET sector stakeholders closer, improved the co-ordination of policy implementation, and combined resources to create mega multi-campus delivery sites (DHET, 2001:3, 15; DoE, 1999).

The national strategy for TVET colleges provides the basis for the development of a nationally coordinated further education and training system. This three year plan provides a framework for the implementation of the TVET policy and reporting and accountability mechanisms on the performance of the system as a whole. Colleges are now expected to develop institutional strategic and operational plans linked to programme-based funding and a national curriculum for teaching and learning. It further outlines areas of collaboration with key stakeholders such as other relevant government departments, statutory bodies and non-governmental organisations (DHET, 1999:11; DoL, 2011, 2016).

- **The Skills Development (SDA) of Act 98 (1998), National Skills Development Levy (SDLA) of Act 9 (1999) and the National Skills Development Strategy III (NSDIII) (2011-2016)**

The Green Paper (1997) for a skills development strategy to train the private sector workforce was released under the auspices of the Department of Labour. The Green Paper (1997) laid the foundation for the development and release of the Skills Development Act of 1998 and the Skills Development Levies Act of 1999. The key objectives of the Skills Development Act are to develop the skills of the South African workforce, to improve the life of workers, provide better prospects for finding work, to facilitate labour mobility, to ensure quality education and training in and for the workplace, and to provide employment services (DoL, 1998:1).

The purpose of the skills development levy act (SDLA) is to provide for the imposition of a skills development levy to fund the purposes of the skills development act (SDA). This act obliges all registered employers with the South African Revenue Services (SARS) who has an annual payroll in excess of R500 000 to contribute 1% of their total payroll to the National Skills Fund (NSF). These levies are paid over to the twenty-five SETAs of the various economic sectors of the South African economy, namely manufacturing and engineering, tourism and hospitality, agriculture, education and training, and banking. The SETAs have authority to disburse these funds to training providers, including TVET colleges, to up-skill and re-skill employed as well as unemployed persons through occupational directed programmes, such as learnerships. SETAs have the primary responsibility for setting up learnerships in their respective economic sectors and to register them with the Department of Labour (DoL) (DoL, 1999:5-6).

The policy documents further support the close working relationship between the Departments of Education and of Labour. These two pieces of legislation led to the establishment of twenty-five Sector Education and Training Authorities (SETAs) that represent the economic sectors of the country, with a strong focus on learnerships aimed at modernising the old apprenticeship system. Learnerships were intended to be delivered by TVET colleges in partnership with SETAs and industry. Unfortunately this objective was only partially achieved, due to the SETAs' preference to contract private providers to offer learnerships instead of public TVET colleges. The vital link between the FET Act, SDA and SDLA is seen in the context of the development of a nationally co-ordinated programme-based further education and training and

governance TVET college system and the development of skills for the South African workforce in order to improve the quality of life of workers (DoL, 1998; DoL, 1999).

The release of the National Skills Development Strategy (NSD III) is a crucial piece of legislation that aims to promote the growth of public TVET colleges to respond to sector, local, regional and national skills needs and priorities (DHET, 2011-2016:3). TVET colleges are central to the government's programme of skilling and re-skilling both youth and adults and NSDIII intend to support and ensure that these colleges take centre stage in skills development. NSDIII also encourages closer co-ordination and collaboration between SETAs and public TVET colleges in order to strengthen and prioritise them for training provision. Furthermore, the improvement of pedagogical, vocational and technical skills of college lecturers is a critical component of NSDIII. The strategy also attempts to address challenges that prevent the economy from expanding and providing employment opportunities. Challenges addressed include inadequate skills and work-readiness of young adults entering the labour market, poor linkages between institutional and workplace learning, and continuing skills shortages in the artisanal, technical and professional fields. The strategy also addresses system blockages, for instance the lack of synergy between post-school sub-systems such as universities, TVET colleges and SETAs (DHET, 2011-2016:3, 4, 12). Aligning vocational curricula with the labour market is a common challenge in developing countries. Literature ascribes that, in part, to deficiencies found in the design and implementation of the curricula offered by these institutions (Albashiry, Voogt & Pieters, 2015; Agrawal, 2012; Badqadir, Patrick & Burns, 2011; Lai & Lo, 2008).

The NSDIII must be read in conjunction with the human resource development strategy of South Africa (RSA, 2010-2030), which also plays a pivotal role in the programme mandate of TVET colleges. The objective of this strategy is increased adult participation, increased enrolments, and relevancy of programmes and alignment to industry. The strategy also encourages optimal responsiveness from education and training activities and resources to the country's developmental needs, and to the demand for skilled human resources (RSA, 2010-2030).

- **Education White Paper 4 on Further Education and Training (1998) and the Further Education and Training Act No 98 (1998)**

The National Training Strategy Initiative 1994 (NTSI), as well as the findings of the National Commission for Further Education (NCFE), laid the foundation for the development of the Green Paper for FET and the subsequent published White Paper for FET. The intention to overcome outdated divisions between ‘academic’ and ‘vocational’ education and training was supported in the FET White Paper 4. FET White Paper 4 of 1998 serves as the foundation for the development of and ultimate promulgation of the FET Act No 98 of 1998.

The key purpose of the FET Act was to establish a nationally coordinated further education and training system, cooperative governance, and programme-based education and training. It intended to restructure and transform programmes and institutions to better respond to the human resource, economic and development needs of South Africa and its people. A milestone was achieved during the tenure of this act when the previously known technical colleges were declared Further Education and Training (FET) Colleges in September 2001. This was an attempt by the state to improve the negative image and brand of the college sector (DoE, 1998a; 1998b).

One of the negative features of this act, however, was that it had placed FET schools in the same band as FET colleges, with no distinct policy focus on TVET colleges. Limited progress was thus made towards the intended TVET college objectives as envisaged in this act. The separate state and state-aided colleges created under apartheid South Africa remained funded unequally under the new FET Act of 1998 and perpetuated the unequal funding regime within the new democratic South Africa. This act was subsequently replaced by the FET Colleges Act 16 of 2006.

- **The Further Education and Training Colleges (FETC) Act No 16 (2006) (also known as Continuous Education and Training (CET) Act 16 of 2006); the National Certificate Vocational Certificate (NCV) Policy (2006) and the National Plan for FET colleges (2008)**

The FET Colleges Act 16 of 2006 was promulgated on 11 December 2006 and became effective on 1 January 2007. The purpose of this act was to enable students to acquire the necessary knowledge, practical skills and applied vocational and occupational competence. It aimed at providing students with the necessary attributes required for employment, entry to a particular vocation, occupation or trade, or entry into higher education. The main changes envisaged by this act include the college council as the new employer of state employed staff

(covered in Chapter 4 of the Act) and the proposed new funding model where new norms and standards would be established to fund mandatory programmes (see Chapter 5). According to (DHET, 2010b:3), the employment provisions of the CET Act of 2016 had a “destabilising effect upon the TVET colleges and there have been unintended consequences”, such as the impact of the new employer status of college councils which led to increased staff turnover due to mainly job insecurity and low staff morale, as well as reporting lines and accountability of college principals and deputy principals. The slow development and ultimate implementation of the new funding model for the national certificate vocational (NCV) programmes in 2010 caused severe financial management challenges for most colleges (DoE, 2006a). The CET Act 16 of 2006 was amended and resulted in the Further Education and Training Colleges (FETC) Amendment Act 1 of 2013 (commenced on 8 October 2014) to enable the DHET to provide for a variety of regulations (see section 3.3.1.3 for more detail).

In 2007, the national certificate vocational policy embarked on an internationally benchmarked curricula, consisting of nine different fields of qualifications, covering key economic sectors, underpinned by integration of theory and practice in a simulated environment. Fundamental learning components, such as Mathematics, Mathematics Literacy, Language and Life Skills, formed a compulsory part of the curriculum in addition to the vocational knowledge and skills learning components. The aim of these qualifications was to respond to the high level technical skills demand from industry. The national student financial aid scheme (NSFAS) was simultaneously introduced with the implementation of the NCV qualifications in 2007 in an attempt to increase the enrolment of NCV students to one million by 2014 and to increase access to poor communities (DoE, 2006:3-4).

In an attempt to improve and align the college physical resources and equipment to the new NCV curricula requirements, national Treasury, through the DoE, approved a conditional grant to the value of R1,9 billion over a three year period from 2007 until 2009 to recapitalize the TVET college sector. The funding was well-received by an ailing TVET sector in dire need of improving and upgrading their resources, especially the previously state controlled rural based colleges. The implementation of the national certificate vocational NQF levels 2 to 4 programmes in 2007 across different study fields, such as engineering, business, information technology, hospitality, and tourism, created vast teaching and learning challenges for colleges. Some of the reasons for poor pass rates and throughput rates include the low level of foundational knowledge of the students coming from schools, poorly qualified staff, challenges

to integrate theory and practice, resistance to change, high pass percentage requirements of subjects (which is 50% for the four vocational subjects), and socio-economic backgrounds of the students. The funding model and the national student financial aid scheme (NSFAS) excluded all other programme offerings of colleges, which led to exclusion of students with an interest in other programmes. The college mandate is to offer a variety of programmes to a diverse range of students according to White Paper 4 of 1998, and therefore the NCV policy was not achieving this objective (DoE, 1998a).

The gazetted 2008 national plan for FET colleges provided the basis for the consolidation of the FET sub-system, according to the DHET (2010: 24). The national plan envisaged a TVET college sub-system responsive to the needs of society and the demands of diverse economic sectors, with strong partnerships with commerce and industry regarding curriculum and governance. Other objectives of the national plan included an increase in youth and adult participation in TVET colleges to one million by 2014, a differentiated and responsive system to geographical and sectoral challenges, strong linkages with industry to support workplace opportunities for students, and quality provision of vocational qualifications with strong links to learning programmes and qualifications in the Quality Council for Trades and Occupations (QCTO). Articulation routes to qualifications offered by universities was also a critical component of the new system (DoE, 2008b; RSA,2010a:324).

3.1.4.3 The third era 2010 to 2013

The third era places emphasis on the present context and emerging knowledge through current legislative developments in vocational education in South Africa.

- **The Green Paper on Post-school Education and Training of 2012 and the White Paper for Post-School Education and Training 2013**

The Green Paper (DHET, 2012b:3-6), represented emerging knowledge and thinking at the Department of Higher Education and Training (DHET) regarding the expansion of the newly established post-school education and training system. 'Post-school' refers to all education for people who have left school, as well as those who need education opportunities. At the time the primary aim of the Green Paper was to create a policy framework that enables the DHET to shape its strategies and plans for the post-school system that includes higher education institutions, TVET colleges, adult education, and skills levy institutions. It furthermore

envisioned the development of a single, coherent, differentiated, articulated post-school education and training system.

Subsequently, the White Paper for post-school education and training was promulgated by the DHET on 20 November 2013 (DHET, 2013b). The DHET envisaged with the release of the White Paper to improve the capacity of the post school education and training system (PSET) to meet the needs of the country. The White Paper envisioned, for instance, a post-school system that can achieve a single, coordinated PSET system; stronger and more cooperative partnerships between education and training institutions and the workplace; and a PSET system that is responsive to the needs of individual citizens and employers and the broader societal objectives (DHET, 2013b:4-10). Some of the policy intentions include the expansion of access to education and training by 2030 to increase the student intake to 5,6 million enrolments in the entire PSET system, of which TVET colleges must enrol 2,5 million students (DHET, 2013:7; RSA, 2013b:321).

The White Paper (DHET, 2013b:14-19) focused on the improving of quality of TVET colleges. This included the offering of relevant programmes by reviewing the existing qualifications that became outdated; the upgrading of lecturer qualifications; capacity building for management and governance; improved learner support; provision of information technology systems; and improved partnerships with employers. It was envisaged that NCV level 5 would be developed to grant access to post matric students. The White Paper also suggested a commitment to improved funding norms and standards from DHET and the levy-grant system that should fund the diverse range of TVET programmes. Enhanced establishment of resources and capacity at TVET colleges, including increased access to the broader public, were also features of the envisaged goals of the White Paper. A review of the funding norms is still eminent, including the unlocking of funding of SETAs and the national skills fund (NSF), in order to achieve the new mandate of colleges (DHET, 2013b:18).

Community Education and Training Centres (CETCs) were proposed by the DHET to cater for the provision of second-chance learning opportunities for out-of-school youth and adults. The CETCs would build on the current offerings of the existing public adult learning centres and offer general education programmes such as the National Senior Certificate for Adults (NASCA). They could also offer knowledge and skills leading to sustainable livelihoods outside of the formal sector. The establishment of the CETCs was envisaged by the White

Paper to contribute to the expansion and strengthening of the integrated and diverse post-school system. However, partnership and articulation issues between CETCs and other institutions in the post-school sector clearly demanded more attention (DHET, 2013b:20-24; RSA, 2013b:324).

Finally, the establishment of South African Institute for Vocational and Continuing Education and Training (SAIVCET) was to be one of the most strategic changes that would contribute to the improvement of the overall quality of TVET colleges through, for instance, developing innovative and industry responsive curricula, and upgrading of technical knowledge and pedagogical skills of existing TVET college staff, as well as initiating research on TVET (DHET, 2013b:25-26; RSA, 2010:316).

Unequal resourced colleges versus those that could respond to the new mandate was one of the typical challenges faced by colleges at the time of the introduction of the White Paper (DHET, 2013b). Another challenge was the focus point on expansion versus current capacity, which might have hampered (and is still hampering) the sector to achieve 2,5 million student enrolments by 2030. Other challenges include a lack of industry participation to provide workplace learning opportunities, which could jeopardize successful implementation of new curricula, especially those with a compulsory workplace exposure component; a lack of staff motivation and commitment to participate in lecturer development programmes; a lack of legislated interface between community education and training centres (CETCs), Adult Education and Training (AET), SETAs, higher education institutions and TVET colleges; some overlapping of roles between AET, CETCs and TVET colleges, which could lead to role conflict and funding challenges; some overlapping of roles between Umalusi and QCTO; and lastly, the multitude of diverse roles that were (and still are) expected to be performed by TVET colleges.

Some of the foreseen benefits indicated in the White Paper reflected the improved quality of relevant nationally co-ordinated VET curricula, as well as the improved quality of programme delivery. The White Paper provides incremental diversity in the range of programmes that could cater for the diverse range of students entering TVET colleges.

- **The Quality Council for Trades and Occupations (QCTO) 2010**

The established Quality Council for Trades and Occupations (DHET, 2010:3) is one of three quality councils in the South African education system. Its purpose is to allow access, success and progression for all who want a trade, occupation or profession resulting in a skilled, productive and employable citizenry. The mission of the QCTO is to develop and quality assure occupational qualifications that are responsive to labour market needs and developmental state initiatives. With the focus on artisan training in all national strategic documents, the National Artisan Development Body (NAMB) was established in 2011 and became the first assessment quality partner (AQP) of the QCTO. The NAMB, funded by the state, was established by the Minister of DHET on 20 November 2011 as a component of the DHET. Some of the key focus areas of NAMB are to monitor the performance of accredited artisan trade test centres; to moderate artisan trade tests; to record artisan achievements; to determine appeals against assessment decisions; and to recommend certification of artisans to the QCTO. The occupational artisan learning routes envisage a knowledge, practical and workplace component that will be offered by TVET colleges and focus schools. Apprenticeships and learnerships will be used as vehicles for the workplace experience component. Occupational qualifications demand that the education and training providers and workplaces must be aligned if learners are to navigate their way from poverty to employment (DHET, 2010:3). According to the QCTO newsletter (2012:1), one of the major challenges in delivering occupational qualifications is getting the buy-in of workplaces in the public sector, private sector, non-government and non-profit organisations, as well as by those in the informal economy.

- **FET Colleges (FETC) Amendment Bill 2012**

After a myriad of legislative mandates meant to transform the TVET college sector from its historic background, the FET Colleges Amendment Bill is seen as the ultimate policy imperative that consolidates all previous legislation. It has the potential to strengthen and reposition colleges to become the centre of skills development in the country. The administration, powers and functions entrusted by the FET Colleges Act (Act No. 16 of 2006), was transferred in terms of section 97 of the Constitution of the Republic of South Africa, 1996, to the Minister of Higher Education and Training by proclamation no. 44 of 2009, published in Government Gazette No. 32367 of 1 July 2009.

The implication of the proposed amendment implies that TVET Colleges will become an exclusive national competency, instead of the concurrent competency between the national and

provincial education departments. Some of the main features that the Bill seeks to amend include the removal of all references to provincial authority; to assign all functions previously assigned to the member of the executive council (MEC) to the Minister; to replace all references to “Head of Department” with “Director General”; and to transfer staff, remunerated by the State through norms and standards, back to the public service. The proposed amendments in the FETC Amendment Bill was approved as the 18th amendment to the South African Constitution on 14 September 2011 by Parliament’s justice committee, which aims to officially transfer further education and training (TVET) colleges from provinces to the Department of Higher education and Training (DHET). The FETC Amendment Bill was subsequently gazetted on 11 May 2012 after the Minister of Higher Education and Training signed the Government Gazette on 9 May 2012 (DHET, 2012a).

- **FET Colleges (FETC) Amendment Act, 2013 (Act no. 1 of 2013)**

The commencement of the Further Education and Training Colleges Amendment Act, 2013 (Act no. 1 of 2013) took effect on 19 March 2013 when the President of South Africa assented to this act. Various sections were amended. Moreover, it includes a number of objectives, such as to restructure and transform programmes and colleges to respond better to the human resources and the economic and development needs of the Republic of South Africa, as well as to ensure optimal opportunities for learning, the creation of knowledge and the development of intermediate to high level skills that are in touch with international standards of academic and technical quality. A shift in the White Paper on Post School Education Education and Training (PSET) now states that the review of qualification types will address the “economy’s needs of mid-level skills” because of the central role that workplace learning has in the training of workers. Such qualification types include apprenticeships and learnerships through which students are primarily being prepared for careers in the labour market (DHET, 2013b:15).

This act includes four prominent features: Firstly, the name change from “FET” to “TVET” colleges was announced as official in January 2014 by minister Nzimande. The significance of this name change signals an overhaul of the entire post school system through strengthening of many weak strategic areas, such as closing the gap between universities, colleges, SETAs and industry, as well as expanding the TVET sector. The shift to TVET was chiefly meant to bring the national education system in line with international trend in post school education.

Unlike FET, which is a term established by the DHET, TVET is an international term. TVET, or Technical and Vocational Education and Training, emerged from the 1999 United Nations Educational, Scientific and Cultural Organisation (UNESCO) second international congress on technical and vocational education in Seoul, South Korea. The congress established the UNEVOC-INEVOC International Centre for Technical and Vocational Education and Training, which would drive TVET as a global educational initiative. According to the website of UNESCO, TVET focuses on the "acquisition of knowledge and skills for the world of work" (UNESCO, 1997:5). This term embodies and draws on the elements of historical educational terms such as 'Apprenticeship Training', 'Vocational Education', 'Technical Education', 'Workplace Education', and more. Thus it can be seen as encompassing the principles of South African's so-called 'Further Education and Development' as well. It is because of the natural alignment of FET and TVET that the name change of South African TVET colleges can be viewed as a re-labelling of already established colleges albeit its many flaws as discussed earlier, rather than any kind of paradigm shift.

Secondly, TVET colleges became a national DHET responsibility and all colleges migrated to DHET away from the provincial education departments on 1 April 2015. This implies that staff salaries are currently paid by DHET, funding happens through stage grants and subsidies and NSFAS bursaries and all other strategic functions are monitored under DHET auspices.

Thirdly, another area of positive progression in this new act is the establishment of the South African Institute for Vocational and Continuing Education and Training (SAIVCET), through which DHET plans to achieve most of the curriculum related challenges, including staff development, leadership training, the promotion of research into TVET college issues, as well as promoting dialogue between colleges and employers.

SUMMARY OF SA LEGISLATIVE CHANGES

Since 1995 until recently, myriad of TVET and related pieces of legislation have taken place. Some of the major changes included legislation to effect a name change from FET to TVET and the constitutional changes that led to TVET colleges becoming a national competence under the auspices of the DHET. The new funding norms and standards for programme based funding heralded a new and welcoming era for TVET colleges. The introduction of new programmes, such as the NCV programmes in 2007, as well as the occupational programmes

linked to learnerships and skills programmes, represented some curriculum changes. The numerous amendments to the CET Act 16 of 2016, which resulted into the FETC Amendment Act 3 of 2012 and FETC Amendment Act 1 of 2013, ushered in a brand new envisaged era by DHET of unprecedented and drastic change in all areas of the TVET college sector, and at the same time brought some relieve to some of the challenges experienced by TVET colleges.

The NQF of 2008 improved the status of occupational certificates that flow from NQF levels 2 to 8, while the FET band of TVET ministerial programmes remained parallel with the schools. The promulgation of the NQF of 2008 did not address the articulation challenges of the OCs and the NCV and other TVET college programmes, since higher education institutions remained reluctant to grant access to students who graduate with OC, NCV and Report 191 qualifications. The establishment of the QCTO as the third quality assurance body of occupational qualifications in South Africa, as well as the SAIVCET, as proposed by the White Paper (DHET, 2013b), which will conduct a variety of TVET specific research areas, are profound and much needed for TVET sector overall quality improvement based on proper research.

The White Paper (DHET, 2013b) is the latest masterpiece of envisioned changes by the DHET that predicts a total overhaul of the entire post school system of quality improvement on all areas of delivery. The TVET college sector is the central feature to be uplifted in order to play its earmarked space to achieve the goals and objectives of contributing to the skills and economic drivers of the country as described in the White Paper.

COMPARISON BETWEEN SOUTH AFRICAN VOCATIONAL EDUCATION AND TRAINING AND AN INTERNATIONAL PERSPECTIVE (UNITED KINGDOM, GERMANY AND AUSTRALIA)

It seems that, similar to South Africa (SA), the United Kingdom (UK) has shown a decline in producing qualified artisans through the apprenticeship system. The UK has also modernized its old apprenticeship system by replacing it with learnerships. During the past decade, the SA vocational system has become more school-based and is now tilted towards a more low skill equilibrium, such as in the UK.

As in South Africa, governments in the UK constantly intervene in the institutional arrangements, design, management and funding of VET, without being willing to wrest power

from or oblige employers. Unlike in the UK, however, the SA government legislated through the Skills Development Act of 1997 that all employers with an annual income of five hundred thousand rand and above pay one percent of their salary bill over to the South African Revenue Services (SARS). These funds are then distributed for training purposes of employed and unemployed citizens through the Sector Education and Training Authorities (SETAs) and the National Skills Fund (NSF), which represent the various economic sectors. In this way the SA government is not solely responsible for funding of VET. Although industry contributes to the training fund, they remain reluctant to participate in training of their workers or to host unemployed youth.

Contrary to Germany, the SA government is heavily involved in TVET. It plays a central, almost all-embracing role in the vocational system, while the participation of other partners, such as business and commerce, is minimal. These partners are sometimes reluctant to participate in workplace programme delivery. The difference between the German and South African system is thus the nature of the role of the state in VET. Qualified artisans also enjoy higher status and salaries in Germany than those in SA. Students are identified from a young age through the dual education system to make career choices, unlike in SA, where most students choose their field of study in Grade 12, the final year of schooling. South African TVET colleges, albeit numerous attempts from government to market TVET colleges as first choice institutions, still attract a large number of academically underachieving students from the school sector. This factor contributes to the high failure rate of students enrolled on the national certificate vocational (NCV). The level of difficulty that the NCV curriculum is pitched at is not permeating with the education level of the underachieving school learners. The current approved funded TVET programme qualifications mix by the Department of Higher Education and Training assume that these programmes are a 'one size-fits-all' situation and loses sight of the diverse needs, aptitudes and backgrounds of the intended students. While the German dual education system caters for student needs based on their diverse needs, the SA feeder system is not sufficiently differentiated or sophisticated.

In Australia, employers and industry have a strong role in the governance of the training system. This is unlike SA where the buy-in of industry in TVET is very weak. School-based apprenticeships exist in Australia and can lead to qualified artisans, whereas in SA apprenticeships are produced by TVET colleges and other training providers, but it are not offered by schools. Articulation of vocational education to higher education institutions is also

allowed for those who complete entry level vocations, unlike in SA where the universities are reluctant to accept TVET college graduates (also see DHET, 2013a:15; Branson, Hofmeyr, Papier & Needham, 2015:48). The Australian system consists of vocational and higher education while the South African VET system consists of vocational, occupational, adult basic education and higher education.

Other major differences between South African TVET and other countries explored in this study include the following: In most other countries occupational programmes resort under the general term vocational programmes, while in SA vocational and occupational programmes are two different terms. State intervention in vocational education, funding and involvement of organised labour also seems to be different. Major similarities across the countries studied include the fact that apprenticeships have dropped over the past decade, partially due to a lack of industry involvement, a lack of government support, the introduction of new modern apprenticeship programmes, such as learnerships in South Africa, and the NVQs in Britain. Other similarities include the low status of qualified artisans, except in Germany, where artisans are respected and well paid citizens. The perceived stigma of school drop-outs with low academic attainment students that enter colleges is thus countered. Furthermore, the lack of industry and other social involvement is prevalent in both the UK and SA. However, in Germany industry is the central stakeholder of the apprenticeship system. Many historic similarities exist between the UK, Australia and South Africa, the latter which had its vocational origin from the UK vocational systems.

CHALLENGES FACED BY TVET COLLEGES

This section addresses three key challenges currently faced by TVET colleges in South Africa. These challenges are: a lack of coherence and articulation of qualifications; inadequate quality, quantity and diversity of programmes and leadership capacity; and capabilities to lead curriculum change.

3.1.5 Lack of coherence and articulation within the post-school system

The DHET (2012:13-14) has already indicated that the post-school education system does not function as a single co-ordinated system in South Africa. The provision of post-school education through higher education, TVET and other training providers are fragmented and

little integration exists across different types and sites of provision (RSA, 2013b:324). The National Qualifications Framework (NQF) that ranges from level 1 to level 10 has also not fully succeeded to create a coherent education and training system. Moodie (2008:138) suggests that the most important aspect of education systems is not their institutions and structures, but the relations between them – the processes or internal dynamics that make it sensible to talk about a system as a whole. The transfer of students between vocational and higher education, and between tiers of higher education, is one way of observing a system's internal dynamics. According to Moodie, student transfer is particularly salient, because it reflects the nature of a tertiary education system and, depending on that nature, can be an important indicator of the system's success. Institutions and sectors that offer intermediate access through transfer to higher tiers, however, often have less prestige.

Moreover, Clark (1983: 63-4) points out that institutions and sectors that do not offer the possibility of transfer to higher tiers have a more sharply defined lower status. Thus, student transfer is important as it is one of the mechanisms that regulates vocational students' access to levels of education, and with that, occupation, prestige, life chances and income. Among other things, it also provides social mobility; it gives students more flexibility to respond to social and economic changes and to changes in their life circumstances; it establishes the lower tier's role as a higher education institution and confirms its standing in higher education; it raises the standing of lower tiers; it is also an important aspect of the relations and interactions between sectors and institutions. Grubb, Davis and Lum (1991:15) suggest that vocational and academic education could be integrated by incorporating more academic content in vocational subjects and *vice versa*, for example by converting some subjects into projects.

3.1.6 Inadequacies in the quality, quantity and diversity of programme provision

Inadequate quality, quantity and diversity of provision of programmes characterise the post-school education sector in South Africa. There are very few accessible educational opportunities available to adults and young people who have left school in the early stages of their lives. Opportunities for those who have failed to obtain a Grade 12 certificate or who do not meet the admission and selection criteria for higher education to catch up on learning they previously missed out on are just as limited. Most school leavers are denied access to successfully enter post-school provision due to inadequate financial resources, low throughput rates, poor human and infrastructural resourcing, insufficient financial aid for students,

inappropriate funding modalities, and ill-prepared school learners, resulting from poor quality in much of the schooling system (DHET, 2012:9-10).

McGrath (2005:139) suggests that some VET curricula are outdated, while some infrastructure is even older and more worn-out. VET provision is costly, yet many graduates do not get formal employment. The range of programmes often appears to have little to do with existing and potential labour market opportunities. VET is supposed to prepare learners for the world of work, and could be manifested in different ways: in programmes of youth yet to enter the labour market, aimed at both formal and informal sector employment and self-employment; in courses targeted at employed workers seeking new or improved skills in response to technological changes; or in retraining programmes for those who have become unemployed. Such programmes require the development of relevant skills and knowledge for the current, and potential future, shape of the economy.

The significance of the TVET band lies in the coherence of its four subsystems, as well as in its external linkages to higher learning and work. TVET systems worldwide are fundamentally shaped and judged by the effectiveness of their articulation with the world of work, but also to the extent to which they grant meaningful access to further and higher education. In South Africa the current TVET system has probably failed on both counts (Badroodien & Kraak, 2006: 20). There is a powerful sense of failure within the system with regard to the quality and relevance of TVET programmes, resulting in inadequate preparation for higher levels of education. The TVET sector has also failed to link many young learners to real employment prospects in the world of work and to provide a meaningful learning pathway for employed adult workers to return to formal study so as to improve their overall skills and competencies (Badroodien & Kraak, 2006:20).

Stark and Lattuca (1997:27-28) point out that in the vocational realm, student demands for specific career majors tend to reflect society's demand more quickly than the colleges' response. Colleges thus frequently seem to lag behind in changing curricula to meet student interests. Middleton *et al.* (1991:23-24) also assert that public training institutions face pressures to increase their flexibility in responding to economic change and uncertainty to develop the skills needed to facilitate change and growth. Vocational and technical education and training is supposed to change as economies change, but Badroodien and Kraak (2006:49) label FET college provision as too narrow, offering in many instances obsolete specialisations

with little underpinning general education. Badroodien and Kraak (2006:181) also cite that curriculum development for vocational education is a national competency, allowing minimal room for institutional innovation and curriculum customisation.

By the same token, Middleton *et al.* (1991: 25, 27, 50) maintain that centrally determined and rigidly administered curricula prevent institutions from responding to locally identified training needs and from reducing the length of training to lower costs. Responsiveness and efficiency have been hampered by rigid planning and management, weak linkages to employers, inappropriate objectives, and inadequate financing. Responsiveness improves when training institutions develop specialised expertise for institutional links with different skills markets. If skills are not developed, productivity will not increase and the benefits to society and individuals will not materialise. Professional instructors with good technical and pedagogical skills are central to quality, while adequate maintenance of facilities and equipment is essential for good training (Middleton *et al.*, 1991; Zideman, 1997; Descy & Tessaring, 2001; Papier, 2010; RSA, 2013a). In tandem, Siriwardene and Qureshi (2009) cite that by positioning TVET to the needs of the world of work is essential for economic, social and sustainable development. TVET has great potential to generate growth by empowering and enhancing the capacities of individuals to be employed.

3.1.7 Leadership capacity and abilities to lead curriculum change

In countries worldwide the curriculum is at the heart of the education and training system. In South Africa, in particular, the past curriculum has perpetuated race, gender and ethnic divisions. It has emphasised separateness, rather than a common citizenship and nationhood. Little wonder that the South African Department of Education remarked in 1994 that "... it is therefore imperative that the curriculum be restructured to reflect the values and principles of our new democratic society" (ANC, 1994:3). Amidst the numerous strategic areas to be led by college principals, one of the major challenges that faced TVET colleges was the improvement of the quality of teaching and learning programmes through sustainable curriculum change. The DoE (2007) has pointed out earlier some of the negative features of the then technical colleges they have been trying to overhaul since 1995. These features included: programmes that were outdated and unresponsive to the emerging economy; low throughput rates and negligible industry take-up of students; and college teaching staff who had lost contact with industry and had little knowledge of new trends in the workplace.

TVET college leadership capacity seems to be further hampered by insufficient physical and human resources. The Department of Education (DoE, 2001) and Gewer (2002) point out that the old FET colleges were (and TVET colleges are still) functioning in an environment with little institutional and curricular change. Naidu, Joubert, Mestry, Mosoge and Ngocobo (2008:1-2) claim that, contrary to public schools, leadership in South African TVET colleges was “a new phenomenon”, because in the past colleges were not autonomous and self-managing, while principals were administrators in highly regulated environments. This was especially the case in the so-called ‘state governed’ colleges.

By the end of the previous millennium, the DoE (1999-2001:13-17) indicated that college principals might need a suite of comprehensive leadership competencies, such as strategic capability and leadership, financial management skills, people management and empowerment skills, a client orientation and customer focus, change management skills, as well as honesty and integrity to effectively lead colleges. The main purpose of the principal’s job description was indicated as to strategically manage the TVET college towards achieving its vision of developing and delivering high-quality, flexible, and market-responsive programmes that facilitate the economic transformation of South Africa. The key responsibility areas associated with the principal’s post were articulated by the DoE as: college management and governance, curriculum responsiveness and marketing, student management and support, teaching and learning management, financial management, infrastructure and estate management, and personnel management (DoE, 1999-2001:13-17).

Such expectations also add to the belief by Bush and West-Burnham (1994:56) that leadership is not necessarily confined to one person in an organisation, nor that there is one effective leadership style, as it is impossible for one person to achieve success leading a diverse range of strategic areas. It thus seems imperative that senior management teams, as prescribed by the DHET’s organogram (DoE, 1999-2001:27), support principals in leading not only curriculum change, but also other mentioned strategic areas that directly impact on curriculum implementation to enhance college capacity. Lachiver and Tardif (2002) explain that effective leadership may contribute to how staff share in and accept the need for change, the extent of such change, as well as a degree of flexibility to adopt and implement change. Hallinger (2003) is also of the view that the effectiveness of leadership closely links to factors in the external environment and the local context of educational institutions, while educational renewal and

changing educational needs determine how instructional and transformational leadership might be useful (Hallinger, 2003).

The next section presents some theoretical understanding of curriculum leadership within the TVET context in the form of a preliminary conceptual framework, as informed by the theoretical perspectives generated from Chapter 2 and 3.

A PRELIMINARY CONCEPTUAL FRAMEWORK

The primary aim of this study was to develop a framework for leading curriculum change in the TVET college sector by investigating strategies that could be beneficial to capacitate TVET college leaders. It thus seems important at this point to at least present some theoretical understanding of how a preliminary framework might, at least theoretically, fit together. This is depicted in Figure 3.1 below and then briefly explained.

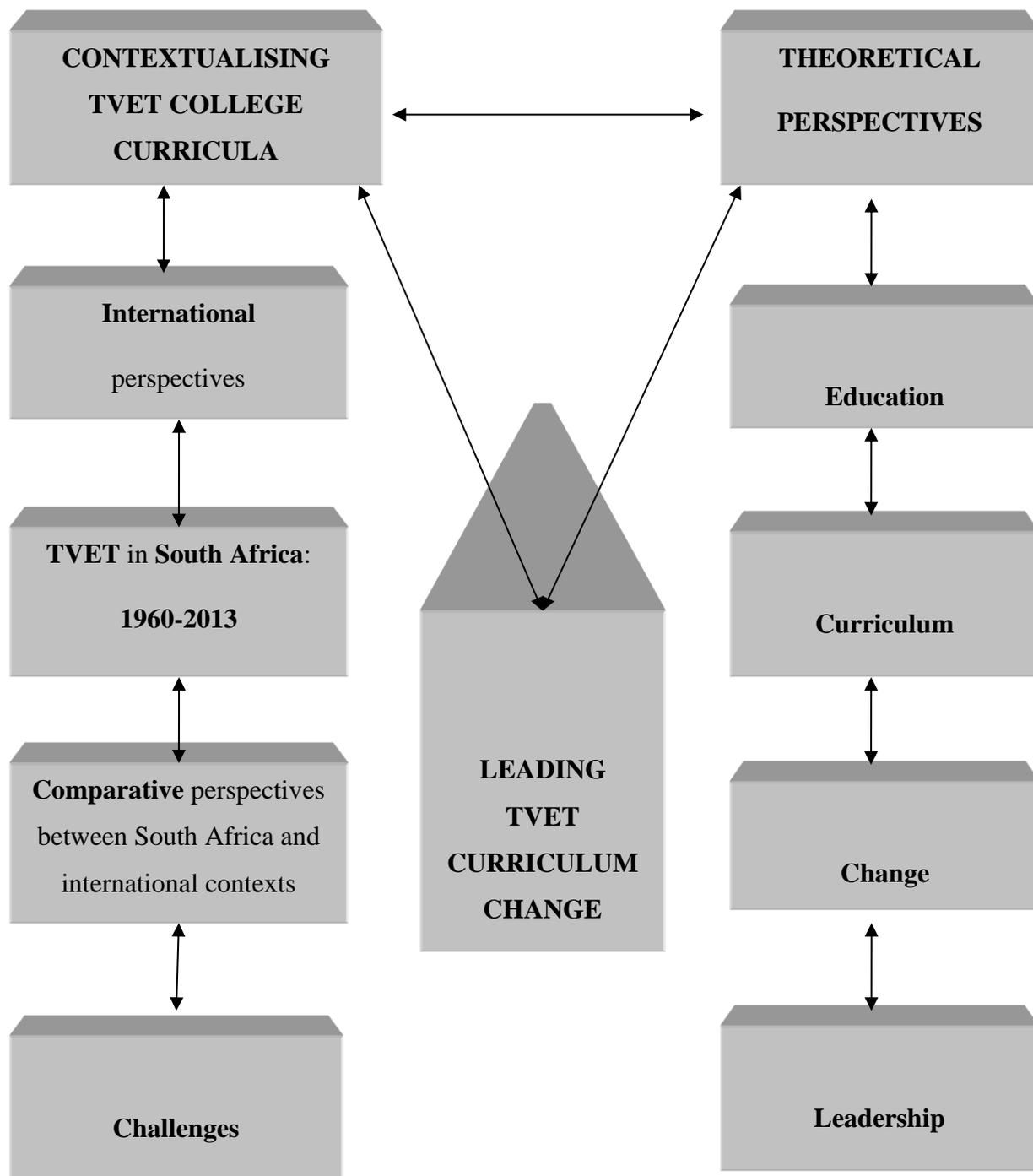


Figure 3.1 A preliminary conceptual framework for leading curriculum change

Based on the insights gained from Chapters 2 and 3, Figure 3.1 depicts and underpins my initial theoretical understanding of the leadership needed for curriculum change in TVET colleges. This follows on my understanding of the key concepts involved in the study, as well as how they relate with the contextual factors.

Firstly, theoretical perspectives on key concepts such as education, curriculum, change, leadership and leadership styles and trait theories are needed in order to understand how curriculum leadership might be influenced at the level of TVET colleges. Chapter 2 examined such concepts within the context of curriculum leadership and associated leadership and trait theories, which include transformational leadership, shared and participative leadership, power and influence as phenomena, and socio-constructivist trait theories as those with potential to lead curriculum change in TVET colleges. Other important cognitive, human and technical skills of successful academic leaders, which also form part of the leadership trait theories, seem to be vital to any type of leadership framework in the 21st century TVET environment.

Secondly, it is seems important to understand TVET leadership against the background of the international scene as well the South African TVET background and its historical development since the early 1800s. Its evolution from the three crucial periods, namely prior to 1990 as a first era, followed by a second era beyond apartheid (1991 to 2009) and a third era of enhanced development (2010 to 2013), is of significance. What also seems important is a comparison between TVET in South Africa and selected countries – especially those countries that influenced the TVET sector historically and otherwise, such as the UK, Germany and Australia. This contributes to a better understanding of the varied definitions linked to vocational versus occupational education, as well as the prominent features of industry in post-school education internationally versus the limited industry support and relationships with industry in South Africa (see section 3.3).

Most importantly, the legislative overview and analysis of the South African FET/TVET policy context provides a clearer understanding of how policies impacted (and still impact) on curriculum reform over the past twenty years and how it strongly influenced the nature and functioning of TVET colleges – not necessarily always for the better. The critical importance of curriculum leadership within an increasingly autonomous and environmental-sensitive college dispensation provides prompts for restructuring the TVET college curriculum. This emphasises the need for effective leaders to lead within a sector currently still faced with

outdated curricula, a lack of curriculum coherence, and poor articulation options of TVET college graduates to higher education programmes.

With these theoretical and contextual perspectives intact, it seems a good point to move on to reporting the empirical investigation which drew on my conceptual understanding of the phenomenon of curriculum leadership - especially within the South African TVET college environment.

CONCLUSION

This chapter concluded the literature review of the study by suggesting a preliminary conceptual framework as it emerged from considering a number of relevant theoretical and contextual factors. The next chapter deals with the research methodology and a design for the empirical part of the study.

CHAPTER 4: RESEARCH METHODOLOGY AND DESIGN

INTRODUCTION

This chapter describes the research methodology and design that was used for the empirical section of the study. A discussion of qualitative and quantitative data characteristics and the reasons for using a mixed methods approach also form part of this chapter. Important issues of the target population and sampling, data collection instruments, data analysis methods and, finally, issues of validity, trustworthiness and ethical considerations conclude this chapter. Respondents were selected by applying purposive sampling to ensure trustworthy sources of information. Data were collected through questionnaires and semi-structured focus group interviews. Ethical principles were observed to protect the integrity of the research study, while adequate measures were also applied to enhance the trustworthiness of the study. More detail follows in sections 4.2 to 4.6.

To remind the reader: The primary research question formulated for this study was stated as *‘What are the leadership features needed for enhancing curriculum change in the South African TVET college sector?’*

The subsidiary questions to support the primary research question were further stated as:

- What are current and future curriculum leadership challenges faced by TVET college leaders?
- What leadership capacity is needed to address current and future curriculum challenges?
- What strategies might be beneficial to capacitate TVET leaders for current and future curriculum challenges?

In the previous chapters the background, motivation, theoretical perspectives and contextualisation of the phenomenon under scrutiny (curriculum leadership in TVET colleges) were provided. Against this background, the researcher has observed a knowledge gap, namely that no curriculum leadership guidelines within the TVET sector in South Africa exist, and deemed it necessary to investigate possible strategies for effectively leading sustainable change faced by the TVET college sector.

The ultimate outcome and contribution of the study was envisaged as the development of a framework for leaders in the TVET environment to lead curriculum change in TVET colleges. Such a framework might, in the longer term, contribute to the further development of a leadership programme which might assist college leaders to effectively lead curriculum change.

RESEARCH METHODOLOGY

This section describes the methodology and design that were used for the empirical section of the study. The research design guided this study to address the main research question and subsidiary questions (Mouton, 2001:56) through specifying the methods and procedures for collecting and analysing the needed information (Zikmund, 2003:65).

4.1.1 Research paradigm

A pragmatic research paradigm (Creswell, 2009; Bryman, 2006; Tashakkori & Teddlie, 2003; Plowright, 2011) was considered most suitable to aid an investigation into a context-sensitive framework for leading curriculum change in the South African TVET college sector. In addition, this paradigm addressed the problematic issue of the need for leading curriculum change and provided the space for some practical applications and solutions as described in Chapter 7 section 7.3 (also see Creswell, 2009; Patton, 1990). The research problem provided the scope for a pragmatic view on methodology and ontology, as well as for using a variety of data collection measures, drawing on both quantitative and qualitative measures to justify the research (Rossman & Wilson, 1985; Cherryholmes, 1992; Morgan, 2007; Creswell, 2009).

4.1.2 Mixed methods design

This study was based on the Framework for an Integrated Methodology (or FraIM) as the most appropriate design for the purpose of the study. Through this design numeric and non-numeric data could be integrated in a holistic manner by providing equal status of importance to all aspects of the research methodology (Plowright, 2011). Unlike Creswell (2009), who refers to 'blending' qualitative and quantitative research as mixed methods, Plowright avoids the terms 'quantitative' and 'qualitative', preferring instead to use 'numerical' and 'narrative' as a means of encouraging a more flexible mixed methods design. The researcher applied an appropriate

mix of methods that produced the option related to the research question (Gorard & Taylor, 2004). The use of and interest in a mixed methods design to undertake social science research has also become more widespread; hence, the researcher found it appropriate to use in this study (Gorard & Taylor, 2004; Plano Clark & Creswell, 2008; Tashakkori & Teddlie, 2010).

Figure 4.1 diagrammatically depicts the FraIM (Plowright, 2011:9) used as the basic design for the empirical part of the study.

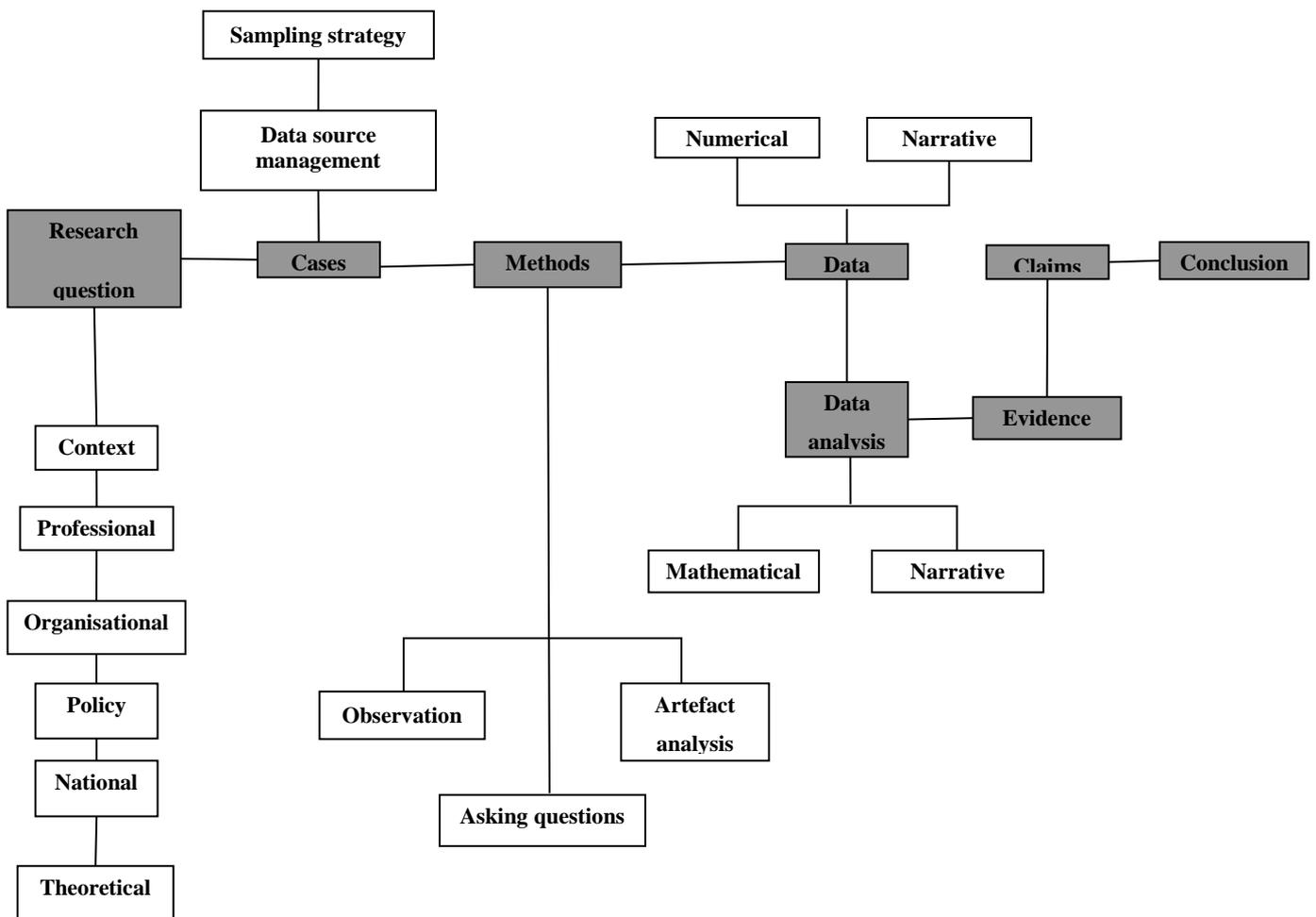


Figure 4.1 The FraIM
 (Source: Plowright, 2011:9)

The FraIM (Figure 4.1) argues that context is important for all research, especially research aimed at evaluating, developing and improving an understanding of practice in the workplace. This is unlike the view of Stephens (2009), who indicates that a traditional view gives prominence to contextual factors only in qualitative research. However, the professional context provides information about the researcher and the subject or professional area within which the research is undertaken - in this instance being the TVET college sector's need for curriculum change and understanding the leadership features needed to lead such a change.

The FraIM begins with the main research question, which has a central role in research that systematically employs empirical data to answer the question (also see Punch, 2009). Clough and Nutbrown (2002) further indicate that social research takes place within a social context, which can inform the researcher's understanding of the issues being investigated and help to formulate more appropriate research questions (see section 4.1). In this study all participants are based in the Western Cape (South Africa), but the curriculum and leadership issues that emerged should also be seen against a national background, as the TVET sector is highly centralised – particularly in terms of TVET programme curricula.

The FraIM suggests careful sampling strategies to best represent research that is undertaken in workplace contexts. Data collection took place through a structured questionnaire as phase 1 and semi-structured focus group interviews (see sections 4.3.1, 4.4 to 4.5) as phase 2 of its execution. According to the FraIM, asking questions has a higher level of mediation in comparison to observations, whereas artefact analysis has the highest of level of mediation. The degree of structure as a second characteristic of data collection methods, as proposed by the FraIM, lends itself to a mix of structured and less structured data methods which were both used in this study (see sections 4.6.2 to 4.6.4, as well as Addenda 6 and 7 for more detail).

The FraIM also suggests the use of both numerical and narrative data towards problem understanding and solving. Numerical data involve counting and measuring, and are informed by the logical code or rules of mathematics (Guiraud, 1975) and science (Chandler, 2002). Such data were generated by the closed questions section of the questionnaire in this study (see sections 4.6.2, as well as Chapter 5 for more detail). Whereas numeric data are often seen as unambiguous, fixed and non-negotiable, narrative data draw on relatively more constructed or 'poetic' codes of meaning (Guiraud, 1975). Such codes – or rules of representation – are based on the use of language or still and moving imagery. Such data are often relatively more

complex, ambiguous and uncertain. Narrative data in this study were drawn from the open-ended question section of the questionnaire (see sections 5.7 and 6.4, as well as in Chapters 5 and 6), as well as on semi-structured group interviews with selected TVET college staff.

Lastly, the FraIM can be applied to report on research that leads to warrantable or justifiable conclusions, as in the case of this study, and can be shared, challenged and developed further by others as envisaged with the proposed framework for leading curriculum change (see Figure 7.1). The procedure progresses from abduction through deduction and ending with induction as integral and necessary stages of all research inquiries (also see Plowright, 2016). A deductive approach was thus applied to describe, compare and tabulate the data collected from the empirical data sources in TVET colleges in the Western Cape, which emanated from the survey and focus group interviews (also see Babbie, 2001:23). Babbie (2001:23) describes the deductive approach as a logical model in which specific expectations are developed on the basis of general principles. Deduction moves from a pattern that might be logically or theoretically expected to a pattern that actually occurs. In the case of this study its findings could be generalised to the Western Cape TVET colleges, but not to the TVET college system in South Africa as such.

4.1.3 Target population and sampling

The population of this research study have common characteristics in that they are all involved in TVET curricula at different levels. This provided a solid platform from which a sample could be purposively drawn (Mouton, 1998:134; Patten, 2009:45). The population for this study is located in the TVET college sector of the Western Cape in South Africa. The focus was on all (a total of five) colleges, as well as the regional office of the DHET in the Western Cape. A few curriculum managers from the DHET head office in Pretoria also formed part of the research population, as TVET colleges follow a national curriculum.

Purposive sampling was used to select relevant staff with the appropriate knowledge and work experience of pertinent TVET college issues (Cohen *et al.*, 2007:115). Purposive sampling simply means that participants were selected because of some defining characteristics that made them the holders of the data needed for the study. The job titles of the research participants selected in the participation sample in this study consisted of academic managers, such as deputy principals, curriculum planners, senior heads of departments, heads of

departments, programme managers, senior lecturers, and lecturers. The researcher ensured that the selected sample of respondents possess a wide range of characteristics based on their TVET college work experience, skills and knowledge that could provide relevant information. Age, gender, post title and level of appointment, as well as the qualifications of the participant sample also served as inclusion criteria. The sample further included a purposefully chosen variation of TVET college teaching experience as inclusion criterion, namely from post level 1 lecturers to lecturers with more work experience, and academic managers with less experience to those with more background and experience.

In particular, the inclusion criteria comprised a minimum of between two and seven years TVET college work experience within the aforementioned job titles. The inclusion of less experienced staff, as well as more experienced staff in the sample, contributed to rich data that are representative of all age categories and work related experience within the five TVET colleges. The difference in the total number of years different participants had been members of a college served as a categorical variable in the study.

A total of one hundred and eighty (N=180) participants were purposively selected to complete an online questionnaire survey that was electronically distributed. The total number of completed online questionnaires via Survey Monkey amounted to one hundred and sixteen (N=116), which accounted for a 64% response rate. The total sample of the qualitative semi-structured focus group interviews did not exceed the targeted one hundred respondents spread across the planned fourteen group interviews. Fourteen (N=14) semi-structured focused group interviews were conducted with a total number of ninety (N=90) respondents, and varied between four and twelve participants per group. Hence, the participation rate for the group interviews was 90% (see more detail in Chapter 5, section 5.3).

The different types of programmes (namely Engineering and Business Studies, National Certificate Vocational and occupational programmes) were grouped together in the questionnaire survey and the group interviews. This could be listed as a limitation in the study, because it was compulsory for survey respondents to complete all questions, irrespective of whether they had the knowledge and experience of all the programmes that were included. The composition of the interview groups were also mostly a mixed group of participants linked to more than one programme, although the questions covered all the different types of college programmes. Due to time constraints and the availability of questionnaire respondents and

focus group interview respondents, the researcher eventually had to continue with those available and willing to participate.

This limitation could have influenced how well respondents interpreted the questions and could also have had an influence on some of the key differences in opinions that are discussed in Chapter 5.

4.1.3.1 Data generation

Quality data form the cornerstone of any research study and are representative of a real-life problem which the data supports (Leedy & Ormrod, 2001:94; Birley & Moreland, 1998:40). The numerical data in this study allowed for statistical analysis, while non-numerical data informed judgement to identify major and minor themes as expressed by respondents in the form of narratives for open-ended questions and tabular format summaries of interview data in Chapters 5 and 6 (Patten, 2009:9; Seaman, 1991:42).

The implementation of a structured online questionnaire, which was followed by a number of semi-structured focus group interviews, will be discussed next.

4.1.3.2 Instrumentation

The questionnaire is discussed first and the focus group interviews thereafter.

4.2.3.2 (a) Questionnaire survey

A self-generated questionnaire was employed to generate information about the knowledge, attitudes, beliefs and experiences regarding curriculum leadership and change in five TVET colleges in the Western Cape.

Brink and Wood (1998:293-298) suggest the following aspects which should characterise a questionnaire:

- The questionnaire should be economical, containing an optimum number of relevant and pertinent questions.
- Sufficient numbers of respondents should complete a questionnaire.
- Respondents should preferably remain anonymous to answer questions without fear of identification.

- Data on a range of topics may be collected within a limited period.
- The questionnaire format is standard and largely independent of the researcher's mood or preferences (also see Polit & Hungler, 1997:466).

This study complied with each of these aspects.

In this study the questionnaire was based on the literature review (see Chapters 2 and 3) and documents related to TVET curriculum issues. Formally managed questionnaire surveys are set up after a period of examining relevant literature (Marsh, 1982; Bulmer & Warwick, 1993). In this case the questionnaire was discussed at length at several occasions with the study supervisors and tested for validity via a pilot study with ten college staff whose results were omitted from the survey. The questionnaire was administered in English only, as all participants are proficient in English. The structure of the questionnaire consisted of both closed and open-ended questions. The rationale for the unequal weighting in favour of curriculum related questions in the closed question section was to ensure that the instrument would generate adequate data linked to the three types of TVET college curricula namely Report 191 engineering and business studies, NC(V) and occupational programmes that formed the core focus of the study. Another reason for the unequal weighting of the questions was due to the duplication of similar questions linked to the three types of TVET curricula. Furthermore, the unequal weighting was compensated for in the closed question section of the questionnaire as well as in the semi-structured focus group interviews where the majority of questions focused on leadership and change management (see Addenda 6 and 7).

4.2.3.2 (b) Qualitative data instruments

Qualitative data methods are essential in identifying, documenting and confirming unknown aspects of human life or behaviour. Educational knowledge, in particular, must be closely linked to values, patterns and beliefs of human groups (in this case TVET college lecturers) and suited to discover the subjective meanings of those involved in a particular context or situation (Mouton, 2001:65; Wiersma & Jurs, 2005:78).

Semi-structured focus group interviews

De Vos (1998:314-315) suggest that focus group interviews should be conducted with the aim of obtaining specific information from clearly identified groups of individuals. In order to achieve this, the researcher made use of information-rich participants with both depth and

breadth of experience and who share commonalities in TVET college education (Brotherson, 1994:110). The size of a focus group is ideally between six and nine participants, as smaller groups are easier to recruit and host, although smaller group size might limit the range of experiences available (Krueger & Casey, 1994).

In this study the groups consisted of a number of individuals among whom a distinguishable pattern of interaction existed (as suggested by Steyn & Uys, 1988:22). “Interview” signifies the presence of a trained moderator who could skilfully facilitate the discussion that takes place between all the members in the group to elicit information on the desired topic. “Focus” implies that the discussion that takes place in the group will be limited to the specific theme under investigation (Stewart & Shamdasani, 1990:10).

Focus group interviews took place as semi-structured discussions which focused on a specific topic or related topics among smaller numbers of informed individuals with similar teaching backgrounds and common interests. Focus group interviews were also conducted as open conversations on a specific topic, wherein participants could make comments, ask questions of other participants, or respond to comments by others, including the moderator (Ferreira & Puth, 1998:167).

The main purpose of the focus group interviews in this case was to learn more about how TVET teaching and management staff talk and think about the phenomenon of curriculum change in the TVET environment (Stewart & Shamdasani, 1990:15) and consisted of two pertinent groups: (i) representatives of the Department of Higher Education and Training (DHET) and (ii) representatives of five TVET colleges in the Western Cape. The composition of each focus group was representative of academic managers, lecturers and provincial officers.

Questions are at the heart of focus group interviews and in this case questions were carefully selected and phrased in order to elicit the maximum amount of information. The ordering of questions was regarded as equally important. Hence, questions were ordered from more general to more specific, while questions of greatest significance were placed at the beginning and those of lesser significance near the end. Sensitive issues were dealt with last (Krueger & Casey, 1994; Stewart & Shamdasani, 1990).

The researcher applied the following categories of questions as suggested by Krueger & Casey (1994):

- Opening question: This is a factual as opposed to an attitude-based question.
- Introductory question: This question introduces the general topic of discussion.
- Transitional question: This question serves as the logical link between the introductory question and the key questions.
- Key questions: There are typically two or five key questions and they require the greatest attention in the subsequent analysis.
- Ending questions: This question closes the discussion and is regarded as the all things considered and final question.

The researcher carefully planned the focus group interviews by determining the accessibility of the setting and used her interview skills to build and maintain communicative relationships with respondents (De Vos, 1998:34). In this study the researcher also sought to establish a cordial atmosphere that laid the foundation for relationships of trust. A sense of equality between the researcher and respondents was created as far as possible, while the purpose and value of the research was emphasised. Interviews were conducted on the premises of TVET colleges, which are real-life settings, free of the constraints of more conventional research procedures. During the semi-structured focus group interviews, the researcher had a chance to observe, enter into dialogue with participants, and interpret their actions and how they view the situation of curriculum change.

4.1.3.3 Data analysis

The study generated various data forms in four phases. Phase one (published data and literature) comprised of a review of documents such as policies, theses, government publications, books, journals and reports related to TVET curricula and leadership. This provided insight, interpretation and application of the views of various authors on leadership and curriculum change, which assisted with the formulation of question items in the empirical part of the study. Data phase two comprised an online questionnaire survey where one hundred and sixteen (N=116) respondents participated and provided quantitative responses of perceived trends and views regarding TVET college curricula.

Data phase three involved a total of ninety respondents (N=90) who participated in semi-structured focus group interviews through purposefully selecting participants from the five participating TVET colleges and the provincial DHET office located in the Western Cape. Based on the trends that emerged from the questionnaire survey, focus group interviews were conducted with fourteen TVET interest groups. Finally, in data phase four of the study the findings from the previous three phases were insightfully integrated into a proposed framework to lead curriculum change in the TVET college sector with a view to enhance the capacity for curriculum change.

For the quantitative data, records of questionnaires were meticulously kept, summarised in Excel sheets and calculated with the assistance of the Statistics Consultation Service at Stellenbosch University. Responses were recorded as anonymous items and calculated impartially as quantitative data, computer processed, and preserved electronically as prescribed by Stellenbosch University.

Analysis of the quantitative data was conducted according to Henning *et al.* (2004:104), who state that through open coding the analyst reads through the entire text in order to get a global impression of the content, which will indicate the emerging themes, although the coding process does not begin as yet (also see Figure 4.2). Once the transcriptions were ready and codes have been awarded to different segments or units of meaning, the related codes were grouped and appropriately categorized (Henning *et al.*, 2004:105).

A category begins to show the themes that might be constructed from the data, which are then used in the discussion of the inquiry. Figure 4.2 demonstrates the move from codes to categories.

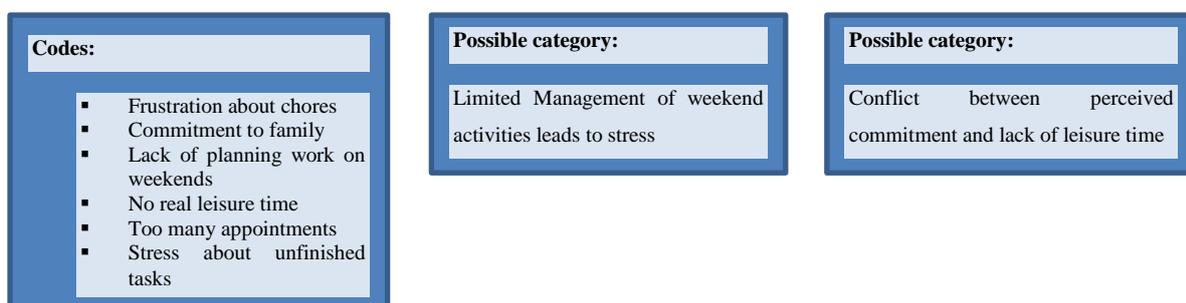


Figure 4.2 From codes to categories
(Source adopted from: Henning, Van Rensburg & Smit, 2004)

Furthermore, the codes were selected according to what the data meant to the researcher after conducting an overview and by considering as much contextual data as possible. All the relevant transcriptions were read several times before any formal meaning was attributed to a single unit as indicated in Figure 4.3 (Henning *et al.*, 2004:104).

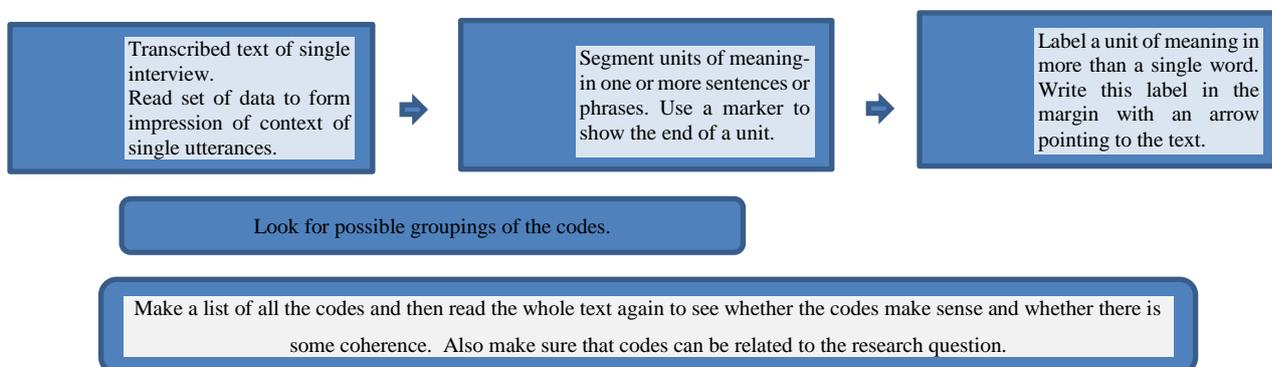


Figure 4.3 *From codes to categories to meaning*
(Source adopted from: Henning, Van Rensburg & Smit, 2004:104)

The process of qualitative analysis in this study involved concepts and clusters of concepts which were identified and grouped together to facilitate the coding process. A grouping system was developed and data coded according to categories (see Chapters 5 and 6). Comparisons were made across the themes so as to generate research conclusions and implications (see Chapter 7).

The next section briefly describes the application and impact of the analysis processes, as adopted from Henning *et al.* (2004), on the empirical data as collected from the surveys and interviews.

Closed question section of the questionnaire survey

The differences of respondents in opinions, perceptions and experiences were graphically displayed for the closed question section of the questionnaire survey. Simultaneously, a simple narrative analysis format was used to scrutinise the findings of the open-ended question section, which consisted of thirteen questions (for more detail, see Chapters 5 and 6).

The closed questions section of the survey reports on the findings related to thirty-five closed questions (see Addendum 1) on curriculum themes. A 4-point Likert scale was used, indicating whether respondents (1) strongly agreed, (2) agreed, (3) disagreed or (4) strongly disagreed. For ease of summarising the findings, percentages were calculated and grouped together for

responses (1) and (2), as well as for responses (3) and (4). Due to the large number of graphs (35 in total), only between two and seven graphs per theme were presented as relevant samples linked to Theme 2.

Descriptive statistics were used to report on the findings from the closed question section. In addition, statistical relationships between the biographical characteristics of the respondents were calculated for three questions using Pearson values (see section 5.5.1.1). The survey results were also explored for possible relations between respondents' biographical characteristics and particular curriculum issues. Pearson values were calculated for the following biographical characteristics: job title, job level, age, gender, highest qualifications and work experience. P-values of less than 0,05 were accepted as indicating a significant correlation between biographical characteristics and a particular curriculum issue. After a test run, only three questions, namely CLC 3, CLC 13 and CLC 14 presented with significant relationships to biographical variables 'work experience' and 'job title', and these were reported accordingly (see Chapter 5, Table 5.1).

Open question section of the questionnaire survey

A narrative format was used to describe and analyse respondents' perceptions on and experiences of particular curriculum and leadership issues (for more details, see sections 5.7 to 5.8 and 6.4).

This section recorded the open-ended responses of one hundred and sixteen (N=116) respondents who anonymously completed the survey questionnaire. Respondents' views could thus not be linked to any particular individual or institution. As in the case of closed questions, themes that had emerged from the data were grouped into theme 1, namely 'Curriculum and Curriculum Challenges' and theme 2, named 'Curriculum Change and Curriculum Leadership'. A total of thirteen open-questions were responded to, which resulted into the narratives recorded under themes 1 and 2. The responses were recorded verbatim, including grammatical and spelling errors.

Theme 1 dealt mainly with respondents' perceptions of vocational, occupational and academic education and highlighted the key challenges related to outdated content and design issues, and the lack of industry involvement. Theme 2 dealt mainly with the impact of legislation on curriculum change and current and future leadership challenges.

Focus group interviews

Semi-structured focus group interviews were audio recorded, transcribed and analysed by grouping key responses into theme 1, namely ‘Curriculum and Curriculum Challenges’ and theme 2, named ‘Curriculum Change and Curriculum Leadership’. Data collected from the group interviews were presented in tabular format (see more detail in sections 5.9 to 5.11 and 6.6.1.1a to 6.6.1.1b). The semi-structured focus group interviews were guided by six questions (see Addendum 7) which were consequently tabulated (see Tables 5.3 to 5.4).

The category column represents a summary of the key responses that emerged from the findings under theme 1 and directly linked to the detailed quotes of the respective respondents. Respondents were not identified for purposes of confidentiality and merely indicated as follows: FG1F1 indicated focus group number 1, female participant number 1 and FG3M1 indicated focus group number 3, male participant number 1. The direct quotes from respondents were classified into various relevant categories, as illustrated under the detail column. The quotes from the respondents were reported verbatim under the detail column as per the respondents’ responses during the interview process. Table 5.3 in Chapter 5 presents the key findings related to Question 1, which inquired into the respondents’ understanding of the key differences between vocational, occupational and academic education.

During the fourteen interview sessions the researcher ensured a comfortable seating, familiar surroundings and privacy with no interruptions by conducting the interviews on the college and office premises of the participants. In addition, the researcher set the scene by explaining that the purpose of the interview was to determine their views and perceptions regarding the research topic of which they are the knowledge and experience custodians. The upfront setting of the scene ensured that the participants did not regard themselves as empty vessels but as research partners. Furthermore, predetermined questions were systematically presented to the participants in a clear structured and logical sequence. Each participant received a handout with the semi-structured questions for ease of understanding and encouragement to provide detailed information regarding their opinions and beliefs. The participants experienced no challenges with the questions and freely contributed to the discussions through active engagement by sharing their knowledge and experience in relation to the questions. The researcher allowed and facilitated disagreements of participant’ opinions in a safe environment by ensuring that each participants’ view is equally important and valuable. The researcher probed and deviated

from some of the questions where and when necessary. She also attempted to remain as neutral as possible throughout the interview sessions by not expressing opinions on any responses to questions.

4.1.4 Strategies for data quality

The researcher applied multiple strategies for enhancing her ability to assess the accuracy of findings (Creswell, 2009:191).

4.1.4.1 Triangulation

Strategies such as triangulation of different data sources of information to establish themes, and member checking to determine the accuracy of findings were applied in this case. This study aligned itself to the definition of Duffy (1993:143), who describes methodological triangulation as the use of two or more methods of data collection procedures within a single study where findings are categorized into themes which lead to verification of data, recommendations and final conclusions. Triangulation of the data from the questionnaire and semi-structured focus group interviews was performed, taking into consideration the literature findings to assess key differences and similarities, and to validate the findings from the empirical data.

Triangulation was used to limit bias in varying ways in the use of quantitative and qualitative data to improve data quality. In addition, triangulation was used to underscore the validity of the findings of the study. In this study, triangulation was achieved by comparing the data with the findings from the quantitative and qualitative measures to determine whether similar or different data patterns emerged.

One example of triangulation was observed in the responses to questions 13 in the closed question section of the questionnaire (see Addendum 6) as compared to the responses on questions 2.1 and 2.2. in the open question section of the questionnaire. According to the responses in question 13, the majority (59%) of the respondents agreed that the curriculum content of Report 191 (N1-N3) engineering is relevant to artisan development in South Africa. The majority (57%) also agreed that the curriculum design of Report 191 (N1-N3) engineering programmes is relevant to artisan development in South Africa (see Figures 5.3, 5.4, 5.11, 5.12 and section 5.3.1.3). In contrast, the responses to questions 13 and 14 explained the outdated

nature of curriculum content and design challenges of Report 191 (N1-N3) engineering programmes (see section 5.4.1.2). The same respondents who completed the closed question section also completed the open ended section of the questionnaire.

The interview sessions was mainly representative of participants who did not complete the questionnaire. The participant responses to question 2.3 was overwhelmingly indicative that the Report 191 (N1-N3) engineering programmes must be replaced with new industry related content and design curricula (see Table 5.4 and section 5.6.1.2a). Question 11 in the closed question section of the questionnaire indicated another contradiction that emerged from the triangulation process. This became clear when the responses to question 2.1 in the open question section were compared to questions 2.1 and 2.4 in the interview sessions. Question 11 refers to the contribution of vocational programmes to the skills workforce of the country where the respondents agreed (75%) that they perceived vocational programmes as contributing to the skills workforce of the country. However, the same respondents disagreed on this issue in the open question section as well as in the interview sessions (see Figure 5.1, sections, 5.3.1.1, 5.4.1.2 and 5.6.1.1c).

Trustworthiness, credibility and validity

Firstly, trustworthiness was established in this study through enhancing the validity and reliability measures of the data (Polit & Hungler, 1996:312). Several measures to enhance the trustworthiness were applied in the study. One such measure included the accuracy of the description of the phenomenon under investigation, which ensured that the most appropriate questions were posed and the most accurate response were recorded. Secondly, the credibility of the data was enhanced by comparing the researcher's handwritten field notes with the interview transcripts and by cross-checking whether respondents' views were accurately reflected in the interpretations of the data. Thirdly, a cross-comparison of the main responses from the fourteen interview groups was performed to find similarities and differences in order to represent the best range of possible responses on the research issues at hand.

Furthermore, the researcher declared all of her own possible biases and assumptions, since she is employed by DHET as the Deputy Principal: Academic based at South Cape TVET college (see more detail Chapter 1 section 1.6.4). Furthermore, the researcher has twenty-four years of work experience within the TVET college sector, which has increased the ecological validity of this study (Plowright, 2011). Ecological validity of the study was further enhanced by the

fact that the researcher is directly involved with TVET college curricula within her work and professional context. As a result of the high measure of ecological validity, the researcher could validate the findings due to her closeness to the data, TVET college teaching staff and the emerging context of TVET college curriculum, policies and relevant legislation (also see Plowright, 2011:34, 134-136). The development of relevant instrumentation, such as the questionnaire and interview schedule, took place in close proximity to contextual issues such as TVET college documents, policies and curricula.

The researcher ensured that her scholarly position was not compromised. Constituting semi-structured interview questions based on the results of the questionnaire survey increased the trustworthiness of the data generated from the latter part of the investigation. In addition, the researcher's own institution, South Cape TVET college, was excluded from the sample of respondents to prevent any respondent from feeling obligated or unduly influenced to participate due to the senior management status of the researcher. Most of the respondents who participated in the group interviews did not form part of the survey respondents, which further strengthened the data quality. A sample of ten respondents completed the survey, which was excluded from the final data collection, as a pilot study. These respondents provided feedback to the researcher regarding any face validity issues, such as ambiguous questions, proposed rephrasing, or possible overlapping questions. Finally, triangulating the questionnaire survey (closed and open questions) results with interview responses and policy documentation added additional credibility and validity to the main findings.

Although the study was conducted in five TVET colleges of the Western Cape, transferability of the findings is possible, due to most of the TVET colleges offering the same national programmes, centralised at the DHET. However, colleges in different parts of the country operate under different circumstances and within different leadership contexts, which may also account for different leadership issues regarding curriculum change (also see Leininger & McFarland, 2002:88).

CONCLUSION

The research methodology and design were explained in this chapter. The research was conducted by using a survey research design with a pragmatic paradigm through a mixed methods approach, as described by Plowright (2011) as the most suitable for this study. A

purposive sampling strategy was applied to the population located in the TVET colleges in the Western Cape, and due diligence prevailed in the selection of participants according to the set criteria that ensured the provision of good quality data. Quantitative and qualitative data were collected in four phases, and analysed by using appropriate quantitative and qualitative measures.

Chapter 5 will report on the findings, discussion and synthesis of the empirical data which relate to theme 1: 'Curriculum and Curriculum Challenges'. In tandem, Chapter 6 will report on the findings related to theme 2: 'Curriculum Change and Curriculum Leadership'.

CHAPTER 5: FINDINGS AND DISCUSSION OF THEME 1: 'CURRICULUM AND CURRICULUM CHALLENGES'

INTRODUCTION

Chapter 4 described the process of data collection and analysis (see sections 4.2.2 and 4.3) related to this study, of which the main research question was posed as: *What are the leadership features needed for enhancing curriculum change in the South African TVET college sector?*

A total of one hundred and sixteen respondents completed an online questionnaire survey which contained closed and open-ended questions (see Addendum 6) followed by a total of fourteen semi-structured focus group interviews that took place with ninety participants spread across the fourteen groups (see Addenda 7 and 8).

Findings from the three sets of findings from the questionnaire and interview data are presented in this chapter. Two broad but related themes emerged from the empirical data sets, namely theme 1: 'Curriculum and Curriculum Challenges' and theme 2: 'Curriculum Change and Curriculum Leadership'. This chapter reports on the findings and discussion of theme 1 while Chapter 6 addresses the findings related to theme 2.

The summary of the biographical information contains descriptive data and reports on some statistical relationships between biographical characteristics of the survey respondents and responses to particular questions. Three questions in particular were analysed using Pearson values. This is followed by a report on the findings of the closed survey questions, while the next section deals with the open question section of the survey. The findings from semi-structured group interviews are also presented, followed by a discussion of the survey and interview findings related to theme 1: 'Curriculum and Curriculum Challenges'.

SURVEY RESPONDENTS' AND GROUP INTERVIEW PARTICIPANTS' BIOGRAPHICAL INFORMATION

One hundred and sixteen (n=116) respondents out of a possible one hundred and eighty completed the questionnaire. Table 5.1 below compares the biographical information of respondents who completed the online questionnaire with those who participated in the group interviews (N=90).

Table 5.1 Comparison of survey respondents' and interview participants' biographical information

| CATEGORIES (*) | % OF TOTAL SURVEY RESPONDENTS | % OF TOTAL INTERVIEW PARTICIPANTS |
|-----------------------------------|--------------------------------------|--|
| *Job Titles | | |
| <i>Lecturers</i> | 23% | 39% |
| <i>Programme Managers</i> | 19% | 29% |
| <i>Heads of Department</i> | 29% | 12% |
| <i>Senior Heads of Department</i> | 22 % | 19 % |
| <i>Deputy Principal</i> | 7% | 1% |
| *Job Levels | | |
| <i>Post Level (PL) 1</i> | 23% | 39% |
| <i>Post Level (PL) 2</i> | 19% | 29% |
| <i>Post Level (PL) 3</i> | 29% | 12% |
| <i>Post Level (PL) 5</i> | 22% | 19% |
| <i>Salary Level (SL) 12</i> | 7% | 1% |
| *Age | | |
| <i>21-30 years</i> | 9% | 7% |
| <i>31-40 years</i> | 11% | 13% |
| <i>41-50 years</i> | 28% | 31% |
| <i>51-60 years</i> | 49% | 37% |
| <i>61-70 years</i> | 3% | 12% |
| *Gender | | |
| <i>Female</i> | 50 % | 30% |
| <i>Male</i> | 50 % | 70% |
| *Highest Qualifications | | |
| <i>Certificate</i> | 2% | 11% |
| <i>Diploma</i> | 19% | 51% |
| <i>Degree</i> | 29% | 20% |

| | | |
|--------------------------|-----|-----|
| <i>Honours Degree</i> | 31% | 11% |
| <i>Master's Degree</i> | 14% | 7% |
| <i>PhD/Doctorate</i> | 3% | 0% |
| <i>Other</i> | 3% | 0% |
| *Work Experience | | |
| <i>0-2 years</i> | 9% | 2% |
| <i>3-5 years</i> | 14% | 16% |
| <i>6-10 years</i> | 18% | 17% |
| <i>11-15 years</i> | 16% | 19% |
| <i>16-20 years</i> | 12% | 11% |
| <i>21 years and more</i> | 30% | 36% |

5.1.1 Summative findings of respondents' biographical information

Table 5.1 indicates that a larger number of staff on the lower job levels and job titles (lecturers and programme managers from PL1 to PL2) participated in the group interviews, compared to the same category who completed the survey. On the other hand, the majority (58%) of management staff (PL3 to PL5 and SL12) completed the survey, while only 32% of the same category participated in interviews. Staff on post levels 1 to 2 are at the coal face of programme delivery in the classroom and their views were critical to this study. Such variation brings a richness to the data collected in terms of balance and opinions related to their experiences and where they find themselves within the college as an organisation. Most of the questions posed to both survey respondents and interview participants were similar in nature, in an attempt to find similarities and differences of opinions and to validate the findings. It is also worth mentioning that the vast majority of interview participants (90%) were not part of the respondents who completed the online questionnaire survey.

A noteworthy observation in terms of the age of survey respondents is that 20% of the respondents are between the ages of 21 and 40 years, while 80% of respondents accounted for the age category of between 41 and 70 years for both the survey and interview data sets. However, the views of younger staff members are critical to future curriculum operations and leadership and will thus be highlighted in the discussion under the four themes. The majority

of respondents (80%) were representative of the 41 to 70 age group for both data sets. Older cohorts of lecturers are normally linked to engineering programmes and the future offering of these programmes could be at risk of being phased out if younger persons are not trained to take up such positions at colleges. Succession planning of younger qualified staff is thus a further consideration to prevent this risk.

In terms of gender, the biographical information shows a (50%) split between females and males for survey respondents, compared to (70%) male and (30%) female participation in the interviews. The disparity of gender representation in the group interviews could be ascribed to the majority (60%) of male engineering lecturers versus (40%) business and general study lecturers who participated.

Staff qualified at certification level equated 2% for survey respondents and 11% for interview participants. Certificate qualifications constitute the lowest level of staff qualifications, as such staff primarily represent those with industry experience and a trade certificate, which is a prerequisite to conduct workshop and practical skills training related to occupational programmes; and in particular, artisan development. Staff with short skills certificates are sometimes found in scarce skills subjects, such as computer and information technology subjects, professional cookery, and hospitality studies. Further staff development appears to be crucial in improving staff qualifications from certificate to at least diploma level, which is the minimum qualification for a teaching position at a TVET college.

Respondents with diplomas ranged between 19% for survey respondents and 51% for interview participants. At the same time, staff with bachelor's and master's degrees represented a total of 74% for survey respondents and 38% for interview participants. Hence, it seems that the majority of staff who participated in the interviews have diplomas, while the majority of staff who responded to the survey have bachelor's and masters' degree level qualifications. The minimum entry requirement for a suitably qualified candidate to be appointed as a TVET college lecturer is a grade 12 qualification plus a three year diploma or degree in the relevant subject field. The majority of staff who responded in the survey and participated in the interviews were thus sufficiently qualified to teach at a college. Although this 3-year diploma or a bachelor's degree is the minimum norm, staff with diplomas and bachelor's degrees who are linked to artisan development programmes must obtain a trade certificate and relevant

industry work experience. The trade certificate is a prerequisite to teach practical components of the occupationally directed programmes in engineering workshops.

The respondent group who had between 0 and 2 years of work experience ranged from 9% (questionnaire) to 2% (interviews) respectively. This category of staff members is critical to be emphasised in the data analysis and will be considered an important variable in the sections to follow. The group who had between 11 and 21 years of work experience are considered as more experienced staff and constituted 58% of survey respondents and 66% of interviews participants. This comparison indicates that both data sets were represented fairly well in terms of the work experience of staff members, which provided a good balance for the differences in opinions and validation of the data collected.

Lastly, the different types of programmes (namely Report 191 Engineering and Business Studies, National Certificate Vocational and occupational programmes) were grouped together in the questionnaire survey and the group interviews.

5.1.2 Synthesis of respondents' biographical information for the questionnaire survey and group interviews

Post level 1 and 2 lecturers constituted the majority respondents in the group interviews, compared to questionnaire survey participants, where the majority of management staff (PL3 to PL5 and SL12) completed the survey. This comparison had no significant influence on the responses since very few differences emerged.

There seems to be a direct link between the age, work experience, post level and post titles of the respondents and participants regarding of both data sets. Clearly the older staff members have more work experience and the majority of them tend to occupy management positions. Evidently management staff also have higher qualifications than those at junior staff levels. However, there was also evidence of the opposite, especially at the junior staff levels (PL1 lecturers), where staff have many years of work experience, but are only in possession of certificates, and might need further staff development. This could be the reason why most of them are not promoted to senior positions and why they represent the majority of the lecturers who participated in the interviews. The qualifications of this category of lecturers were probably achieved 30 years ago or more, due to their many years of work experience. It could also be expected that their qualifications might be outdated, and these staff members might

require staff development to keep up with the latest developments in their field to ensure relevant education services for the TVET college sector.

The majority of staff who participated in the two data collection opportunities were thus relatively older and more experienced. Both data sets were fairly well represented in terms of the work experience of staff members, which provided a good balance for the differences in opinions and validation of the data. However, the views of the junior staff levels are important as they bring variation and richness to the data in terms of balance and opinions related to more recent work experiences.

Some of the management staff could have answered the questions from a position that might be removed from curriculum realities, whereas junior staff found themselves in the classroom on a daily basis. The junior staff thus might have experienced curriculum challenges and curriculum related issues quite differently from the way the management staff did. Males were well represented in the interviews (70%), as well as in the survey (50%), which is a strong indication that the male-dominated engineering staff complement was well represented in this study. The next sections deal with the discussion of the results related to theme 1, namely ‘Curriculum and Curriculum Challenges’, as it emerged from the three data sets (closed survey questions, open survey questions and interview questions).

FINDINGS FROM THE QUESTIONNAIRE SURVEY (CLOSED QUESTIONS) FOR ‘CURRICULUM AND CURRICULUM CHALLENGES’

This section summarises the findings related to the thirty-five closed questions (see Addendum 6) on curriculum themes. A 4-point Likert scale was used for the closed question section of the survey, indicating whether respondents (1) strongly agreed, (2) agreed, (3) disagreed, or (4) strongly disagreed, regarding each question. The percentages in the graphs were rounded off to whole number percentages; it thus might happen that not all tables add up to exactly 100%. In the case of this study question numbers CLC 2, 3, 17, 28, 29 and 32 added up to 101% and CLC 23 and 34 added up to 99%.

Responses were summarised under theme 1 that comprised 12 questions (numbers 1,2,3,4,5,6,9,10,11,12,18,19) for ‘curriculum’ and 13 questions (numbers 7,8,13,14,15,16,17,20,21,22,23,24,25) for ‘curriculum challenges’. Theme 1 in general dealt with curriculum issues and curriculum challenges such as education types, articulation of

vocational programmes to higher education programmes, and whether programmes are relevant to industry needs. Theme 1 also included curriculum challenges such as the lack of funding and industry involvement. For ease of summarising the findings, percentages were grouped together for responses (1) and (2), as well as for responses (3) and (4). Due to the large number of graphs (35 in total), only between two and seven graphs per theme are presented as those samples most relevant to theme 1.

The last part of this section indicates relationships between a number of biographical characteristics and curriculum variables as tested with Pearson values. Three graphs were selected for reporting these findings as they represent the only ones that indicated sufficient statistical significance to be considered useful.

5.1.3 Curriculum, curriculum challenges and correlated curriculum variables

5.1.3.1 Curriculum

The existence of a curriculum framework for vocational programmes was supported by 96% of respondents, while 79% of respondents agreed that a curriculum framework also exists for occupational programmes. Also, the majority (80%) of respondents agreed that TVET college lecturers have the necessary competencies to deliver post school education, such as vocational, national accredited technical education (NATED), Report 191 programmes, and occupational programmes. Fifty one percent of respondents disagreed that DHET provides adequate staff training to TVET college lecturers.

The majority (80%) of respondents are of the opinion that TVET colleges offer a wide variety of programmes to address the diverse needs of students. A majority (68%) of respondents also believe that the variety of occupational programmes serve the needs of a diverse range of students, while most (84 %) also agree that these programmes contribute to the skills workforce of the country. Respondents marginally agreed (51%) that occupational programmes are offered via flexible modes of delivery.

The following two graphs (see Figures 5.1 and 5.2) were selected as examples linking to theme 1 (question numbers 11 and 18). These two graphs were selected for its potential to have a significant influence on the outcome of the study. Firstly, the respondents who agreed that vocational programmes contribute to the skills workforce of the country contradict the current

state of affairs, which is that the curriculum in use faces critical challenges, such as lack of practical components and outdated subject content (see section 5.4.1.1b). Secondly, flexible modes of programme delivery is important to increase student numbers and to widen access to learning opportunities through e-learning, distance learning, or part time studies. These options could assist TVET colleges to expand their student numbers amidst limited infrastructure.

A total of *75% of respondents perceived vocational programmes to contribute to the skills workforce of the country (see Figure 5.1).²

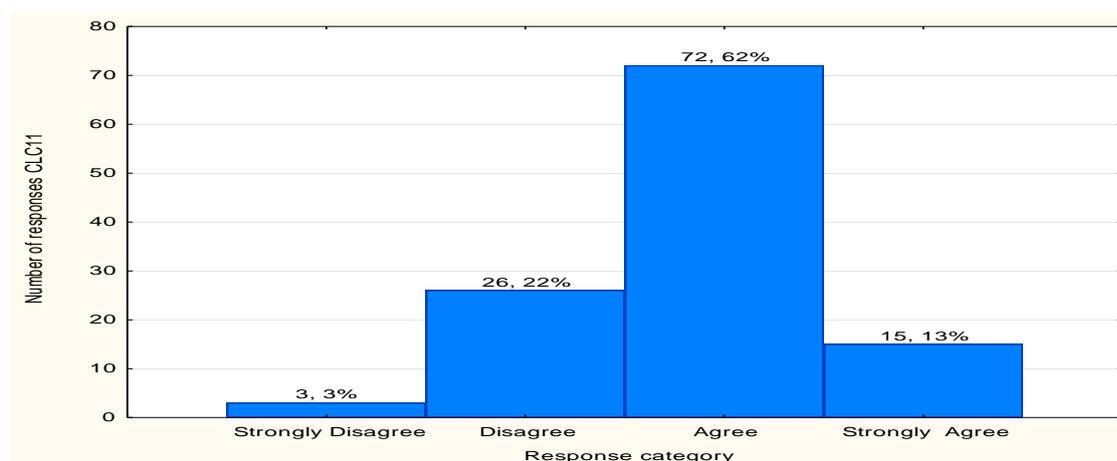


Figure 5.1 Vocational programmes contribute to the skills workforce of the country

**(Responses are represented as follows in Figure 5.1 and all the figures that follow: The comma separates the number of respondents (real number) from the percentage of respondents. For instance, the respondents that disagreed with the statement depicted by Figure 5.1 are 26 in number out of a total of 116, while the percentage of respondents who disagreed are indicated as 22%. In all cases 'strongly disagree' and 'disagree' are calculated together as 'disagree', while 'agree' and 'strongly agree' are calculated as 'agree').*

The majority (69%) of respondents disagreed (see Figure 5.2) that colleges offer flexible modes of delivery for vocational programmes.³

² See section 5.6.1.1 (c) for detailed discussion on the contribution of vocational programmes to the skills workforce of the country.

³ See section 5.6.1.1 (e) for a detailed discussion on the lack of flexible modes of delivery.

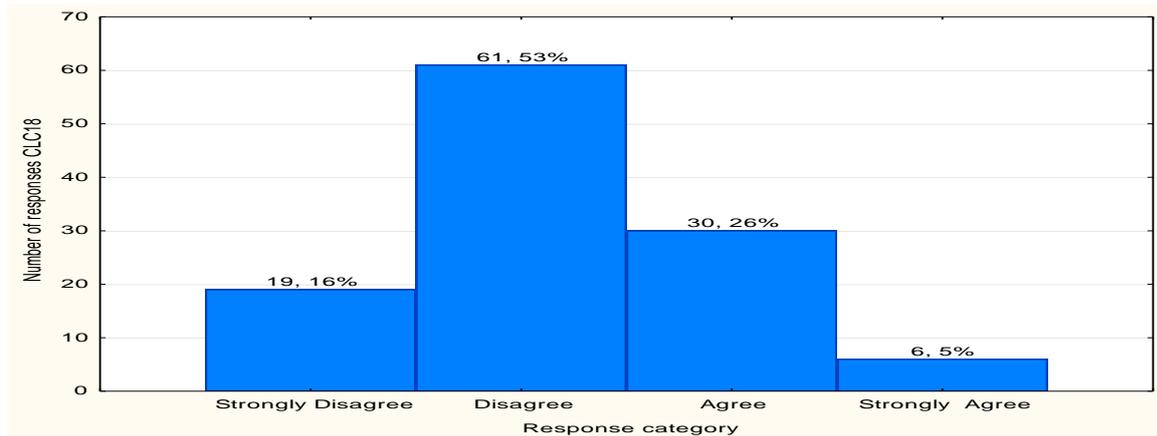


Figure 5.2 *The lack of flexible modes of delivery for vocational programmes*

5.1.3.2 Curriculum Challenges

Respondents had a 50% split in their perception that colleges are adequately funded to offer vocational programmes, while 71% considered occupational delivery to be underfunded. Respondents who disagreed with the statement that DHET ensures adequate industry involvement in the development of college curriculum equated 70%. The majority (55%) of respondents disagreed that vocational education is benchmarked against international standards, while (50%) also disagreed with this statement for occupational programmes.

The following seven graphs (see Figures 5.3 to 5.9) are linked to curriculum challenges and relate to question numbers 13, 14, 15, 16, 17, 19 and 20. The curriculum content of Report 191 (N1-N3) engineering programmes are judged relevant to artisan development in South Africa (see Figure 5.3) according to the majority (59%) of respondents.

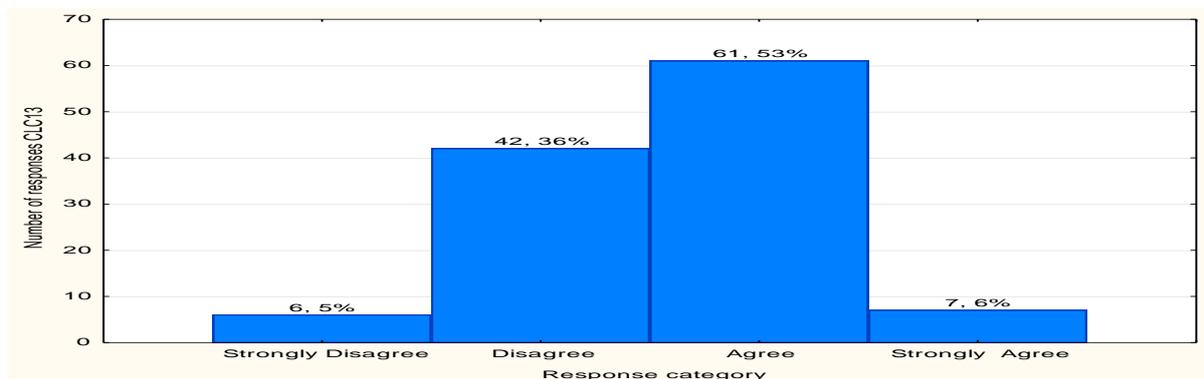


Figure 5.3 *Curriculum content relevancy of Report 191 (N1-N3)*

Most of the respondents (57 %) (see Figure 5.4) are of the opinion that curriculum design of Report 191 (N1-N3) programmes is relevant to artisan development in South Africa.⁴

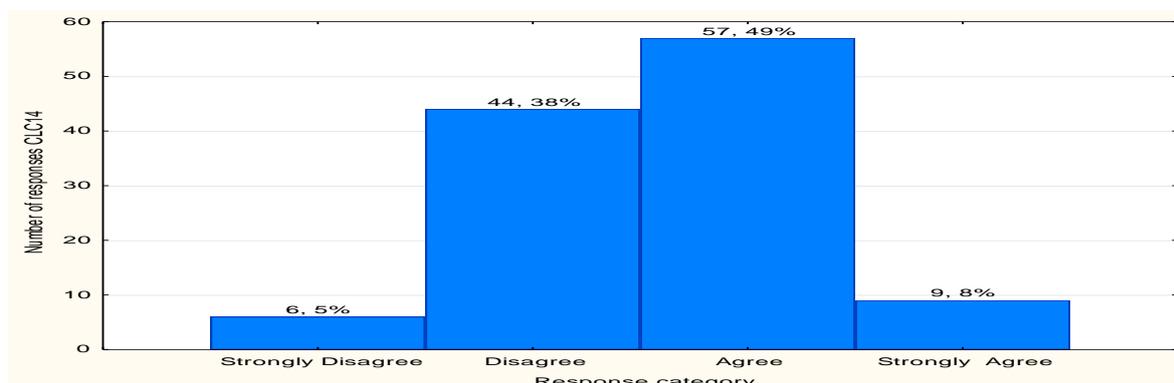


Figure 5.4 Curriculum design relevancy of Report 191 (N1-N3)

A large majority of respondents (88%) indicated (see Figure 5.5) that Report 191 (N4-N6) business and general study programmes need revision.⁵

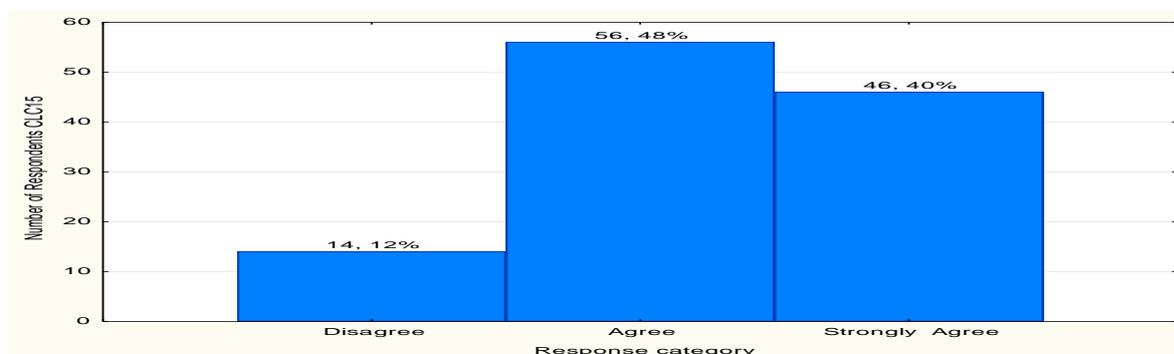


Figure 5.5 Curriculum relevancy of Report 191 business and general studies (N4-N6)

⁴ See section 5.6.1.1 (a) for detailed discussion on content and design relevancy of Report 191 N1-N3.

⁵ See section 5.6.1.2 (b) for detailed discussion on relevancy of Report 191 business and general studies N4-N6.

The need to revise the content of the National Certificate Vocational (NC (V) L2-L4) was also supported by a large majority (80%) of respondents (see Figure 5.6).⁶

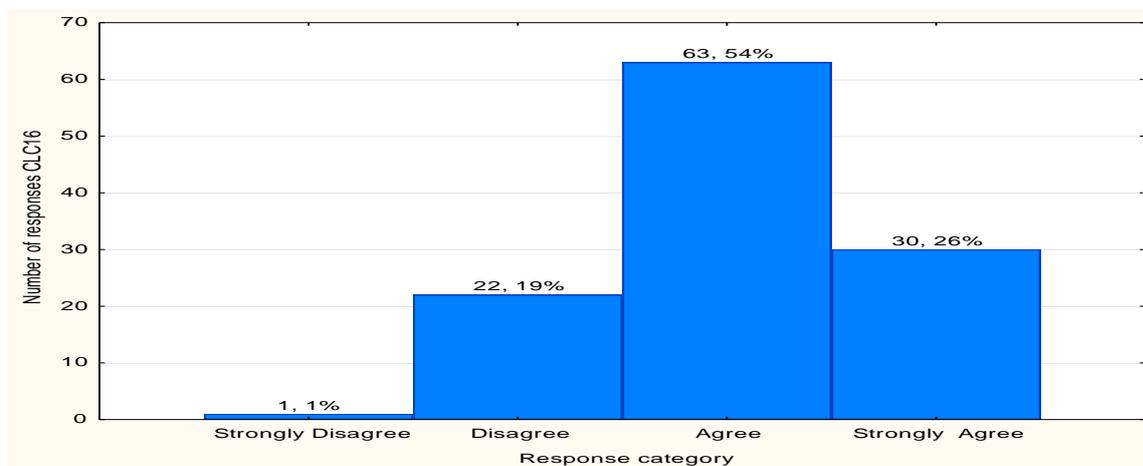


Figure 5.6 Curriculum content relevancy of NC (V) L2-L4

The need to revise the design of the National Certificate Vocational NC(V) L2-L4 was supported by most (84%) respondents (see Figure 5.7).

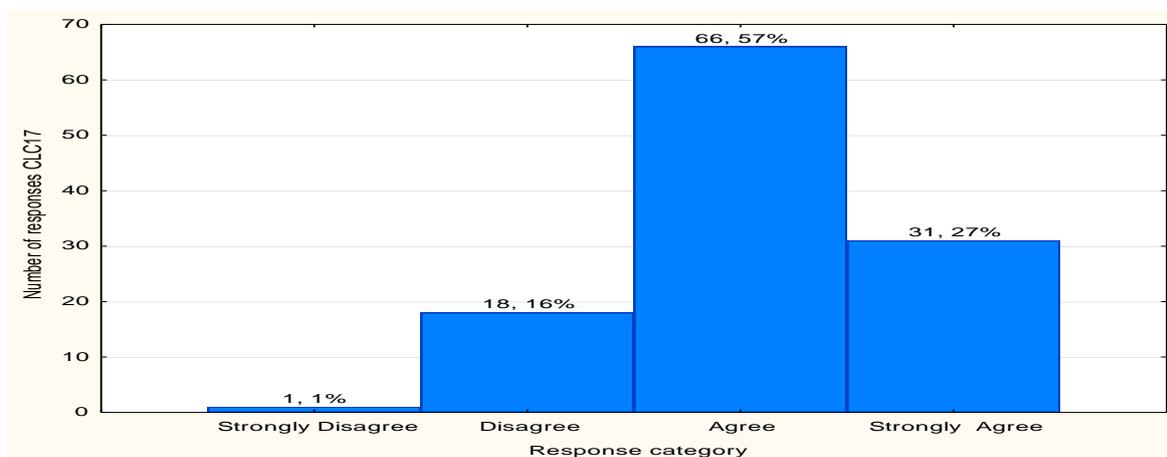


Figure 5.7 Curriculum design relevancy of NC(V) L2-L4

⁶ See section 5.6.1.2 (c) for detailed discussion on content and design relevancy NCV L2-L4.

Most respondents (80%) disagreed (see Figure 5.8) with the statement that vocational programmes articulate seamlessly into higher education programmes.⁷

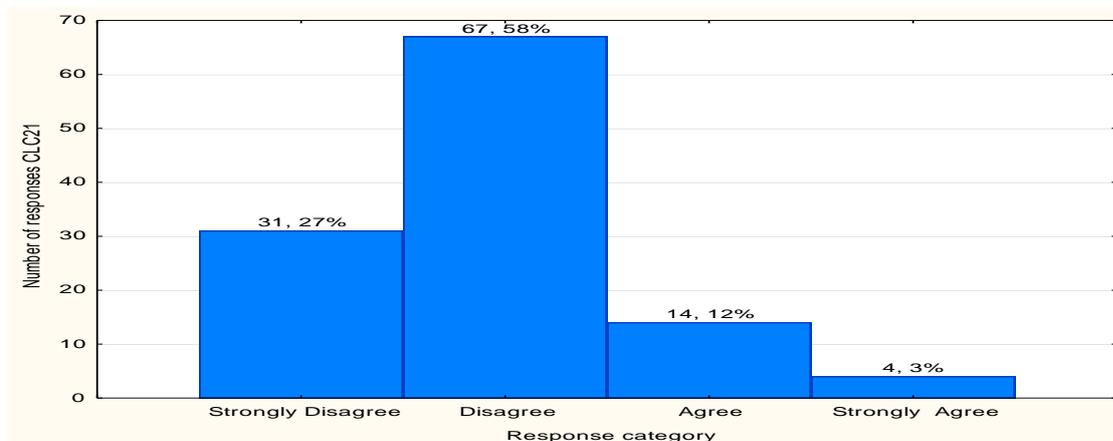


Figure 5.8 *Articulation of vocational programmes*

The majority (70%) of respondents disagreed (see Figure 5.9) that occupational programmes offer articulation routes into higher education.

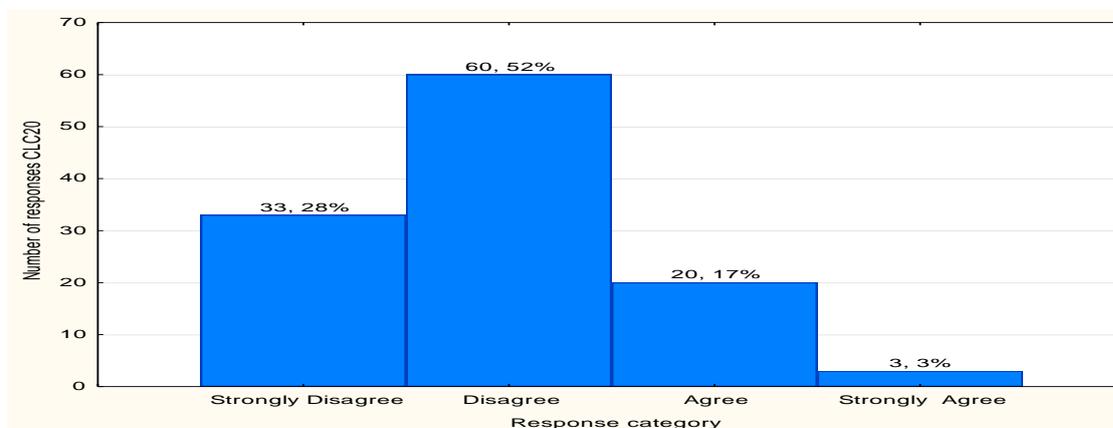


Figure 5.9 *Articulation of occupational programmes*

⁷ See section 5.6.1.2 (e) for detailed discussion on articulation of vocational and occupational programmes.

5.1.3.3 Correlated curriculum variables

The results from the questionnaire survey were also explored for possible connections between biographical variables of respondents and particular curriculum issues. Pearson values were calculated for the following biographical characteristics: job title, job level, age, gender, highest qualifications, and work experience. P-values less than 0,05 were accepted as indicating a significant relationship between biographical characteristics and a particular question. After the test run, only three questions, namely CLC 3, CLC 13 and CLC 14, presented with significant relationships to the biographical variables work experience and job title (see Table 5.1).

Table 5.2 indicates p-values for biographical categories with three questions (CLC3, CLC13 and CLC14) where the results were statistically significant.

Table 5.2 *Variables related to curriculum*

| Question number | Biographical Category | Pearson | Pearson p-value |
|-----------------|------------------------|---------|-----------------|
| CLC3 | | | |
| | Work experience | -0.27 | 0.01** |
| | Job title | -0.09 | 0.34 |
| | Job level | -0.09 | 0.34 |
| | Age | -0.17 | 0.06* |
| | Highest qualifications | 0.05 | 0.57 |
| CLC13 | | | |
| | Work experience | -0.24 | 0.01** |
| | Job title | -0.37 | 0.01** |
| | Job level | -0.37 | 0.01** |
| | Age | -0.13 | 0.18 |
| | Highest Qualifications | -0.18 | 0.05* |

| CLC14 | | | |
|-------|------------------------|-------|--------|
| | Job Title | -0.25 | 0.01** |
| | Job Level | -0.25 | 0.01** |
| | Age | -0.04 | 0.69 |
| | Highest Qualifications | -0.15 | 0.12 |
| | Work Experience | -0.15 | 0.11 |

*: $p < 0.05$ (significant at 5%), and **: $p < 0.01$ (significant at 1%)

The following three graphs (see Figures 5.10 to 5.12) indicate the calculated significant p-values for biographical characteristics (job title and work experience) with three questions CLC3, CLC13 and CLC14.

Question CLC 3 asked the view of respondents regarding the competencies lecturers possess to deliver post-school education programmes such as the National Certificate Vocational programmes, which resulted in 80% agreement. The biographical characteristic of work experience showed a highly significant relationship p value of < 0.01 to this question (see Figure 5.10). This implies that an increase in the work experience of respondents could be associated with a more negative view of respondents' competence, and that less work experience is associated with a more positive view of programme delivery. This finding can be regarded as a variable, since most lecturers feature predominantly under the lowest work experience group, while senior staff members mostly reside under the higher work experience group.

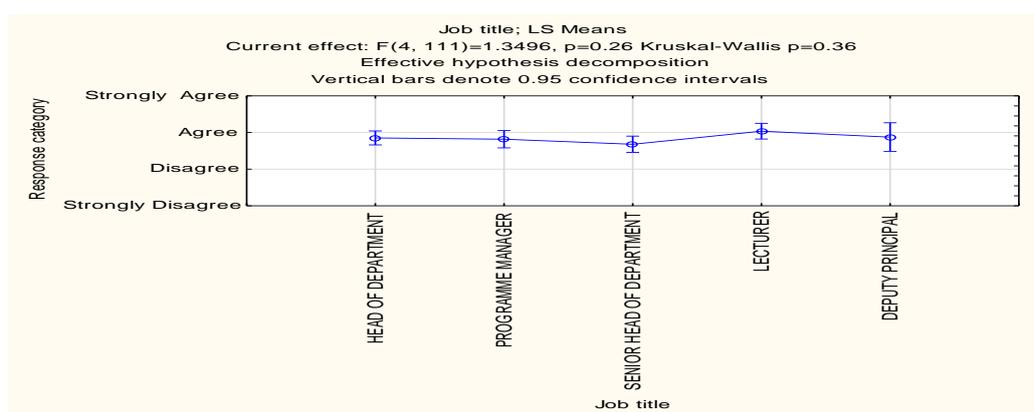


Figure 5.10 Work experience related to respondents' view on competencies of lecturers to deliver post school programmes

Examples of cases where relationships with particular variables were tested with analysis of variance (ANOVA) to assess whether there may be differences in the average Likert scale scores between groups of respondents are depicted in Figures 5.11 and 5.12. Response groups who share at least one common symbol do not differ significantly, while response groups that have no symbol in common indicate significant difference.

Question CLC 13 asked for respondents' opinion on whether the content of the Report 191 (N1-N3) Engineering programmes is relevant to artisan development in South Africa. A slight majority of respondents (59%) agreed with this statement (see Figure 5.3). After comparing work experience with question thirteen (see Table 5.2), a significant p-value of < 0.01 difference was found that could have influenced the manner in which the respondents responded to question CLC 13. Lecturers, for example, tend to agree more with the statement than senior heads of departments. Difference in responses between the lecturers (a) and senior heads of departments (c) imply that more lecturers than senior heads of departments significantly agreed with the statement made in question CLC 13, which could have a significant influence on the final response to question thirteen (see Figure 5.11).

The same analysis applied to lecturers (a) versus deputy principal (bc), and heads of departments (ab) versus senior heads of departments. Hence it seems like a categorical variable where respondents with lower job titles, such as lecturers and programme managers, agree more with this statement than those with higher job titles, such as senior heads of departments and deputy principals. This difference in opinion might be ascribed to either lack of knowledge of what industry requires, or a misinterpretation of the question, since the responses to the closed question section provided contradictory comments compared to the open-ended question section of the survey. Furthermore, the interview participants' finding concurs with the finding of the respondents in the open-ended question section of the questionnaire. It can thus be deduced that the curriculum is outdated and needs to be reviewed or replaced.

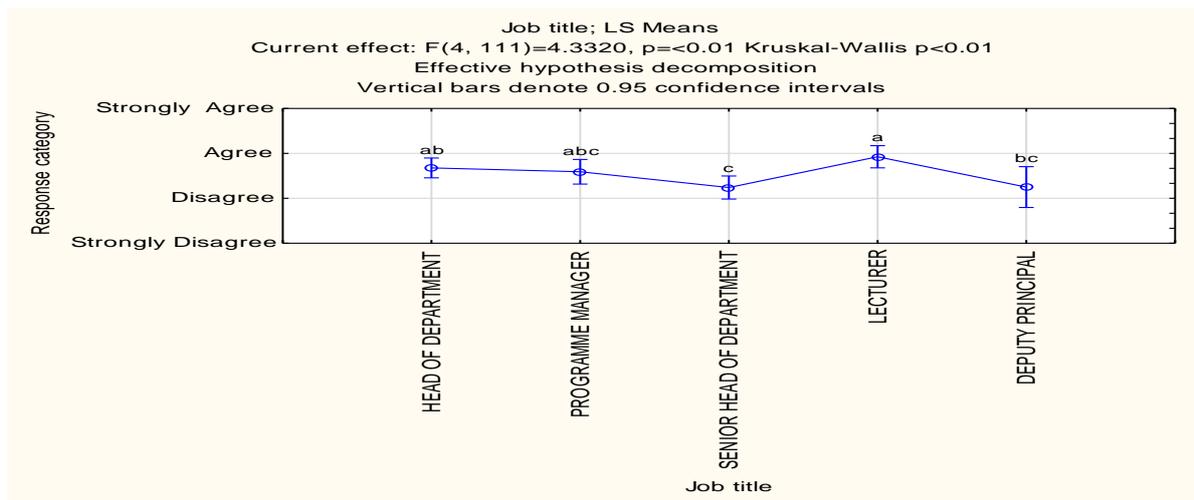


Figure 5.11 Work experience related to Report 191 (N1-N3) engineering programmes being relevant to artisan development

Question CLC 14 enquired about the views of respondents regarding the relevancy of the design of the Report 191 (N1-N3) Engineering programmes to artisan development in South Africa. The majority of respondents (57%) agreed that these programmes are relevant (see Figure 5.4). As a biographical characteristic, the variable ‘job title’ was compared to the responses to question CLC 14 (see Figure 5.12) and it is evident that a difference exists in the responses between the lecturers (a) and senior heads of departments (b). This implies that more lecturers than senior heads of departments tend to agree with the statement made in question CLC 14, which could have a significant influence in the manner the respondents answered the question. The p-value <0.01 indicates that significant differences exist, which could have influenced the way in which the respondents had answered CLC 14.

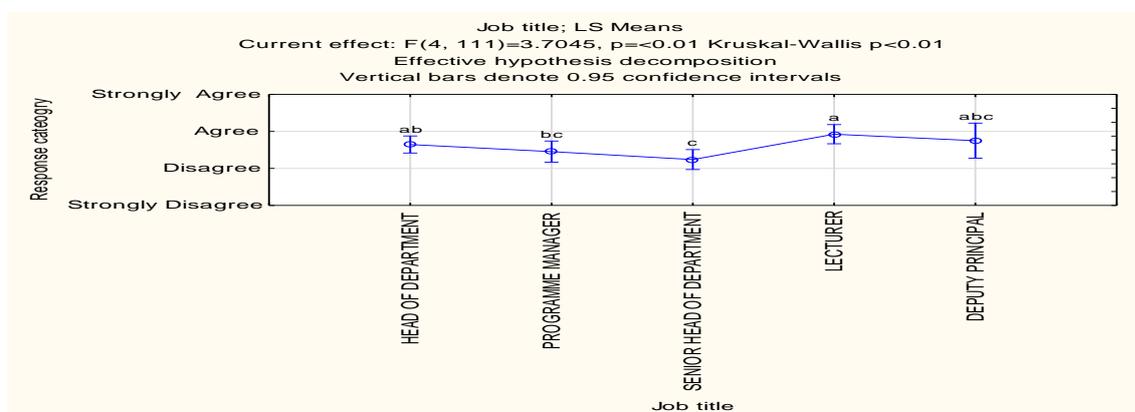


Figure 5.12 Job title related to Report 191 (N1-N3) Engineering programmes as relevant to artisan development

5.1.4 Summative findings from the closed questions for Curriculum and Curriculum Challenges

The main findings that emerged from theme 1 comprise the respondent view that the vocational programme curriculum contribute to the skills workforce of the country, while at the same time flexible modes of delivery for these programmes are viewed as not an option by 69% of the respondents. Furthermore, findings linked to curriculum challenges indicated that respondents perceive Report 191 Engineering (N1-N3) content and design to be relevant to artisan development in South Africa. At the same time, respondents regard N4-N6 business and general studies and NC(V) programmes as non-responsive to the needs of industry. In addition, articulation of vocational and occupational programmes is judged as a critical challenge to access higher education programmes.

All correlational data as described in (section 5.3.1.3) did not result in a substantial number of significant relationships and thus had little impact on the outcome of the responses from the online questionnaire survey. Respondents were mostly consistent in how they reacted to statements posed in the questionnaire survey. After all the questions were related to respondents' biographical information, only three questions stood out and related to the biographical variables of job title and work experience (see Figures 5.10 to 5.12).

FINDINGS FROM QUESTIONNAIRE SURVEY (OPEN-ENDED QUESTIONS) OF CURRICULUM AND CURRICULUM CHALLENGES

This section describes the results from the open-ended section of the questionnaire survey of one hundred and sixteen (n=116) respondents who anonymously completed the survey questionnaire. In this case the respondents' views could not be linked to any particular respondent or institution. As in the case of closed questions, themes that had emerged from the data could be grouped into two themes, namely 'curriculum' and 'curriculum challenges'. Curriculum dealt mainly with respondents' perceptions of vocational, occupational and academic education as well as knowledge and skills required to develop a responsive vocational and occupational curriculum. Curriculum challenges highlighted the key challenges related to possible outdated content and design issues, as well as a possible lack of industry involvement. A total of thirteen open-questions were posed to respondents which resulted into the narratives

recorded under theme 1. Data generated by the open questions were grouped together under ‘Curriculum’ and ‘Curriculum Challenges’ for ease of reading and referencing.

5.1.5 ‘Curriculum’ and ‘Curriculum Challenges’

5.1.5.1 Curriculum

This section relates to questions 1,3,4,5 and 6, which are summarized and grouped together in two subsections.

(a) Question 1 inquired into respondents’ views on the main differences between the concepts of vocational, occupational and academic education.

A number of differences in the understanding of the three types of education emerged from the open responses. Some definitions were vague, for example when vocational education was defined as “*exam-based*”, occupational education as “*assessment-based*”, and academic education as “*knowledge-based*”.

Vocational education is mostly perceived by respondents as a curriculum of applied theory and practical components. One respondent maintained that vocational education “*...consists of applied theory and practical components*”. By contrast, another respondent stated that vocational education consists of “*...more theory than skills/practical*”, while still another indicated that it focuses on training for a broad orientation towards a career path within an industry: “*Broad orientation towards specific career field of Mechanical/Electrical/Civil Engineering which can lead to an occupation...*”.

Occupational programmes were perceived by one respondent as “*...preparing students for a specific skill required in a particular trade or industry career specific*”, while at the same time, assessments take place in the workplace. Another respondent cited that occupational education “*Uses real workplace as assessment/competency framework*”. Still another respondent was of the opinion that occupational training “*Prepares for specific job/occupation/trade e.g. Electrical and Welding*”.

Academic education was cited by one respondent as “*[T]heory-based learning as its primary focus*”. Another respondent stated that academic education “*[A]ims to build foundational knowledge and prepares student to cope in any Academic field of study*”, while another

respondent perceived academic education as training of students for a specific study field: *“Training in a field of study and not a specific job”*.

Questions 3,4,5 and 6 tested respondents’ views on the knowledge and skills required for TVET colleges to develop a responsive vocational and occupational curriculum.

A wide variety of elements, such as knowledge of the academic abilities and needs of prospective students, the required curriculum resources, as well as assessment and moderation strategies that are needed to develop a responsive vocational curriculum, were alluded to by respondents. One respondent listed the following elements: *“Knowledge of the needs of industries”* and *“Knowledge of the type, abilities and needs of students to whom the vocational curricula will be offered to”*. A second respondent mentioned issues such as: *“Knowledge of all the resources needed to compliment the curricula”* and *“Knowledge of assessment and moderation strategies”*.

Knowledge of international trends, subject knowledge and different teaching methodologies, as well as flexible modes of delivery were also mentioned by one respondent: *“International trends”* and *“Strong disciplinary knowledge in the subject matter”*. Another respondent cited *“Teaching methodologies applicable to more mature learners and more flexible modes of delivery”* as well as *“Strong work place based experience, knowledge and skills”*. Respondents seem to indicate that lecturers need knowledge of previous curricula with reference to best practices, job opportunities, national economic trends in the specific learning field, industry knowledge and current legislation as key elements needed for developing a responsive vocational curriculum. In this respect, one respondent wrote: *“Knowledge and understanding of the world of work/industry”* and *“Knowledge of job opportunities, the economy and national trends in business knowledge of scarce skills”*. Yet another respondent remarked that *“Current legislation [is] applicable”*, as well as that *“Current trends in learning area /field”* are also necessary.

Furthermore, the elements of skills required to develop a responsive vocational curriculum should include, according to one respondent *“Interpretation skills, writing skills, organisational skills, administration skills, communication skills and training material development skills”*. Another respondent also listed *“Pedagogical skills, language skills and computer skills”*.

Skills such as *“Curriculum design skills, communication skills, problem solving, assessment and moderation skills”* were also proclaimed as necessary skills by another respondent. According to one respondent *“consistency, analytical, creativity, critical thinker, research skills and logical thinking and reasoning”* are important skills required of lecturers. Lastly, the elements of *“cognitive thinking skills, curriculum writing and design skills”* were also listed as important to develop a responsive vocational curriculum by another respondent.

Similar elements of knowledge and skills to those of vocational education were asserted by respondents for the development of occupational programmes, with a few distinct differences. Lecturers must have workplace experience and must be qualified in a trade in order to be able to integrate knowledge and practical skills in the workplace as per the opinion of one respondent: *“Broad awareness of current trends in the careers; knowledgeable to the point of expertise in the field of study. Must know what the industry needs and what the environment depicts”*. The qualifications required for an occupational lecturer as cited by another respondent: *“In the occupational system, a facilitator is expected to be trade experienced and qualified”*. Another respondent stated that lecturers must be *“[S]ubject matter experts in the field: they must have practical skills and they .must be current with industry requirements”*.

According to one respondent, lecturers should be skilled in *“Interpretation skills, writing skills, organisational skills, administration skills and communication skills... ”*. A workforce who are registered assessors, moderators and invigilators and who are computer literate to analyze assessment results in terms of quality are key elements, according to another respondent: *“[They must have] knowledge of the needs of industries, the type, abilities and needs of students to whom the occupational curricula will be offered to, knowledge of the resources needed to complement the curricula and knowledge of assessment, moderation and verification strategies”*.

5.1.5.2 Curriculum Challenges

This section presents the findings related to question 2 (2.1 to 2.4).

Question 2.1 to 2.4 elicited respondents’ views on perceived curriculum challenges faced by TVET colleges regarding vocational, Report 191 (N1-N3), Report 191 (N4-N6) business and general study programmes, as well as occupational (NQF L1-L5) programmes.

The perceived curriculum challenges linked to the national certificate vocational programmes as pronounced by one respondent include: “...*specific subject content levels which are pitched too high for the education entry level of the students as well as the pass requirement of subjects which are also too high*”. Another challenge raised by a respondent has reference to the “...*imbalance between theory and practical components in the design and delivery of the programmes*”. According to still another respondent, “...*curriculum is not responsive to industry and market needs and are tainted with a poor public image*”. Another respondent remarked that the “[C]*urriculum is too broad, wide and complex*”. Lastly, a respondent disclosed that a mismatch exists between the different levels of the curriculum, which is problematic while recruitment of students, poor throughput and articulation to higher education programmes remain ongoing constant challenges: “...*articulation issues are not revised regularly*”.

Several challenges with regard to the Report 191 (N1-N3) Engineering programmes were reported. These challenges include the “...*short duration of twelve weeks, the lack of practical components and technology, outdated curriculum content, design, equipment and textbooks*”. Another respondent stated that the curriculum is “[N]*ot aligned to changes in technology, new equipment and industry*”. Further remarks from a respondent indicated that the programmes should be “...*linked to apprenticeship system or practical employment and remain inflexible to meet industry needs*”. Another respondent commented that the “[C]*ontent of the curriculum is outdated*”. Lastly, the “...*poor quality of the national examinations*” was also mentioned as a major issue by one respondent.

The responses generated from respondents regarding challenges with the Report 191 (N4-N6) business and general study programmes were analogous with most of the aforementioned findings. These challenges varied from “...*outdated curriculum and design and textbooks*” to a “...*practical workplace application of theory exposure*”.

As reported by one respondent “...*resources need updating*” and the “...*pass requirements of some of the subjects are too high*”. The lack of updating and adequate resource materials, as well as poor practical integration, remain of serious concern according to one of the respondents: “*Lack of practical applications to current work scenarios*” and “*No practical application is required. Only theory knowledge*”. Students don’t find jobs as per the response of one respondent: “*No demands – students don’t get work with their qualifications*”.

One respondent cited a variety of challenges linked to the occupational programmes, such as the *“lack of partnerships with industry for work placement opportunities for students”*, while another mentioned the *“lack of infrastructure”*. A respondent also stated that *“some of the unit standards are outdated”* and are marked with *“insufficient resources”*. Additional challenges cited by another respondent were: *“theory-based learnerships; too much paperwork and inadequate actual learning time”*, while *“Lack of infrastructure for practicals and partnerships with industry for workplacement”* were also added by another respondent.

The *“[C]urriculum is too fragmented with a unit standard based approach”*, stated one respondent, while another wrote: *“Coherence and articulation is difficult”*. Further challenges mentioned by respondents also included that *“...students don’t find jobs”* and that *“People do not trust the curriculum”*, which contains too little content knowledge: *“[L]ack of knowledge content of occupational programmes”*. Another respondent noted that *“[A]ccreditation, learning material, accreditation of lecturers and verification of each SETA have different rules”*. Lastly, challenges relating to the intensity, the mismatch, and high level of the curriculum in relation to the level of the students’ capabilities were also cited as a major concern by one respondent: *“Curriculum is intensive and some are pitched too high for the level of learner”*.

5.1.6 Summative findings from open-ended questions on Curriculum and Curriculum Challenges

The main emerging findings include the different views of the concepts of vocational, occupational and academic types of education. Respondents indicated a need for specific knowledge and skills required for the development of a responsive vocational and occupational curriculum, such as research on and knowledge of the academic abilities and social background of students, knowledge and experience of industry, curriculum writing skills, and advanced cognitive and analytical skills. Respondents also listed a number of curriculum challenges, which include a lack of industry partners, incoherent and fragmented curricula, and the duration of Report 191 Engineering and NC(V) programmes. Furthermore, the NC(V) curriculum standard seems to be too high for the level of prior academic knowledge of the students who register for these programmes. Respondents also mentioned poor articulation of vocational and occupational programmes to higher education programmes and the workplace (also see DHET,

2013b:15-16; Kraak *et al.*, 2016:48). Respondents believe that the tarnished poor public image of TVET college programmes persists within the broader community and industry.

FINDINGS FROM SEMI-STRUCTURED FOCUS GROUP INTERVIEWS ON CURRICULUM AND CURRICULUM CHALLENGES

This section present results from of the semi-structured focus group interviews. Two main themes emerged from the data collected, namely theme 1: ‘Curriculum and Curriculum Challenges’, and theme 2: ‘Curriculum Change and Curriculum Leadership’. In theme 1 ‘Curriculum’ presented three emerging categories as vocational, occupational and academic education types. Also in theme 1, ‘Curriculum Challenges’ highlighted articulation issues, as well as the offering of an outdated curriculum.

In Table 5.3 and Table 5.4 below, the category column is a summary of the key responses that emerged from the findings against theme 1 and directly link to the detailed quotes of the respective respondents. The direct quotes from respondents are linked to the various categories illustrated under the detail column. The quotes from the respondents are reported verbatim under the detail column as per the respondents’ responses in the interview process. The semi-structured focus group interviews were guided by six questions (see Addendum number 8), summarized in each respective table (see Tables 5.3 to 5.4). Table 5.3 presents the key findings related to Question 1, which inquired into the respondents’ understanding of the key differences between vocational, occupational and academic education.

Table 5.3 *Respondents’ understanding of vocational, occupational and academic education*

| THEME 1 | CATEGORIES | DETAILED RESPONSES |
|--------------------------|---|---|
| <u>Curriculum</u> | Vocational | |
| | <ul style="list-style-type: none"> ▪ Generically trained for a broad career path | “Job specific background and knowledge but a wider range of knowledge and skills within an particular industry field. Not too deep in the trade”. (FG1F1)* |
| | <ul style="list-style-type: none"> ▪ Mix of theory and practical knowledge | “Combination of theory and practical”. (FG3M1)* “Mix of theory and practical (structural practical). More generic trained for the job”. (FG4M1) |

| | | |
|--|---|--|
| | <p>Occupational</p> <ul style="list-style-type: none"> ▪ Focus on trades for specific jobs ▪ Narrowly trained with a combination of theory, practical and workplace exposure | “Narrow training towards job specific occupation. Those directed in the trades. People work with their hands. Gives job specific education in an industry field”. (FG1F1) |
| | <ul style="list-style-type: none"> ▪ Industry related | “Occupational is about practical in nature, it is industry related”. (FG1M1) |
| | <ul style="list-style-type: none"> ▪ Practical in nature. ▪ Workplace component | “Combination of theory and practical and workplace exposure – aiming towards a career. Students already worked but now come to gain knowledge. Situation and background differ vastly from other streams of education. Aiming for a career- getting a certificate – already have the experience in the work place”. (FG3M) |
| | <ul style="list-style-type: none"> ▪ Unit standard based skills training Specific career path | “Unit standard based, learnerships, skills courses that is build up under SAQA. Theory, practical and workplace component”. (FG12F2) |
| | <p>Academic</p> <ul style="list-style-type: none"> ▪ Focus more on theoretical knowledge | “General education that take place in schools. Devoid of skills. Abstract in nature. Deeper understanding of how knowledge are constructed”. (FG1M2) |
| | <ul style="list-style-type: none"> ▪ Little or no practical ▪ Generic training | <p>“Normal academic programme – not focused to a specific career. They generalize”. (FG13F3)</p> <p>“Very theory based. Foundational component will underpin the whole curriculum”. (FG12F2)</p> |

*FG1F1 indicates focus group number 1, female participant number 1 and FG3M1 indicates focus group number 3, male participant number 1.

Table 5.3 indicates the differences in the understanding of the terms vocational, occupational and academic education by the interview respondents. From their responses it emerged that vocational education is commonly understood as a combination of practical and theory for a broad career path within a specific industry. Academic education is perceived as focused more on theoretical knowledge for a generic career path, while occupational education is seen as more practical in nature with training focused on a specific job in the industry.

Table 5.4 presents the key findings related to Question 2 (2.1-2.4), which asked the respondents' view on the perceived current curriculum challenges faced by colleges, with reference to the National Certificate Vocational (NC(V) levels 2-4), Occupational (levels 1-5), Report 191 (N1-N3) Engineering, Report 191 (N4-N6) business and general studies.

Table 5.4 Respondents' perceptions of current curriculum challenges

| THEME 1 | CATEGORIES | DETAILED RESPONSES |
|-------------------------------------|---|---|
| <u>Curriculum challenges</u> | National Certificate Vocational (NC(V)): | |
| | <ul style="list-style-type: none"> ▪ Curriculum overload ▪ Duration of curriculum ▪ Over-assessment | “Implementation of curriculum is sometimes too full and in some instances it is too short within the various programmes. Assessment regime is still a challenge and over-assessment”. (FG1F1) |
| | <ul style="list-style-type: none"> ▪ Target market for NC(V) students ▪ Curriculum is too theoretical ▪ Level of subjects is too high for the level of the students ▪ Lack of proper research before review of curriculum | “Not the right learners for the NC(V). The curriculum was intended: 60% theory and 40% practical. The focus is now on mostly theory for exams and not enough practicals. NC(V) was not researched and polited properly before implementation. Some subjects are confusing and contain high level of conceptual knowledge”. (FG1M1) |
| | <ul style="list-style-type: none"> ▪ Lack of subject progression ▪ Little articulation options | “Curriculum is broad and does not have depth - no progression from one year to the next – no progression in difficulty level of topic. It differs in complexity. Students don't master some outcomes in subjects but they still progress. Not structured as it should be. Very little articulation”. (FG9F1) |
| | Occupational (levels 1-5) | |
| | <ul style="list-style-type: none"> ▪ Stipends motivate students | “Students are here for the monetary stipend linked to course. Low entry levels of students lead to poor understanding of theory and even practical. Time management is also |

| | | |
|--|---|---|
| | <ul style="list-style-type: none"> ▪ Level and background of students ▪ Time management ▪ Work placement experience | <p>problematic. Community from where Grade 9s come determine their attitude and academic entry level”. (FG3M1)</p> <p>Industry does not know the qualification and learners don’t get work”. (FG1M1)</p> |
| | <ul style="list-style-type: none"> ▪ Fast pace of programme delivery ▪ Mode of delivery | <p>“Occupational programmes’ pace of delivery for planning is very short. The mode of delivery is quite different”. (FG3M1)</p> |
| | <ul style="list-style-type: none"> ▪ Literacy and numeracy challenges ▪ Lack of student tracking | <p>“...Literacy problems and Maths problems. Learner academic perceptions are too low. Occupational readiness programme standard is too high. No tracking system in the college”. (FG3M1)</p> <p>Language is a challenge. English is not their first language. Receive class in English and it is abstract for them”. (FG4M1)</p> |
| | <ul style="list-style-type: none"> ▪ Pitching of unit standards is too high ▪ Programme placement of students | <p>“Some unit standards are pitched too high for the pass requirement where students come from. Students are not placed incorrectly if they are struggling with content especially in the business and general occupational programmes but it is true for the engineering fields”. (FG3M1)</p> |
| | <p>Report 191 (N1-N3) Engineering</p> | |
| | <ul style="list-style-type: none"> ▪ Outdated programmes and textbooks ▪ Lack of industry background and workplace opportunities ▪ Lack of practical tasks | <p>“Outdated curriculum - Misaligned to what industry wants. The 1972 curriculum of motor and diesel. Outdated textbooks. Industry background is lacking when student come into class. Cannot find work placement. No practicals”. (FG1M31)</p> |
| | <ul style="list-style-type: none"> ▪ Lack of curriculum credibility and industry support ▪ Training for unemployment | <p>“...Credibility of qualifications – industry don’t acknowledge. Training for the unemployed. Machinery and equipment (some from Noah’s ark) are outdated and we are lagging behind industry. Only provide basic training and not what industry demand due to limited machines and</p> |

| | | |
|--|---|---|
| | <ul style="list-style-type: none"> ▪ Outdated and limited resources | <p>equipment. The 1969 textbook for trade testing is still the same...”. (FG2M1)</p> |
| | <ul style="list-style-type: none"> ▪ Outdated syllabus, not relevant to industry ▪ Mathematics and Engineering Science unsuitable for most trades | <p>“The syllabus that come from the archive – not being used anymore in industry. Site visits is futile because they won’t be able to relate the theory to what they see in the workplace. Quality of students that we receive from schools is not up to standard. Mathematics is a timeless subject and well-suited with Electrical trade but not with the other trades. Engineering Science is the same – not-well suited with other trades as in Electrical. 25% of marks are favoured to Electrical students. Maths and Science should be applied to the specific trade”. (FG4M1)</p> |
| | <ul style="list-style-type: none"> ▪ Apprentices versus voluntary students ▪ Industry involvement with curriculum change | <p>“Programme originally designed for Apprentices, now we get voluntary students. Industry must come on board and be part of change the curriculum and then they will accept the curriculum...”. (FG4M1)</p> |
| | <p>Report 191 (N4-N6) Business and General Studies</p> | |
| | <ul style="list-style-type: none"> ▪ Outdated curriculum and learning materials | <p>“Outdated curricula”. (FG1F1) “Materials for Report 191 are outdated. Some syllabi’s were revised. Some subjects are still being followed but outdated. We teach new materials but students are examined on old curriculum – they must learn old materials”. (FG12F3)</p> |
| | <ul style="list-style-type: none"> ▪ Content lacks range statements ▪ Upskilling of staff | <p>“...Interpretation of content differs and lacks range statement. Students are disadvantage in exam because they have no frame of reference. Upskilling and staff developing is needed. Embedded knowledge differ and they come in at different levels of basic education”. (FG9F1)</p> |
| | <ul style="list-style-type: none"> ▪ Lack of authority to change the outdated curriculum ▪ Poor quality of assessments | <p>“...We don’t have flexibility to change the curriculum. Poor quality assessment (only exit levels are being examined externally)”. (FG9F1)</p> |

Table 5.4 highlights that the National Certificate Vocational NC(V) programmes appear to be faced with poor or no articulation possibilities to higher education institutions, incoherent subject progression, too high subject pass percentages, recruitment and selection of school drop-outs with low academic entry levels, and outdated subjects that lack proper resources and infrastructure for implementation. It is interesting to note that the occupational and Report 191 programmes are faced with similar challenges to those of the NC(V) programmes. Among the other notable similarities that featured were low academic entry levels of students and outdated unit standards, subjects and learning materials. Occupational programmes also face other challenges, such as the lack of student work placement opportunities, industry involvement, partnerships, and student tracking. Unique challenges to Report 191 programmes include the poor quality of assessments, an inflexible curriculum, a lack of range statements, and the need for bridging programmes.

5.1.7 Summative findings from group interviews on ‘Curriculum and Curriculum Challenges’

Regarding curriculum, the findings that emerged from the group interviews were similar to those for the open-ended question section of the questionnaire survey. These findings indicate different perceptions of vocational, occupational and academic education. Vocational education is perceived as a mix of knowledge and skills components where students are trained for a broad career path within a specific industry. Occupational education is seen as a narrow type of training for a specific job linked to a trade for a specific industry. At the same time, academic education is perceived as mostly theory and knowledge based, related to a generic career for a wider career path. Furthermore, curriculum challenges were also similar to those cited in the open ended question section of the survey. Challenges mentioned were non-responsiveness of the curriculum to industry needs; the lack of resources, such as equipment and outdated learning materials; the lack of programme credibility; a lack of industry support for TVET college programmes; and a lack of articulation options of TVET college programmes to higher education programmes.

DISCUSSION OF THE FINDINGS FROM ‘CURRICULUM AND CURRICULUM CHALLENGES’

Theme 1 that emerged from the findings was linked to the three data sets that will be discussed in this section. The discussion will be based on the findings from the online survey, which consisted of closed and open-ended questions, as well as the findings from the group interviews.

What is addressed first is respondents’ understanding of the different types of TVET education, namely vocational, occupational and academic education. Differences in understanding of these terms between survey and interview respondents will be pointed out.

5.1.8 ‘Curriculum’ and ‘Curriculum challenges’

5.1.8.1 Curriculum

(a) Understanding of vocational, occupational and academic education

Different views and interpretations were expressed by respondents of the three data sets regarding their understanding of ‘vocational’, ‘occupational’ and ‘academic’ education. Some responses were vague, while other responses indicated that respondents might not have a clear idea of the distinction between the different types of education (see section 5.4.1.1a and Table 5.3). Relevant literature on this issue indicates that the term ‘curriculum’ implies a plan for students’ academic development which is historically, socially and politically contextualised (Stark & Lattuca, 1997:22). According to Du Toit (2011:59), there is not a common understanding of what the concept ‘curriculum’ entails. The viewing, interpretation and implementation of curricula within the same field in different ways are thus quite prevalent among academics at higher education institutions. This is confirmed by the Council for Higher Education (2010) that reported on the evaluation of programmes at higher education institutions in South Africa.

The findings (see section 5.4.1.1a and Table 5.3) indicate that vocational education seems to be mainly understood as a combination of applied theory and practical components based on examination subjects within a broad career orientated curriculum for a wider range of industries. The Department of Higher Education and Training (DHET, 2012:1) concur with

this finding by describing vocational education as middle level of education which provides knowledge and skills to enter the economy through a general broad orientation in vocational areas, as well as general learning in essential areas such as language and mathematics. This corresponds with a view by Moodie, who defines vocational education as the development and application of knowledge and skills for middle level occupations needed by society from time to time (Moodie, 2008:172).

The respondents' understanding of occupational education (see section 5.4.1.1a and Table 5.3) involves a narrow type of training towards a specific trade within a particular industry, where practical skills training exceeds theoretical knowledge, with components based on unit standards and workplace-based assessments. In correspondence with this finding, Middleton *et al.* (1991:25) remarks that occupational programmes are usually unit standard based and that students accumulate credits until a qualification is achieved. A compulsory workplace component and theoretical component form part of such an occupational design. (Moll *et al.*, 2016). Stark and Lattuca (1997:150-168) support the view of Middleton and colleagues by defining occupational qualifications as focused more on training for task performance and less on education for solving unstructured problems. Many occupational programmes are developed specifically to meet the workforce needs of a local industry or business. Finally, the Department of Higher Education and Training (DHET, 2012:1) endorses the definition of Stark and Lattuca by referring to occupational education as “educational programmes that are focused on preparation for specific occupations, as well as on-going professional development and training in the workplace”.

Among the notable findings from relevant literature (see 2.1.3 to 2.1.4) was that contradictory definitions of the term vocational education seem to exist. For example, Biernacki (1995) postulates that vocational education is seen by most Anglo-Saxon countries as training for particular jobs in order to serve the needs of current employers. This is in strong opposition to the views of other authors, supported by the findings as reported in Chapter 5. Biernacki's definition of vocational education seems to correlate with the respondents' contradictory perceptions of occupational education and also supports the comparative findings (section 3.3), namely that most Anglo-Saxon countries do not differentiate between vocational and occupational programmes, but only use the term “vocational education” or “technical education” to describe college based curricula.

Based on comparisons between vocational education systems in Germany, Australia, the United Kingdom and South African (see section 3.3), it seems that the term ‘occupational education’ is only used in South Africa. Different terms also seem to be interchangeably used for different types of education and programmes of similar meaning. For instance, vocational and occupational education is intermittently also referred to as “training”, or “technical” and “industrial” types of training. To support this claim, Moll *et al.* (2005:21-22) posits that to understand VET in South Africa, it is important to distinguish between general post-school VET and occupationally directed VET.

The first takes place in FET colleges or training institutions and is aimed at young school leavers, while the latter takes place in the workplace, or is directed more at adult learners. These authors further state that general VET programmes are based on set national curricula, and offer general vocational skills and knowledge, while occupationally directed VET programmes aim more directly at adults and employed workers in the workplace and generally falls outside of the national curriculum. Gamble (2003:11) explains that, from a historical perspective, technical and vocational education has originally included three forms of educational provision. Firstly, technical education referred to science instruction as found in general education, where it functioned as a foundation for practical knowledge. Secondly, vocational education referred to forms of compensatory education, with a practical aim. And finally, industrial education focused on the imparting of skills in some form of handcraft, as well as the inculcation of discipline, obedience and regular work habits. The definition of ‘technical education’ as defined by Gamble (2003) aptly describes what is known as Report 191 (N1-N3) engineering programmes - also known as national accredited technical education (NATED) programmes. These programmes consist of four theory based subjects that include the relevant trade subjects to provide specialisation for various trades, such as those in the electrical, mechanical and carpentry artisan fields. The programmes provide the theoretical basis for the practical skills linked to artisan development of students to become a qualified tradesperson or artisan.

The term ‘compensatory education’ can also be seen as referring to opportunities for second chance learners, learners who lack education opportunities or development, or who could not cope with mainstream education in their former years, and those who mainly come from disadvantaged backgrounds. These factors are today commonly stigmatised to persons entering vocational and occupational education in South Africa. Industrial education, as described by

Gamble, leans predominantly to what is now also known as occupational education in South Africa (SA), where practical skills are mainly taught in order to perform specialised tasks for various occupations or trades which are industry related and focused. None of Gamble's definitions align closely to how 'vocational education' is currently perceived in the TVET college sector. This observation is confirmed by the empirical data in this study.

Chisholm (1992:2) contributes to the confusion about terminology by contradicting the meaning of technical education as described by Gamble. She writes that 'technical education' refers to programmes based on the traditional craft trades, while Gamble link crafts to industrial education. However, Gamble agrees with Chisholm in postulating that technical education is based on theoretical principles and that industrial education is instruction in specific practical skills.

Finally, the official view of the DoE (2006), as promulgated in the Government Gazette volume 28677, indicates that the purpose of the national certificate (vocational) at level 2 to 4 "enables students to acquire the necessary knowledge, practical skills, applied competence and understanding required for employment in a particular occupation or trade, or class of occupations or trades, with the exception for level 4 to entrance into higher education" (DoE, 2006). The purpose of vocational education, as described by the Department of Higher Education and Training (DoE, 2006), is further proof of the confusion regarding terminology associated with vocational and occupational education in South African TVET colleges. A combination of both vocational and occupational education is contained in the official description, yet the curriculum content and design of NC(V) do not subscribe to achieve this all-inclusive multi-focus purpose.

Moreover, this purpose remains elusive, as most of the industries have been reluctant to accept the NC(V) qualifications as an alternative to the traditional programmes, such as Report 191 Engineering programmes, for artisans development pathways. Only a few industries have embraced it. One respondent in the study has even gone as far as indicating the NC(V) curriculum as "tainted with a poor public image". It was further indicated that entrance to higher education remains problematic for the vast majority of level 4 students, since most higher education institutions (HEIs) would deny them access (see section 5.6.1.2 [a] to 5.6.1.2[g] and Table 5.4 for further discussion of these challenges).

The apparent confusion regarding the terms ‘vocational’ and ‘occupational’ education is understandable, as the vast majority of the survey respondents to the open-ended question section of the study survey struggled to answer this question. Some respondents even wrote ‘I don’t know’ or simply refused to provide a response (see section 5.4.1.1 [a]). A similar situation was observed in the semi-structured group interviews where most groups avoided to engage with this question (see Table 5.3). Considering the diverse citations by various authors (including the DHET), it is understandable that those who have to implement the curriculum are either confused, or do not know the meaning and purpose of the different types of education.

While vocational education is closely engaged with industry and the economy, and might change as industries and economies change, higher education is, in many respects, more closely linked to academic disciplines or fields of study, and would change according to changes in those disciplines or fields (Moodie, 2008:172). However, training in specific skills seems to be more effective when it builds on a strong foundation of general education (Middleton, Ziderman & Van Adams, 1999:46). I agree with the latter definition, as a strong foundation in especially numeracy and literacy enhances a student’s performance when (s)he enters any form of TVET education. The TVET college sector does not offer any pure academic programmes, but rather combine knowledge components with applied practical knowledge within one curriculum.

In summary, the following summative statements are based on the views held by respondents in the study survey: Vocational education is examination subject-based, whereas occupational education is unit standard based. Vocational education prepares students for a broad career path within a study field, while occupational education focuses on a specific trade for a particular job within a specific industry. Academic education within a school context is mainly for general formative purposes, while at university it is for the purpose of underpinning particular disciplinary knowledge, such as mathematics and chemistry, or for professional educational knowledge, such as in teacher education and accounting. Occupational programmes are predominantly practical and task orientated. Furthermore, while vocational education seems to attract younger students, occupational education attracts older and more mature students. Moreover, occupational education has a compulsory workplace assessment component, while this component is not compulsory for vocational and academic types of education within the TVET sector. Academic education is mainly associated with schooling (general formative

purposes) and university education (disciplinary and professional education), but also with some elements of occupational and vocational education at TVET colleges.

In conclusion: Survey respondents and interview respondents in this study were largely in agreement regarding their understanding (or lack of understanding) about the perceived key differences between vocational, occupational and academic education.

(b) Lecturer competencies to deliver vocational and occupational programmes

Although the majority of survey respondents in this study appear to have sufficient qualifications to teach in TVET colleges (74% have diplomas, bachelor's or master's degrees) and sufficient work experience (58% of the respondents), it does not mean that current staff qualifications and work experience is adequate for the relevant knowledge and skills required to implement a responsive curriculum. For instance, the biographical information of respondents did not indicate in which study fields the qualifications were obtained and whether the work experience was directly related to what is currently required in terms of delivery of industry related vocational and occupational programmes.

As curriculum reforms are in many respects related to the expertise of teaching staff, both the content and pedagogical knowledge of FET lecturers have, in general, not kept pace with curriculum changes and development in industry (Gewe, 2010; RSA, 2013b:321). In support of Gewe, Clark (1993:168) espouses that academic staff members can and have played major roles in the process of change. They are important actors in the process, because changes grow out of their work as teachers and as scholars, where they are acutely aware of changes in their fields (see section 2.3.1). A statement made by Lolwana in the QCTO newsletter (QCTO, 2012:1) further confirms that occupational programmes are severely challenged by a lack of “industry knowledge and experience by lecturers” (also see McGrath, Needham, Papier & Wedekind, 2010; Wedekind, 2008) as well as (section 5.6.1.1 [d]).

It thus seems to remain a priority for the TVET colleges to engage in further staff development to ensure that staff obtain the necessary competencies to properly deliver on relevant and responsive vocational and occupational programmes. Papier (2009) avers that quality of teaching, learning and assessment, including training of lecturers who seemingly lack the necessary pedagogic skills to assist students academically and sympathetically, needs serious introspection and remedial steps (Papier, 2009:41).

(c) Vocational and occupational programmes contribute to the skills workforce of the country

The majority of respondents (see section 5.3.1.1) perceived vocational (75%) and occupational (84%) programmes as contributing to the skills workforce of the country (see Figure 5.1). This is contrary to the views expressed by survey respondents in the open-ended question section and by the interview respondents. The high level of unemployment in South Africa is a consequence of education for the youth that provides a significant pool of labour supply, as cited by the Human Resource Development Council (HRDC, 2013/2014:11). They state that South Africa had an unemployment rate of 25,2% on average between 2000 and 2014. The lack of skills needed by industry, coupled with weak industry links between TVET colleges and industry, contribute to the high unemployment rate and to poverty (Taylor & Pereira, 2004; South African Swiss Association Corporation Initiative (SSACI), 2010; RSA, 2013b:320). Similarly, in Nigeria, one of South Africa's neighbouring countries, "youth unemployment, (and the) high rate of poverty have for a long time constituted hindrances to economic development" (Kayode & Adeyemi, 2016:262). Comparable to South Africa, unemployment in Nigeria attributes the mismatch between inadequate educational outcomes and skills demands (Kayode & Adeyemi, 2016:263; Albashiry *et al.*, 2015).

A recent tracer study by JET Education Services confirmed that "...fewer than half of NC(V) graduates were able to find employment" (DHET, 2015c:24). The tracer study confirmed that of their NC(V) respondents, 47.7% were unemployed in 2015. The study also reported that most employment opportunities are temporary and part-time jobs within the private sector, that earn incumbents less than R3 000,00 per month (DHET, 2015). Further substantive research is not currently available to support this finding. An email conversation to find statistics of occupational programme college graduates led to the following remark by an informed expert at the Institute for Post-school Studies (IPPS) at the University of the Western Cape: "If you can find graduate, employed statistics for TVET college graduates, then you will have found the pot of gold at the end of the rainbow. Unfortunately such stats do not exist in our system, though sorely needed, and if you want to use such stats you will have to start the long, slow climb to where the sources of such info might be" (Email conversation, 2016). This is

confirmed by Papier (2017:41), who maintains that there is a “dearth of empirical research on college student transitions into employment” (also see Cosser, Kraak & Winnaar, 2011; Allais, 2012).

Another tracer study conducted by Kruss, Wildschut, Janse van Rensburg, Visser, Haupt and Roodt (2014), found that 90% of those who completed a learnership at private institutions reported that they were employed in permanent positions, mostly by the formal sector in large private firms or by the public sector. Unfortunately, no reliable statistics for the same type of occupationally directed public TVET college graduates seem to be available. Amidst the wide variety of curriculum challenges (see section 5.6.1.2 [a] to [g]), it remains challenging for TVET college graduates to meaningfully contribute to the skills workforce of South Africa, while the skills deficit has become a major confining feature for economic development and growth in the country.

(d) What knowledge and skills are required for the development of a responsive vocational and occupational curriculum?

For this question, numerous types of knowledge and skills necessary to develop a responsive curriculum for vocational and occupational programmes emerged from the empirical data (see section 5.4.1.1 [b]). Curriculum development, review and approval is a national competence within the Department of Higher Education and Training (DHET). College lecturers serve on the curriculum writing teams, based on their subject expertise and experience, along with industry partners and other relevant stakeholders. College lecturers thus need the appropriate knowledge and skills to equip them to serve on these writing teams. Hugo (2010:70) articulates curriculum development as a process which determines how curriculum construction will proceed. The basic aim of a curriculum is to move a learner to a higher level within an organised knowledge structure, not just to a different place within it.

A succinct summary of the main knowledge and skills as it emerged from the empirical data will be discussed in the sections that follow.

(e) Flexible modes of delivery for vocational and occupational programmes

Flexibility to offer different modes of delivery does not seem to exist for vocational qualifications, due to the rigidly structured vocational curriculum design, assessment and examination requirements. Against this background, distance learning, e-learning, blended-

learning, part-time or block release options are non-existent, and the lack thereof seems to stifle student access to flexible learning experiences, due to the inflexibility of the curriculum design. This was confirmed by 69% of survey respondents (see Figure 5.2), who disagreed that flexible modes of delivery exist for vocational programme delivery. It seems clear that different modes of delivery might also assist colleges to grow their student numbers to compensate for their limited infrastructure, however these delivery options will need to be planned carefully in a developing country such as South Africa.

It also seems important for curriculum developers to ensure that a diverse range of flexible programme delivery options exist to open up access. Flexible learning options, such as e-learning and distance learning programmes, could lead to increased access and the successful completion of programmes. Moreover, UNESCO (2008:1) suggests the importance of technology and, in particular, information technology as a force that could influence the curriculum.

A small majority (51%) of survey respondents agreed that flexible modes of delivery form part of occupational programme delivery (see section 5.3.1.1). Some degree of flexibility does exist for occupational programme delivery. For instance, learnerships comprise 30% theory, offered at college level, and 70% practical skills training, offered at the workplace. A compulsory period of 18 to 36 months workplace experience is needed to qualify as a tradesperson, depending on the trade requirement. It is important to note that not all occupationally registered students receive a stipend; however, students in programmes such as learnerships and artisanal development programmes receive a monthly stipend. For staff development in various modes of delivery, this is of vital importance to be considered at the inception stage of a curriculum, and not be implemented as an afterthought when the curriculum is in its operational phase.

(f) Research regarding the social background and academic level of students

According to interview and survey respondents, a mismatch exists between the prior academic knowledge of students and the high cognitive and other demands of the TVET college curricula (see sections 5.4.1.2, 5.4.2 and 5.6.1.1 [f]). It is therefore of vital importance that research should be conducted on the social background and academic level of students, and the outcomes considered prior to the inception stage of curriculum design and development processes. This consideration might productively contribute to improved student success rates, a view supported by Du Toit (2011), who lists three curricula designs commonly used, namely

curricula that are designed around subjects or disciplines, those that are student focused, and those focused on societal problems. This view is further strengthened by the perspectives of Moll *et al.* (2005), who suggest a focus on the clientele of vocational qualifications, as those students often aspire to learning towards higher education, but have been denied access to universities, or are ‘second chance’ learners who have prematurely dropped out of school.

The data also reveal that the design of curricula offered at colleges may readily shift from a predominantly subject or disciplinary focus to a more student-focused approach which is inclusive of societal issues and challenges. In addition, Middleton *et al.* (1991:19-20) mention that the “...level of general education required for successful training also increases with the level of skills being taught”. More broadly, educated and trained workers seem to be better prepared to learn new skills as production technologies change, which enables them to move up the occupational ladder to increase their earnings throughout a career (also see Kraak *et al.*, 2016:xix).

Students who enter with poor academic qualifications from the schooling sector seem to struggle to succeed in vocational and occupational programmes. According to a Human Sciences Research Council (HSRC) report on academic models: “FET colleges are meant to provide second chance opportunities and accept youth at risk. These students are usually not academic achievers and frequently have performed poorly in school. There is thus a need to acknowledge that students are coming into FET colleges with a poor foundation in language, mathematics and in other subjects” (HSRC, 2006:15). Papier (2009:44; Zideman, 1997) supports the aforesaid view by stating that students are regarded by college staff as “poorly prepared for the high cognitive and other demands of NCV programmes, (they) have already been failed by systems in school and society, and have looked to the college for alternative opportunities”. Furthermore, Papier appeals to all colleges to recruit the “right learners into the right programmes” and to build the culture of learning, trust, accountability and hope that these young people so desperately need. In addition, the HRDC (2013/2014:30) cites that, according to several research studies conducted, “schooling in South Africa remains very poor with South African pupils facing learning deficits early on in their academic careers”.

The contextual factors discussed above could suggest some of the reasons why the student success rate in terms of certification and retention for the National Certificate (Vocational) has been generally poor since it was introduced in 2007. For instance, only 38,1% of students who

participated in the tracer study undertaken by JET Education Services obtained a NC(V) level 4 certificate. In the same tracer study the certification rates were 6,3% for Report 191 (N3) Engineering; 10,6% for Report 191 N4; 6,5% for N5; and 3,4% for N6 students, which is exceedingly low (DHET, 2015b:16).

Based on the factors pointed out thus far, the need for knowledge about students' socio-economic backgrounds and academic entrance levels as an entry requirement for further learning seems critical in the development of a responsive vocational and occupational curriculum.

(g) Knowledge of industry needs for curriculum purposes

Knowledge of industry needs seems to be particularly important in curriculum development to ensure industry relevancy in performing a specific job. Industry involvement in curriculum development is therefore vital to ensure industry buy-in, and to ensure relevancy that could enhance student employment rates. This observation was supported by a total of 91% of survey respondents, who indicated that student employability could be enhanced through curriculum change (see Figure 5.1).

Employers seem to prefer the appointment of staff based on relevant qualifications and experience to perform the duties linked to a particular job. In allegiance with this statement, Middleton *et al.*, (1991:19-20) cites that "...with a competent and flexible workforce, one that can acquire new skills as economies change, is a necessary prerequisite for economic and social development". In addition to these views, Papier (2017:46) reports that the inclusion of real workplace exposure in the TVET college programmes during the on-course duration of the college training programme is strongly recommended by employers, while at the same time additional skills such as basic accounting, information communications technology, attitudinal skills and career guidance is mentioned as additional competencies needed by apprentice artisans. It thus seems imperative for TVET curriculum developers to have knowledge of industry needs in the development of a responsive vocational and occupational curriculum to ensure relevancy of programme content and design.

(h) Technical skills needed to develop a responsive vocational and occupational curriculum

In the study survey, numerous technical skills needed to develop and review a responsive curriculum were mentioned, such as curriculum writing and design skills, language skills, research skills, creativity, and computer literacy skills. Ongoing staff development to enhance the relevant knowledge and skills for curriculum development seems to be an important priority. It was interesting to note that survey respondents emphasised the importance of staff being qualified artisans, who have the ability to integrate knowledge and practical skills in the workplace, in order to develop appropriate occupational programmes. No respondents expressed the same requirement for the development of vocational programmes. This could possibly be ascribed to the common perception that vocational programmes (such as the National Certificate Vocational, NC(V) levels 2 to 4) are not recognised by industry as foundational knowledge preparation for artisan development as a career path. Instead, the intention of NC(V) programmes is rather to access higher education programmes and enhance employment and self-employment opportunities. Occupational programmes reside under the auspices of the various Sector Education and Training authorities (SETAs) and it is compulsory that staff have a relevant trade certificate to qualify as a workshop trainer and assessor.

The next section will deal with the discussion on curriculum challenges according to the findings from the two empirical data sets.

5.1.8.2 Curriculum challenges

According to the DoE (2007a), some of the negative features of the then technical colleges that they have been trying to overhaul since 1995 include outdated programmes that were unresponsive to the emerging economy, low throughput rates, and negligible industry take-up of students. Another concern was that those working in colleges had lost contact with industry and had little knowledge of new trends (also see Wedekind, 2008; RSA, 2016). In support of the aforementioned, minister Blade Nzimande states that, “despite many achievements by TVET colleges, these curriculum challenges are often deep-rooted, cross-cutting and systemic” (HRDC, 2015:5).

Multiple challenges related to these characteristics will be discussed in the following sections, which include challenges related to programme offerings, articulation issues, lack of industry support and inadequate funding.

(a) Report 191 (N1-N3) Engineering programmes

A marginal majority of 59% of the survey respondents perceive the curriculum content of Report 191 (N1-N3) Engineering programmes as relevant to artisan development in South Africa (see Figure 5.3), while a slight majority of 57% of the survey respondents perceive the curriculum design of Report 191 (N1-N3) Engineering programmes as relevant to artisan development in South Africa (see Figures 5.4 and 5.11).

However, the same respondents contradicted themselves (see 5.4.1.2 and 5.6.1.2 [a]) when they answered a similar question in the open-ended section of the survey, as they indicated that the curriculum content, design and textbooks are outdated. In their view, the current curriculum is also misaligned to the required technology and the equipment used in industry. Furthermore, it was indicated that the current curriculum provides no practical task components and apparently lacks industry support for work placement opportunities.

This contradiction could be ascribed to the work experience of the respondents, as 58% of the respondents in the survey and 66% of respondents in the interviews were experienced staff (11 to 21 years experience and above). As the work experience of the survey respondents was less than the experience of those who participated in the group interviews, it could be that survey respondents could have misunderstood the closed-questions related to this question. Another reason may also link to limited knowledge of Report 191 (N1-N3) Engineering programmes, due to survey respondents' lack of knowledge and exposure to the Engineering field of study.

Respondents in the group interviews supported most of the views expressed by survey respondents to the open-ended question section. Furthermore, the view of the Department of Higher Education and Training (DHET, 2010d:26; DHET, 2013b) endorses the perceptions of the respondents in the open-ended section and the interview groups, by stating that the “N courses are fundamentally outdated and lagged behind in applied disciplinary knowledge”. Agrawal (2012) avers that the need for a broad and flexible involvement from the labour market is needed when vocational curricula are designed or modified. In addition, Papier (2017:42, 43, 46) posits that lecturers and employers concurred with each other during her research

interviews that “the course syllabus has long been out of date and needs review to align it with developments of industry”.

The N1 to N3 Engineering curriculum, in particular the N2 programme, is one of many other programme options, a prerequisite to become a qualified artisan. According to Badroodien and Kraak (2006:27), registered apprenticeship contracts in South Africa declined from 33 752 in 1985 to 22 015 in 1994, and the annual indenturing of apprentices declined from 11 573 to 5 002 in the same period. Six years later in 2012, this statement of Badroodien and Kraak (2006) was supported by the DHET (2012b:10-11), who also pronounced that “...the training of artisans has declined and is only now beginning to grow again”.

While a myriad of policy amendments took place, the outdated Engineering curriculum remained unchanged, in some cases since 1981. Apparently, with the establishment of the Quality Council for Trades and Occupations (QCTO) in 2010, a renewed purpose and hope was placed upon the QCTO for the development of industry occupational directed programmes that would also include the replacement of Report 191 Engineering and business studies qualifications (also see RSA, 2016:v; (also see DHET, 2015a). However, little progress has been made since 2010, hence Report 191 Engineering programmes are still offered and funded by the DHET seven years later.

(b) Report 191 business and general studies (N4-N6)

The findings from the empirical data strongly indicated that the need to review and replace Report 191 business and general study programmes are long overdue. These programmes are marked with similar factors to those discussed in section 5.4.1.2 and Table 5.4, which range from an outdated curriculum content, design and textbooks, to the lack of practical tasks. The vast majority of these programmes are predominantly theoretically based, although programmes such as hospitality and clothing production contain some practical tasks. The examinations are therefore also predominantly theoretically based, where students merely recite theoretical components. Both the Green Paper and the White Paper support this finding by stating that there is an urgent need to review and replace or improve the N4 to N6 programmes (DHET, 2012b; DHET 2013b).

Students find it difficult to find meaningful and sustainable employment upon completion of N4, N5 or N6, although they also hold a grade 12 certificate from the school sector. Industry seems reluctant to host these students for work placement exposure and experience. Students

thus generally find casual or temporary jobs within the private sector, which is mostly not aligned to their study field. These challenges further hamper those in possession of an N6 certificate to obtain their national “N” diploma, which requires an 18 month workplace experience component.

In an attempt to present relevant subject content, some lecturers incorporate the latest information regarding the subjects into their lessons, but unfortunately, students still have to study outdated content for the nationally set examination question papers; hence, a mismatch between what is taught and what appears in the examination question papers set against an outdated curriculum. In addition, students experience challenges to access programmes offered at higher education institutions (HEIs). Based on these challenges, it is a natural flow of events that students will experience difficulties entering higher education opportunities, although this issue could be addressed if the TVET curriculum could be changed or revised to make articulation possibilities acceptable to HEIs.

The Report 191 business and general study programmes are currently ministerial DHET funded programmes, which form part of the college programme qualification mix. With the establishment of the newly formed Quality Council for Trades and Occupations (DHET, 2010), renewed hope was generated for the development of industry occupational directed programmes, which would also include the replacement of the old Report 191 business and general study programmes. However, seven years later, no replacements have taken place since the establishment of the QCTO in 2010. Further discussion on occupationally directed programmes will follow under section 5.6.1.2 [d].

(c) The National Certificate Vocational (NC(V) L2-L4)

The need to revise the content and design of the National Certificate Vocational (NC(V) L2-L4) apparently deserves immediate attention. The NC(V) curriculum is wide, complex, and faced with varied challenges. Many of the programmes, specifically subject and textbook content, are outdated and need revision, while others are in need of total revision to ensure industry responsiveness (also see RSA, 2017).

The NC(V) programmes (with 7 subjects) comprise a higher level curriculum standard than its predecessor, called NATED programmes. The curriculum is currently offered to students from the school sector with varied entry level certificates. Grade 9 to 12 students are often

accommodated in one class, for instance. The foundational academic attainment of these students are mostly below average. Yet, the subject pass requirements of NC(V) programmes for the vocational subjects are higher (minimum of 50 %) than those of the school sector, although it is the same for the fundamental subjects (30% for mathematics and mathematical literacy) and (40% for English and life orientation). Furthermore, students progress to the next level with subjects which they failed on the lower level, which causes a severe strain on the system. By the time students reach level 4, they could be registered for a total of 10 subjects across all 3 levels. The compulsory integrated practical task (ISAT) intend to provide the practical component of the subject instead of a compulsory work placement experience (DoE, 2006).

The registration of academically under-achieving students from the basic education school sector, as indicated by one participant as “...*not the right learners for NC(V)*”, is problematic. This is particularly so in view of poor pass requirements, poor retention, and low certification rates of NC(V) students (see section 5.6.1.1 [f]), where it was found in a recent tracer study by JET education services that only approximately 38% of NC(V) level 4 students are certified. Improvement of quality teaching and learning is also hampered due to curriculum overload, as well as over-assessment. The curriculum seems to be too theoretical, although the design of NC(V) promotes an uneven theory (60%) versus practical (40%) division. It seems that practical skills are being taught and tested theoretically with very little practical workshop exposure. NC(V) programmes currently do not have a compulsory work place component as in the case of occupational programmes. Industry is thus extremely reluctant to host NC(V) students for practical work place exposure and question the credibility of this qualification, which could be linked to the poor public image and non-responsiveness to industry needs of the curriculum.

The duration of the programmes is also problematic, as it takes three years to complete and obtain NC(V) level 4, which is regarded as equivalent to a grade 12 certificate. Only a few NC(V) students, “less than 1%” (see section 5.6.1.2 [e]), enter higher education programmes. This poses serious challenges for students to gain access and articulate to institutions of higher education. Other challenges include areas of non-responsiveness to industry needs, coupled with a poor public image. Further discussion of this issue will follow in section 5.6.1.2 [f] on the involvement of industry in curriculum development as a key challenge to the TVET college sector.

Of utmost importance, however, is the fact that NC(V) qualifications were introduced in 2007 with the aim to resolve the issues of NATED engineering qualifications regarding poor quality teaching, weak linkages with industry, and outdated technology (DHET 2010a; DHET, 2013b). In an attempt to modernise the NATED curriculum, required fundamentals such as language (English first additional language) and mathematics now means that NC(V) has become more academically challenging than the NATED programmes (DHET, 2010a). These additional requirements attempt to compensate for weaknesses evident in the basic education system (DHET, 2010a).

(d) Occupational programmes

According to the statement made in by Lolwana in the QCTO newsletter of January 2012 (QCTO, 2012:1), "...one of the greatest challenges in delivering occupational qualifications is getting the buy-in of workplaces in the public sector, private sector, non-government and non-profit organisation as well as by those in the informal economy". This statement confirms why the empirical findings from this study indicate that occupational programmes are severely challenged by a lack of industry partnerships, a lack of student workplace opportunities including a lack of industry knowledge and experience by lecturers. Adding to these views Kruss, Wildschut, Janse van Rensburg, Visser, Haupt and Roodt 2014; Branson, Hofmeyr, Papier and Needham 2015) posits that TVET college participation in the delivery of occupational programmes remains debatable since they find it challenging to form sustainable relationships with industry. One interviewee in this study claimed that "...colleges are training for unemployment" because students don't find jobs and that students are only motivated to register for occupational programmes due to the stipends which now became a living allowance to feed households.

Some of the unit standards and learning material are also outdated, coupled with a fragmented curriculum which do not build on previous unit standards or levels. These programmes are paper intensive and this leads to inadequate learning time which negatively affects teaching and learning time and quality of programme delivery. According to the DHET (2010d:5), the Quality Council for Trades and Occupations (QCTO) was tasked to "...develop and quality assure occupational qualifications that are responsive to labour market needs and developmental state initiatives". Apparently, these new occupational qualifications will result in a "...skilled, productive and employable citizenry" (DHET, 2010d:5). Almost seven years

later, not much progress has been made and the college sector is awaiting the newly developed industry relevant qualifications.

According to respondents the continuous lack of infrastructure and insufficient resources to conduct practical tasks remain constant blockages due to insufficient funds as well as competing for workshop space with the National Certificate Vocational programmes. Some of the respondents also claim that curriculum of occupational programmes is too intensive and some unit standards are pitched too high for the academic ability of the learners (see Table 5.4, and sections 5.7.2.1[a] and 5.8). Although these programmes are more practical by nature and assessment based, the findings from the study survey indicate that students are also struggling with the content of the curriculum (see section 5.10.1.1[f]). The academic level and social background of students thus have to be considered when revising or developing new unit standards linked to the variety of occupational programmes (see section 5.10.1.1 [f] for detailed discussion on this issue).

It was found from the empirical survey data that occupationally directed curricula lack content knowledge as well as practical tasks although it is meant to be predominantly practical in nature. In addition, these programmes are tainted with a poor public image and most people do not trust the curriculum, hence it lacks credibility. Against this background, it is not surprising that occupationally directed graduates are denied access to higher education programmes.

Finally, the processes of accreditation that include, the accreditation of programmes, facilitators, learning material, assessors, moderators and verifiers are extremely tedious and further exacerbates by the different rules from the various Sector Education and Training Authorities (SETAs) for the variety of occupational qualifications registered. One of the aims of the QCTO is to streamline the quality assurance of all occupational programmes which means that this function will fall away from the education and training quality assurance bodies (ETQAs) currently linked to the various SETAs (RSA, 2010b).

(e) Articulation of vocational and occupational programmes into higher education

The articulation of vocational and occupational programmes into higher education programmes poses a serious challenge to TVET college student graduates (also see DHET, 2013b:15) The vast majority of college graduates are currently denied into higher education programmes. This is a worrying factor, since one of the articulation routes for NC(V) level 4 qualifications is

entrance into higher education. This was confirmed by a recent tracer study undertaken by JET education services on behalf of the DHET, which found that “...only a tiny minority of NC(V) graduates went on to study at a university or university of technology”. Furthermore, the tracer study confirmed that less than 1% of their respondents obtained a certificate, diploma or degree from an institution of higher education (DHET, 2015b:17). Duncan (2009:27) echoes in support of the lack of articulation routes that “...most universities and universities of technology (UOTs) seem to be reluctant to register NC(V) graduates for level 5 courses in 2010 because of apparent gaps between the output competences targeted by the NC(V) and entry requirements for university-level courses”.

Based on all the challenging factors as described, it is indeed understandable why institutions of higher education are reluctant to grant college graduates of occupational, vocational and Report 191 programmes access to their qualifications. The DHET thus might need to speed up the revamp of all college qualifications to enhance improved access into higher education programmes of learning. These new programmes would be required to steer away from a ‘one model fits all’ regime, meaning that not all vocational and occupational programmes should be developed and designed to provide access to higher education programmes. Some, that will be more practically inclined, should lead to direct employment, while others might be more theoretical in nature and more closely aligned to higher education programmes. Therefore, the entry requirements that allow access at college level should also be different for the two different types of programmes.

(f) Lack of industry support and involvement

Interestingly, the new TVET funding model as promulgated (DHET, 2015c:8) has now shifted the emphasis of funding towards ‘...training that tackles skills and unemployment problems more aggressively through, for instance, more relevant training content and the cost effective use of college facilities and resources’. It further specifies how government, in collaboration with industry stakeholders, should determine what programmes should be offered and how colleges must receive funding to respond to such needs (also see DHET, 2013b:16).

These are both progressive objectives in the right direction and seem to be the solution to some challenges (see section 5.3.1.2, 5.6.1.1 [g], 5.6.1.2 [d]) currently faced by colleges regarding the lack of industry partnerships and involvement with TVET college curricula development. It signals a new funding regime that will prioritise responsive programmes in demand by

industry, and commit funding towards the new programmes. However, only time will testify whether these curriculum reform objectives will be met by the DHET and the relevant stakeholders.

Colleges are also currently experiencing poor industry participation in areas such as student work placement opportunities for NC(V), Report 191, and occupational programmes. The majority of industries remain reluctant to host TVET learnerships and apprenticeship students, for whom it is compulsory to complete practical work experience to obtain a red seal qualification in becoming a qualified tradesperson. Poor industry participation in curriculum development and review processes thus seem to remain challenges that contribute to the non-responsiveness of programmes to industry needs.

(g) Inadequate funding

Due to limited funding, few colleges can afford to update and equip their training workshops with the latest infrastructure, technology and machinery, as required by the needs of industry (see sections 5.3.1.2, 5.4.1.2).

Traditionally, and in recent times, despite slight improvements, The White Paper on Post School Education and Training (DHET, 2013b:18) promised to provide core funding for staff, infrastructure and student support services; however, TVET college managers need to seek other types of funding sources, such as SETAs, National Skills Fund, student private fees and other private funding agencies. TVET colleges remain underfunded amidst the expectations of government to build a high quality, expanded and well-articulated post-school system as envisioned in the White Paper for Post School Education (DHET, 2013b:4-10, 18). In the past, colleges were funded with the remains of the provincial “Education vote” budgets after all other education needs were met in terms of an objective set of norms and standards. Colleges are mainly funded by DHET class fees, accommodation and transport allowances. Class fees are annually nationally set and increased by the DHET. The second stream of funding comes from the various sector education training authorities (SETAs) and lately the national skills fund (NSF) for the delivering of occupational programmes, such as learnerships, apprenticeships and short skills programmes (DHET, 2013b:7-8).

The majority of colleges formerly known as state funded colleges, inherited poor infrastructure, resources and staff establishments. Yet it is expected from these colleges to expand and deliver new modern programmes such as NC(V) and occupationally directed programmes. Albeit,

nimble staff development initiatives to improve quality of delivery by the DHET, as confirmed by the survey respondents (see section 5.3.1.1, it is expected of lecturers to provide good quality teaching and learning and excellent student success rates. Colleges are under much pressure to deliver on its mandate of growing student numbers and offering a diverse mix of programmes amidst poor infrastructure, resources and funding challenges.

The new TVET funding model that was promulgated in the TVET funding norms gazette, number 38796, states that "...the capital stock of colleges has reportedly been depreciating, and the readiness to address new challenges clearly hinges on more capital investment" (DHET, 2015c:6). This model promises to support future capital expenditure needs. It also promises NSFAS bursaries for academically capable students who cannot afford to pay college fees, which, up to now, were inadequate to fund the needs of students - especially for accommodation and transport (DHET, 2015c:6; Branson, Hofmeyr, Papier & Needham, 2015:45). During the 2016 academic year some of the TVET college students protested under the banner of the '#FeesMustFall' movement, due to insufficient DHET NSFAS bursary allocation according to the 100% financial need of student fees, accommodation and transport allowances.

5.1.9 Synthesis of findings on 'Curriculum and Curriculum Challenges'

In an attempt to streamline the understanding of the different types of education, this study puts forward the following definitions based on the findings of the empirical data (Table 5.3 and section 5.4.1.1 [a]): 'Vocational education' seems to be mainly understood as a combination of applied theory and practical components, based on examination subjects within a broad career orientated curriculum for a wider range of industries. 'Occupational education', on the other hand, appears to involve a narrow type of training towards a specific trade within a particular industry, where practical skills training exceed theory knowledge components based on unit standards and workplace-based assessments. 'Academic education' is mainly associated with schooling (general formative purposes) and university education (disciplinary and professional education), but also with some elements of occupational and vocational education at TVET colleges.

It became apparent from the findings that a need might exist to conceptually combine vocational and occupational types of education. This seems in correspondence with usage in

the UK, since the three data sets indicated a tendency to merge the various definitions under one education term, namely that of ‘vocational education’. In addition, academically related programmes might be increasingly needed in order to enhance the possibilities of student articulation (see Figures 5.8 to 5.9 and section 5.4.1.2 into higher education programmes). Alternatively, HEIs probably need to develop vocational and occupationally directed higher education programmes so that TVET college graduates can articulate into higher education programmes more easily.

Another important finding points to ongoing professional development (see section 5.6.1.1 [b]) of college staff, which seems crucial if TVET staff are to gain the relevant knowledge and skills required to plan and deliver a responsive vocational and occupational curriculum (also see Papier, 2010; RSA, 2013a). Widening of student participation and access (see section 5.6.1.1 [e]) was also found to be crucial to be considered at the inception stages of curriculum development. Students’ social background and prior academic knowledge (see section 5.6.1.1 [f]) might also be a priority when considering the development of new curricula in order to contribute to the success rates of TVET college students (Table 5.4 and section 5.5.1). Furthermore, industry knowledge and experience (see section 5.6.1.1[g]) were pointed out as being a critical criteria for curriculum developers and it is envisaged that once the curriculum becomes industry aligned, the employability of students and industry partnerships with TVET colleges may improve.

Against the contextual factors as pointed out by this study and as discussed under curriculum challenges (see sections 5.6.1.2 [a] to [d]), it seems that NC(V) and National Accredited Technical Education (NATED) Report 191 programmes are in need of being revamped and replaced with new industry responsive programmes (see Figures 5.3 to 5.7 and section 5.3.2). Finally, the revision of the type and amount of funding (see section 5.3.1.2 awarded to colleges by DHET seems critical in order to achieve the mandate of student expansion, meet the need for adequate resources, and for quality delivery of teaching to promote the skills workforce of South Africa.

CONCLUSION

Chapter 5 provided the findings and discussion of the empirical data linked to theme 1, namely ‘Curriculum and Curriculum Challenges’. The need for TVET college curriculum renewal and

articulation into higher education is the central focus in Chapter 5. Another central feature is the poor conceptual understanding of the terms vocational, occupational and academic education.

Chapter 6 will report on the findings and discussion of theme 2, namely ‘Curriculum Change and Curriculum Leadership’.

CHAPTER 6: FINDINGS ON AND DISCUSSION OF THEME 2: 'CURRICULUM CHANGE AND CURRICULUM LEADERSHIP'

INTRODUCTION

Chapter 5 dealt with the results and discussion of the findings on theme 1: 'Curriculum and Curriculum Challenges'. In Chapter 6 the results for theme 2: 'Curriculum Change and Curriculum Leadership' are discussed.

In this study the concept 'curriculum change' emphasises, amongst other things, the possible need to review any possible outdated curriculum content and design of TVET college programmes, the probability to address articulation of TVET programmes into higher education, and the possibility to introduce TVET bridging programmes. 'Curriculum leadership', on the other hand, refers to challenges such as the possible lack of industry knowledge and experience of TVET leaders, a possible lack of strategic thinking, adopting a strategic vision, not aligning strategy with resources, and the possible lack of a will to change by some leaders. Curriculum leadership might also refer to the possible need for leadership to have business acumen, to act with some sense of urgency, to guide change management, and to demonstrate transformational, shared and participative leadership. These are some of the possible leadership deficiencies observed in TVET colleges.

Three sets of findings from the data will be presented in this chapter, namely the results from closed and open question sections of the questionnaire survey, as well as the results of semi-structured focus group interviews. Thereafter the discussion of survey and interview findings will follow.

FINDINGS FROM QUESTIONNAIRE SURVEY (CLOSED QUESTIONS) ON 'CURRICULUM CHANGE AND CURRICULUM LEADERSHIP'

This section presents and summarises the findings related to the thirty-five closed questions (see Addendum number 6) on curriculum themes. A 4-point Likert scale was used, indicating whether respondents (1) agreed, (2) strongly agreed, (3) disagreed or (4) strongly disagreed on each question. For ease of summarising the findings, percentages were grouped together for responses (1) and (2), as well as for responses (3) and (4). Due to the large number of graphs

(35 in total), only between two and seven graphs per theme will be presented as relevant samples linked to theme 2.

6.1.1 ‘Curriculum Change’ and ‘Curriculum Leadership’

6.1.1.1 Curriculum Change

The majority (90%) of respondents agreed that curriculum change may contribute to improved service delivery in the workplace. In addition, 83% of respondents judged that student success rates could also be enhanced by curriculum change. A detailed discussion will follow (see section 6.5.1.1 [a] to [d]) on all the reported findings. The graphs below (see Figures 6.1 to 6.2) show respondents’ views on whether curriculum change can lead to increased student employability, and the importance of change management strategies to be employed for bringing about curriculum change.

The majority (92%) of respondents indicated that student employability could be enhanced through curriculum change (see Figure 6.1).⁸

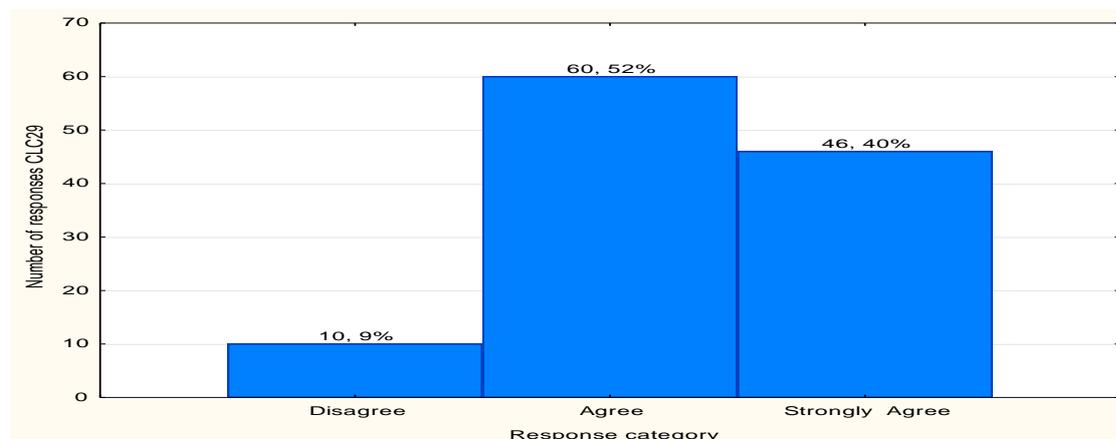


Figure 6.1 *Increased student employability through curriculum change*

**(As in Chapter 5 ‘Disagree’ represents 10 responses out of 116 (before the comma) or 9% (behind the comma). The comma separates the number of respondents from the percentage which is 9%. The same applies to the rest of the figures that follow).*

⁸ See section 6.5.1.1 (a) for detailed discussion on student employability.

However, only 43% of respondents agreed that change management strategies for contributing to curriculum change exist in colleges (see Figure 6.2).⁹

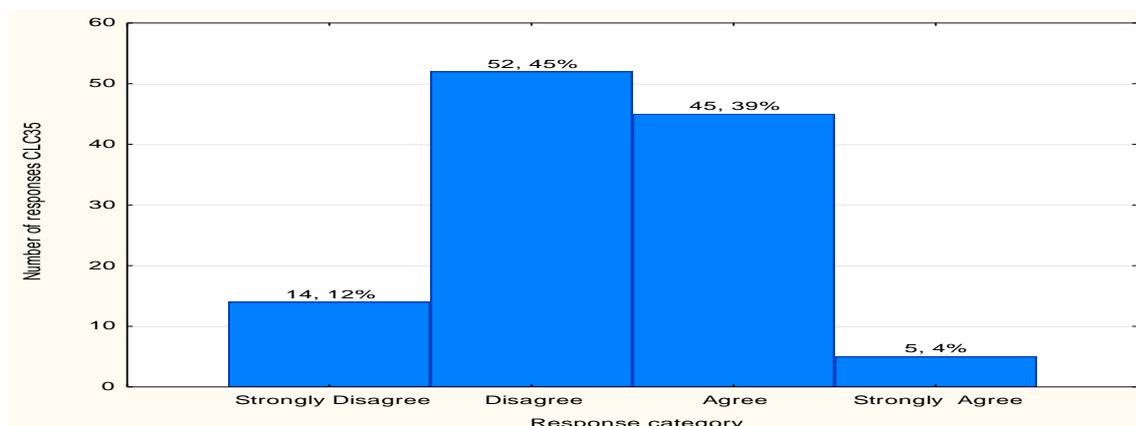


Figure 6.2 *Change management strategies' existence in TVET colleges as a contribution to curriculum change*

6.1.1.2 Curriculum Leadership

In terms of whether TVET leaders are equipped with sufficient knowledge to lead curriculum change, a slight majority (55%) of respondents agreed. Almost the same number (54%) agreed that leadership strategies are not in place to manage work integrated learning (WIL) in TVET colleges. A detailed discussion will follow (see section 6.5.1.2 [a], [b] and [c]) on all the reported findings. The two graphs below (see Figures 6.3 and 6.4) link to theme 2 in very particular ways, namely the need for leadership skills in the TVET college sector to lead curriculum change, and the important role that leadership programmes could play in capacitating staff for leading curriculum change.

⁹ See section 6.5.1.1 (c) for detailed discussion on change management strategies.

¹⁰ See section 6.5.1.2 (b) for detailed discussion on the necessary leadership skills to lead curriculum change

There was a 50% split in the opinion of respondents (see Figure 6.3) on whether TVET leaders have the necessary skills to lead curriculum change.¹⁰

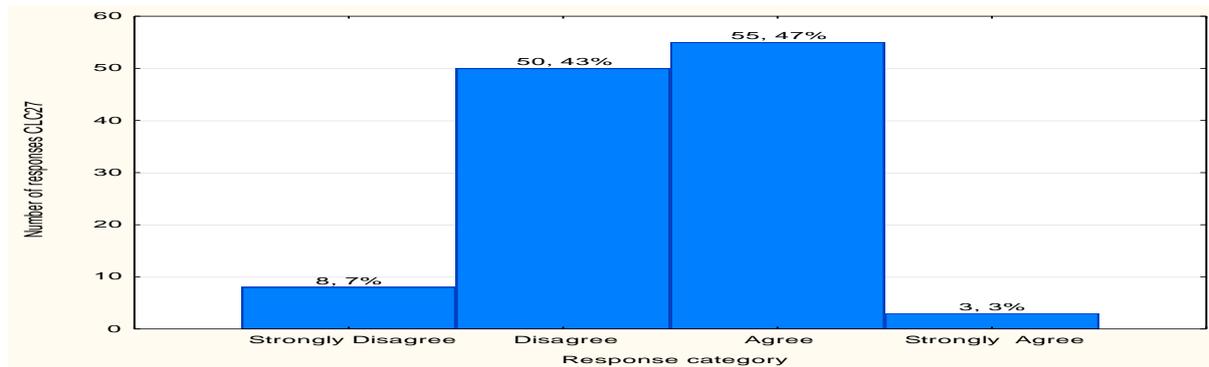


Figure 6.3 Leadership skills needed to lead curriculum change

See section 6.5.1.2 for a detailed discussion on the necessary skills that are needed to lead curriculum change.

The majority (76%) of respondents disagreed (see Figure 6.4) that leadership programmes exist that could capacitate and enable TVET college leaders to lead curriculum change.¹¹

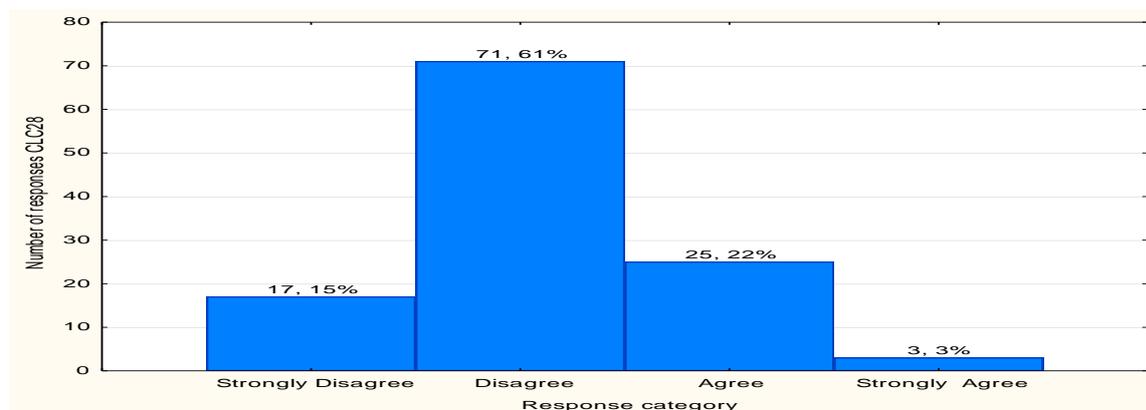


Figure 6.4 Lack of leadership programmes to capacitate TVET college leaders to lead curriculum change

¹¹ See section 6.5.1.2 (d) for detailed discussion on the lack of leadership programmes to capacitate TVET college leaders to lead curriculum change.

6.1.2 Summative findings from the questionnaire survey (closed questions) on ‘Curriculum Change and Curriculum Leadership’

The majority (92%) of respondents indicated that student employability could be enhanced through curriculum change and almost the same number (90%) of respondents believe that productivity in the workplace could be improved.

The respondents were split in half (50%) in their view of whether TVET college leaders have the necessary skills to lead curriculum change, while only a slight majority (55%) also agreed that leaders have sufficient knowledge to lead curriculum change. In addition, only 43% of respondents agreed that change management strategies are non-existent in TVET colleges, whereas 76% disagreed that leadership programmes exist that could capacitate TVET college leaders to lead curriculum change.

The next section will deal with the open-ended questions linked to theme 2.

FINDINGS FROM QUESTIONNAIRE SURVEY (OPEN-ENDED QUESTIONS) OF ‘CURRICULUM CHANGE AND CURRICULUM LEADERSHIP’

This section describes the open-ended section of the questionnaire survey of the one hundred and sixteen (n=116) respondents who completed the survey questionnaire. As respondents completed these questionnaires anonymously, their views cannot be linked to particular respondents or institutions. As in the case of closed questions, themes that had emerged from the data could be grouped into ‘curriculum change’ and ‘curriculum leadership’.

A total of thirteen open-questions were responded to, which resulted in the narratives recorded under theme 2. Data generated by the open questions were grouped together under ‘curriculum challenges’ and ‘curriculum leadership’ for ease of comparison, reading and referencing. The quotations from respondents were recorded verbatim, including grammatical and spelling errors.

6.1.3 ‘Curriculum Change’ and ‘Curriculum Leadership’

6.1.3.1 Curriculum Change

This section presents the findings related to five open-ended questions (Questions 10, 11.1, 11.2, 12, 13).

(a) Question 10 asked for respondents’ views on how legislation such as the FET Colleges Act of 2006 influenced curriculum change in TVET colleges

The feedback mostly portrays a negative picture regarding the influence of the promulgation of legislation on curriculum change. Although the intention of legislation was to transform programmes that could respond to the economic development needs of the country, respondents perceive the impact of transformation as either too slow or having no impact at all on curriculum change. One respondent’s opinion of the impact is: *“Currently, little influence. We need to re-curriculate & revise on regular basis (e.g. every 3 years) to impact on productivity, employment & economic growth”*. This view was supported by another respondent who stated: *“I think most of the legislation speaks to the fact that curriculum change is needed and must be done urgently but little action has been taken”*.

Legislation is found by one respondent to be too politically driven, with lack of synergy between the various pieces of legislation. One respondent echoed: *“Legislation was not properly designed. Parts of legislation are missing such as a proper funding model for TVET Colleges, lack of synergy between various pieces of legislation, no regulations for implementation for the TVET Act or any other legislation. Too politically driven”*. A further claim by another respondent indicates staff who are mostly unaware of the existing policies developed by the DHET: *“... top down so staff have little input and thus little interest”*.

A statement that echoed on the impact of the Skills Development Act and the TVET Act on curriculum change reflected some negativity. One respondent wrote: *“The Skills development Act influenced mainly Occupationally directed learning and possibly contributed to the lowering of standards of education due to the mis-use of the flexibility allowed in declaring learners competent”*. The promulgation of the legislation also bore some positive changes, such as recognising the college sector as a key stakeholder in the development of the national economy, and implementing vocational and occupational programmes.

One respondent viewed this as follows: *“The influence that the promulgation of the various pieces of legislation gave recognition to the importance of the TVET in the development of the economy...”* and *“Put a focus on vocational and occupational training so there has been a lot of activity in [the] sector”*.

(b) Question 11.1 requested respondents’ views regarding proposed policy changes to improve curriculum standards of TVET vocational education

An overwhelming majority of respondents proposed that legislation must ensure regular update and review of the curriculum to improve the standard of vocational programmes. Industry involvement during the curriculum review process is a critical factor to ensure responsiveness to industry needs, as indicated by one respondent: *“Policies to ensure the regular revision of curricula to bring it in line with the needs of industry and the students. Look at admission requirements”*. Another respondent wrote: *“A policy to ensure that the entire curriculum of the N4 - N6 programmes are reviewed and updated - funding, etc. must be allocated in the process must get started ASAP – that will only happen with a direct directive from the president (it seems!)”*. Yet another respondent held the view that: *“NCV requires three yearly review and needs industry input in curriculum content and design”*.

One respondent also proposed that policy changes were needed in terms of curriculum alignment. It was stated as follows: *“...minimum pass percentages of vocational subjects should be aligned to matric subjects since both are pitched on the same national qualifications framework (NQF) level”*. Legislation is thus required to regulate the articulation of college programmes between schools and universities. Another respondent also remarked: *[We need] “[C]lear articulation from the school sector with recognised credit transfer and recognition of the qualifications for articulation into HE”*.

Shortening of the curriculum, more practical versus theoretical components, and a compulsory work placement component might contribute to the improvement of standards, as viewed by one respondent: *“Shortening of the vocational programme based more on practical”* and another: *“... WIL must become a compulsory part of NCV”*. While reviewing the curriculum is important to improve the standards of vocational programmes, the ability and educational level of students should be a focal area to consider in changing the content and design, as reiterated by one respondent: *“There should be a closer ‘link’ between students' abilities, needs and content knowledge and expectations”*.

The possible need to regulate the inclusion of an additional language and academic support structures for English and Mathematics that could enhance the standard of vocational programmes were viewed as follows by one respondent: *“Mainstreamed support structure for literacy, both English and Mathematics”* and *“I would propose a rethink on the language policy. Students need to have a least one other additional language”*.

(c) Question 11.2 recorded respondents’ views regarding proposed policy changes to improve curriculum standards of TVET occupational education

There is an apparent need for policy changes regarding artisan development needs to be revised to include a variety of trades with flexible modular block releases, and changes in the duration of engineering studies from trimester to semester programmes (also see DHET, 2015a). One respondent is of the view that: *“The occupational system provided a solid artisan foundation, in my view. It drastically needs updating and I believe scrapping the trimesters and implementing semesters for engineering studies will reap rewards”*. Along with this former proposal, another respondent also requested new legislation for Sector Education and Training Authorities (SETAs) to provide colleges with learning material, smoother accreditation processes for programmes, assessors, and moderators. One respondent proposed *“SETAs to commission and/or procure approved/accredited Learning Material and making it available to public TVET Colleges. Accreditation of and programme approval to Public TVET colleges fast tracked. Registration of College lecturers as assessors and moderators fast tracked”*.

Another policy change was proposed by one respondent with regard to earmarked SETA funds to be diverted to the Department of Higher Education and Training (DHET) for colleges, and the subsequent fall of the Sector Education and Training Authorities (SETAs) to make way for a central body who will deal with quality control of occupational programmes. One respondent suggested: *“To do away with SETAs and form a body that will deal with quality issues and implementation of programmes. Divert the funds that SETA' have to DHET to capacitate TVET's”*. This view was supported by another respondent who proposed *“Fixed funding norms by government for the implementation of a variety of occupational programmes to meet the make it more to be specific based-training”*.

Current legislation of occupational programme delivery and certification seems too complex to manage effectively, hence respondents proposed a less complex system. Legislation should be amended in such a manner that colleges are recognised and supported in the occupational

arena as a key role player. Legislation should preferably be passed to regulate industry and to host college students and staff members for workplace exposure and experience in an attempt to improve curriculum standards of occupational programmes. As emphasised by one respondent: “[An] NQF framework [is needed] that supports the TVET sector’s role in Occupational training. Legislation [is needed] that compels industry to open its doors to TVET Colleges (student and staff placements, etc.)”.

Lastly, policy change regarding the admission requirements and articulation between occupational and vocational education and vice versa also seems to be necessary to improve standards of occupational programmes. As indicated by one respondent: [Raise the] ‘[L]evel of admission requirements. Specifically language, inclusive education, admission, articulation”.

(d) Question 12 inquired about respondents’ views regarding change management strategies to capacitate college leaders for managing current curriculum challenges in TVET colleges

The data collected from respondents regarding the management of current curriculum challenges comprised a number of critical areas, like industry partnerships and knowledge, funding, career guidance, technology, staff development, organisational structures, communication, new curriculum development, participative management style, and national advocacy of colleges, which will be elaborated upon later.

A respondent also suggested “*Linkages with Industry to secure work experience. More simulated rooms and simulated / applied training. Funding equality for all programmes (proper new funding model Employers should be the custodians of learnerships and play their part accordingly*”.

Another respondent added: “*...Strong national advocacy of the TVET role the Skills development and economy of the country. National does NOT make enough effort and consistent effort to portray the value of TVET*”.

The need for “*student career guidance including labour market information and embracing the latest technology to enhance students learning experience*” was expressed as an important strategy to improve upon by one respondent. Staff development inclusive of change management workshops, leadership training and mentoring, curriculum development training, writing of new textbooks, best practice sharing, upskilling of lecturers and workplace exposure

were declared by a respondent as further strategies to be employed: *“In-depth course in curriculum development and delivery must be compulsory since they are heads of educational institutions. Knowledge around [finance], HR, etc. are not sufficient to lead quality education and training. Mentoring from accomplished leaders”*. Another respondent mentioned *“Staff development in terms of Education Management and Leadership. Communication Strategies. Policy imperatives”*.

Leadership seems to be required for improving internal and external communication with stakeholders, especially between colleges and the DHET. Such communication can only be achieved through a communication strategy. One respondent proposed: *“Improved communication between the college and DHET currently is not effective. Better communication channels. Strong clear direction”*.

Moreover, a participative management strategy as well as a workable organisational structure are required to involve all stakeholders. One respondent suggested *“A participative management strategy where inputs from all college staff levels are used to fully implement and utilise the current curriculum”*. The need to create more consultative platforms between lecturers and senior management also seems clear, as expressed by a respondent: *“... Involve all the parties in the College - from the student, the lecturer - upwards...”*.

(e) Question 13 enquired about respondents’ views regarding change management strategies to capacitate college leaders to manage future curriculum challenges in TVET colleges

The respondents proposed a number of effective change management strategies to be employed in order to manage future curriculum challenges. Prominent strategies listed by respondents include change management workshops and partnerships with international and local stakeholders, like universities and industry, to keep abreast with technological and industrial changes. One respondent proposed *“Change management [workshops]. International links to bring them on par with places which are [already] ahead in this regard”*.

Improvement of articulation of college programmes to higher education is crucial and may need urgent attention, as highlighted by one respondent: *“Articulation of programmes into higher certificates of universities”*. Adequate funding for resources, equipment, facilities, and staff development to deliver quality programmes were listed as important factors by another respondent: *“Adequate funding arrangement for better strategic planning. Adequate resources,*

equipment and facilities for all programmes. Qualifications/Curricula to be aligned to Higher Certificates in fields that correspondent with the programmes offered by Higher Educational Institutes”.

Improved communication channels within and between colleges and the DHET were also disclosed as critical by respondents. One respondent felt: *“Manage the people side of change, not just the business side. Develop a change management strategy for your project. Create a communications plan. Actively manage resistance to change”*. Another respondent added *“Visible leadership with a presence at campus level, who has an open door policy with improved people skills and a sense for business”* as a possible strategy beneficial to manage future curriculum challenges. Other beneficial strategies needed in future were staff development, as well as leadership training that comprise a mentorship programme. The respondent cited: *“Create a mentor system to support and guide leaders. Develop a systems approach and leadership pipeline”*.

The need for the assessment of future skills might be achieved by engaging employers to enable colleges to respond to industry needs. One respondent suggested: *“Assessing future skill needs through consultations with employers. Ensure that vocational providers have the means to respond to new labour market needs”*. Furthermore, the need to evaluate and determine who is or should be responsible for curriculum development is a crucial factor for decision making. One respondent wrote in this respect: *“Critically evaluate who is responsible for the development of curricula and its process of development. It seems that there might be many people closer to the coal face who have a wealth of subject and work experience are not being used as consultants”*. Still another added: *“Colleges allowed to play a more active and independent role in curriculum development and programme roll-out, with less authority vested in SETAs for approval and control over occupational training”*.

6.1.3.2 Curriculum Leadership

(a) Question 7 ascertained respondents’ views regarding leadership features needed for enhancing curriculum change in the South African TVET college sector

In order for leaders to enhance curriculum change, features such as vision, creative thinking, trustworthiness, negotiation, project management, and decision making skills seem to be crucial. Other key leadership skills viewed as essential for enhancing curriculum change

include good communication, listening, and interpersonal skills. The following two statements highlight this view. One respondent wrote: *“High level of conceptual, decision-making, interpersonal, communication and pro-active skills as well as strategic planning skills [are needed],* whereas another respondent suggested *“Creative thinking, negotiation skills and project management skills. Ability to link and bring together different role players from both industry and educational institutions for input and cooperation”*.

Pragmatic leaders with *“good strategic planning skills, knowledge of policies”* to promote curriculum change are also indicated as important leadership features. According to one respondent leaders must *“Have a good understanding of essential policies (policy amendments) and the implementation implications”*. Elemental features inclusive of current curriculum knowledge versus industry needs, as well as promotion and support of innovation and change also seem to be vital for effective curriculum leadership. Other features, such as honesty, integrity, sincerity, and risk taking also seem important leadership features. In addition, knowledge and understanding of the macro-economic trajectory of the country seem to be important requirements. One respondent proposed *“Good understanding of the macro-economic trajectory of the country. Ability to source and analyse labour market information. Able to incorporate statistics/ data, and environmental information into curriculum planning and delivery. Engagement with a diversity of stakeholders to [determine] what is relevant and [purposeful] in the changes to be made. The requirements to effect curriculum change from conceptualisation to full implementation must be thoroughly understood”*.

Moreover, leaders are required to be charismatic, assertive, committed, accessible and humble to bring about curriculum change in the TVET college sector. According to the view of one respondent leaders must be *“Charismatic, eloquent, assertive, visionary, decisive, objective, exemplary, committed, innovative, motivator and inspire others, good communicator, open mindedness, accessible and be humble”*. While still another respondent cited: *Visionary leader. Be able to initiate programmes. Be prepared to learn and turn negativity about the TVET sector into [positives]. Accept change or be a change agent”*.

Future leaders, according to one respondent’s view, must be *“change agents with strong industry links that will ensure articulation into the workplace as well as the ability to develop, grow and sustain partnerships”*. Another emphasised: *“A good understanding of curriculum design and the TVET college environment including knowledge of diversity and career*

pathing". High leadership energy levels, inclusive of the maintenance of a balance between industry, academic and technical competencies are additional leadership features as proposed by another respondent: *"We need a balance between industry / academic and technical competencies"*.

Finally, as one respondent indicated, *"persuadability, passion, resilience, empathy, flexibility and the will to change"* are leadership features needed for the enhancement of curriculum change.

(b) Question 8 asked respondents' views regarding leadership capacity needed to address the current curriculum challenges in TVET colleges

Among the notable findings regarding leadership capacity that might be needed to address current curriculum challenges include elements such as *"vision, effective communication, listening skills, efficient leadership, assertiveness, conflict management, strategic management, curriculum management, people skills and emotional intelligence"*. This is according to one respondent's view. The need for leaders with the capacity to be *"proficient in education and training, but also informed about industry needs"* was also echoed by another respondent. Still another respondent cited the need for *"focused well-disciplined leaders that can organize, manage, [execute] and influence"*.

Research on industry training needs and successful employment of students seems vital for the capacity needed by leaders to address curriculum challenges. Other leadership capacity needs include the establishment of mutually beneficial partnerships with local commerce, industry and international organisations. The need for skilled, dynamic, strong, consistent and decisive leadership, mindful of consulting stakeholders, was expressed unreservedly by one respondent: *"Strong ethical leaders that are qualified to understand curriculum issues and labour needs. Leaders that are flexible and agile to respond to changes as they arise"*. Contrary to the aforementioned leadership capacity needs, one respondent stated: *"I think the leadership capacity is under-rated. They are very highly skilled in this sector"*.

Another contradictory view by a respondent cited: *"We need leaders who are much more education focused as opposed to business focused. Sometimes facilities are lacking because of poor financial management or 'clinging' on to funds"*.

(c) Question 9 asked respondents' views regarding leadership capacity needed to address the future curriculum challenges in colleges

The findings from this question confirm that leadership capacity might be important to address future curriculum challenges. One respondent mentioned *“Leaders with insight of global/international future curricula. Futuristic leaders who will take chances, like to experiment”*. Another respondent envisioned *“A workable organisational structure with capable leaders having the leadership”*. A bursary scheme to support future leaders in their quest to improve leadership qualifications should be introduced by the DHET to support development of future leaders. This need is supported by the view of one respondent who declared: *“To me, it currently looks quite bleak. The DHET needs to play its role in developing future leaders of TVET Colleges. A bursary scheme should introduced by the DHET to support future leaders in their quest to improve leadership qualifications”*.

As reiterated by one respondent, future leadership capacity will see *“[V]isionary leaders that have the foresight to develop programmes that will meet future needs. Leaders that pay attention to research and development are taking into account global trends and also labour needs”*. Another respondent wrote as follows about the capacity to address future challenges: [This currently resides with] *“[U]niversities only!!! We simply do not have the capacity yet, and it needs to be developed, I believe.”* The need for *“effective understanding of vocational curriculum needs - ability to set up collaborative structures between college and industry to develop relevant curriculum”* was requested by another respondent as leadership capacity to be developed.

One respondent perceived future leadership capacity needs as *“...the use of latest technology; networks and partnerships that bring significant benefits to students; develop capacity at all levels; economic literacy; quality management; research and update curricula regularly”*. Still another indicated: *“...[future] leadership must be able to think out of the box to also make provision for needs that do not exist yet but may develop due to changes in [the] world of technology”*. Contrary to the aforementioned statements, which overwhelmingly supported the need for future leadership capacity, another respondent stated: *“I believe that a wealth of experience resides in the TVET sector. This must be tapped into by the DHET when [r]eviewing /redesigning curricula”*.

6.1.4 Summative findings from the questionnaire survey (open-ended questions) for ‘Curriculum Change and Curriculum Leadership’

The results from the open-ended survey questions showed some key findings under theme 2. These consist of both negative and positive curriculum change factors, which include, for instance, the minimal impact that legislation had on curriculum changes, as well as the view that the promulgation of the Skills Development Act possibly resulted in lowering of standards of education. Although a review of some of the subjects linked to NC(V) and Report 191 business study programmes has taken place in the recent past, the amount of outdated subject content far outweighs what has been revised. Some of the positive spin-offs of the new legislation are the recognition of the TVET college sector as a key role player in the development of the economy, and the implementation of the national certificate vocational and occupational programmes, which include learnerships.

Furthermore, a plethora of curriculum leadership features required to bring about curriculum change were cited by respondents under theme 2. These include vision, creative thinking, research skills, trustworthiness, negotiation, project management, decision making, and strategic planning skills. Leadership capacity training requires skills development for effective communication, conflict-handling skills, strategic and curriculum management skills, economic literacy skills, capacity building for quality management, research skills, and listening and people skills.

FINDINGS FROM SEMI-STRUCTURED FOCUS GROUP INTERVIEWS FOR THEME 2: ‘CURRICULUM CHANGE AND CURRICULUM LEADERSHIP’

This section presents results from the semi-structured focus group interviews related to theme 2: ‘Curriculum Change and Curriculum Leadership’. Three prominent categories emerged from the data regarding curriculum change, being an entire revamp or review of TVET college programmes; the problem of low academic entry levels and the social backgrounds of students; and the need for more practical tasks, industry involvement and relevancy of programmes. Results regarding curriculum leadership placed the focus on strong leadership with industry knowledge and experience, as well as the need for innovative skills and the will to change.

The category columns below represent a summary of the key responses that emerged from the findings under theme 2 and were directly linked to the sample quotes of the respective respondents. The direct quotes from respondents are linked to the various categories as illustrated under the detail column. The quotes from the respondents were reported verbatim in the detail column as responses generated during the interview process. The semi-structured focus group interviews were guided by six questions (see Addendum number 7) and summarised under each table (see Tables 6.1 and 6.2).

6.1.5 ‘Curriculum Change’ and ‘Curriculum Leadership’

6.1.5.1 Curriculum Change

Table 6.1 presents a summary of the key findings that emerged from the fourteen semi-structured group interviews.

(a)

Table 6.1 Respondents’ proposed curriculum changes

| THEME 2 | CATEGORIES | DETAILED RESPONSES |
|--------------------------|--|--|
| <u>Curriculum change</u> | National Certificate Vocational (NC(V)) | |
| | <ul style="list-style-type: none"> ▪ Topic articulation and lack of curriculum depth ▪ Incoherent curriculum | “Each programme and subjects must be reviewed for articulation or topic articulation and curriculum depth to build curriculum from L2 –L4. Main change is needed. The curriculum is not coherent enough between level 2, 3 and 4 and need more practical knowledge”. (FG1F1) |
| | <ul style="list-style-type: none"> ▪ Review of curriculum ▪ Add more practical components | “Some subjects are outdated. The whole package should be reviewed. Develop different programmes for different students. It must be a total education revamp. Practical component must be added”. (FG8F1) |
| | <ul style="list-style-type: none"> ▪ Pitching of subjects and topics | “Pitching of topics should be changed – some are too high”. (FG9F2) |

| | | |
|--|---|---|
| | <ul style="list-style-type: none"> ▪ Curriculum alignment with type of student ▪ Applied mathematics | <p>“Align curriculum with type of student. With the high employment rate in country we must focus our curriculum on what we want for the country. Do we want a motor mechanic with Maths or no maths?. Get students qualified without Maths. Make it curriculum specific”. (FG10M2)</p> |
| | <ul style="list-style-type: none"> ▪ Integration of topics ▪ Need for a second language | <p>“Integrate some topics and allow the lecturers to conduct team teaching and specialize in the topics that they are good at for example hygiene is taught across many hospitality subjects. Entry to university need a second language (e.g. Afrikaans)”. (FG13F2)</p> |
| | <p>Occupational (Levels 1-5)</p> | |
| | <ul style="list-style-type: none"> ▪ Entrepreneurial skills ▪ Student screening ▪ Industry involvement | <p>“Develop entrepreneurial skills so that students can create their own jobs. Screening of students must improve. SETAs and industry must fund/donate latest equipment for training”. (FG2M5)</p> |
| | <ul style="list-style-type: none"> ▪ Part qualifications | <p>“Allow entry and exit for part qualification of polisher which is part of the full qualification of Spray Painter. Certificate the person as a polisher then he have an accredited qualification and can find a job with the certificate. Allow entry and exit levels within one qualification to create opportunities for work”. (FG2M3)</p> |
| | <ul style="list-style-type: none"> ▪ Academic level and background of students | <p>Develop a specific programme for a specific target market (learners) against their academic level and background. Teach students skills that can also be applied at home so that he can work from home to generate money if he cannot find a job”. FG2M3</p> |

| | | |
|--|--|--|
| | <ul style="list-style-type: none"> ▪ Skills gaps as determined by economy ▪ Review of curriculum ▪ Meetings between industry and college staff | <p>“Determine skills gaps in economy to determine the type of programmes we must offer. Frequency of the review of the curriculum must improve especially with technological changes. Industry don’t have time or resources for college staff to provide feedback. Managers changes frequently. Regular meetings between industry and college staff”. (FG3F3)</p> |
| | <p>Report 191 (N1-N3) Engineering</p> | |
| | <p>Industry involvement.</p> | <p>“Industry involvement is needed”. FG1F1</p> |
| | <ul style="list-style-type: none"> ▪ A need for bridging programmes | <p>“NCOR – bridging of N1-N3 be re-instituted”. FG2M5</p> |
| | <ul style="list-style-type: none"> ▪ Need for literacy ▪ Use of technology | <p>“Some form of Literacy must also be added to the curriculum and (communication skills needed). Drawings subject must be replaced with computerized subject. Technology must be used in the classroom. E-Learning /blended learning is needed in colleges”. (FG2M2)</p> |
| | <ul style="list-style-type: none"> ▪ Subject review ▪ Combine practical and theory ▪ More practical tasks ▪ Workplace experience ▪ Duration of programmes | <p>“Generic core fundamental changes to Electronics. Combine practical with theory (semester course). No exam for practical but practical assessment (%) to achieve to be added to final mark. Build practical subject around the trade theory. Student should be placed in workplace for experience. More practical exposure for N1-N3. Six months instead of three months”. (FG7F1)</p> |
| | <ul style="list-style-type: none"> ▪ Review entry requirement | <p>“Review the entry requirement”. (FG8F3)</p> |
| | <p>Report 191 (N4-N6) Business and General Studies</p> | |
| | <ul style="list-style-type: none"> ▪ Revamp the entire curriculum | <p>“The programmes must be revamped”. (FG1F1)</p> |
| | <ul style="list-style-type: none"> ▪ Phase in new curriculum | <p>“Phase in new curriculum and bring in the new curriculum of Report 191”. (FG12F3)</p> |

Table 6.1 highlights the major factors to consider (as suggested by group interview respondents) when curriculum changes are proposed. These factors include the need for proper research before reviewing or developing a new curriculum, as well as the need for stronger industry involvement in the curriculum development processes. Other crucial factors are proper systems for student screening and the use of technology. Due to the low academic entry level of students, the development of bridging programmes and certification of part qualifications also seem to be important crucial options to explore.

Table 6.2 presents the key findings related to Question 4 which sought group interviewees' views regarding competencies needed to manage the change required for leading curriculum change in TVET colleges.

(b)

Table 6.2 *Competencies which are needed to manage required curriculum change (as suggested by interviewees)*

| THEME 2 | CATEGORIES | DETAILED RESPONSES |
|---|---|--|
| <u>Competences to lead curriculum change</u> | <ul style="list-style-type: none"> ▪ Industry knowledge and experience ▪ Knowledge of policies ▪ Networking skills ▪ Partnerships ▪ Political will | <p>“Top management must know the policy of government or the economic competencies. We need to network with partners to help us to manage the change. There must be a political will to change”. (FG1F1)</p> |
| | <ul style="list-style-type: none"> ▪ Subject expertise ▪ Innovative thinking ▪ Consultation | <p>“Subject expert or specialist to drive the curriculum change. New way of thinking – think out of the box. Adopt a consultative process. We have expertise but are not drawn into changing”. (FG2F1)</p> |
| | <ul style="list-style-type: none"> ▪ Social background of students ▪ Creativity in curriculum delivery ▪ Strong leadership | <p>“Understand our students backgrounds, social background etc. Creativity in delivery the curriculum. Build ethos and don't let each dept. and lecturer do their own thing. The leadership is too loose”. (FG5F1)</p> |

| | | |
|--|--|---|
| | <ul style="list-style-type: none"> ▪ Knowledge of college sector ▪ Industry knowledge and linkages ▪ Curriculum knowledge | “Leaders must have full knowledge of the sector. A lot of new people are coming into the sector. Leaders must have industry knowledge. Must have knowledge about the curriculum and know what is going on. Must have linkages with industry”. (FG8F1) |
| | <ul style="list-style-type: none"> ▪ Lack of research skills | “Research capabilities are lacking”. (FG13M1) |

Table 6.2 reported on key competencies that are needed by leaders for leading the required curriculum change. These competencies include research skills, knowledge of the sector, networking skills, innovation, creativity, and subject expertise.

6.1.5.2 Curriculum Leadership

Table 6.3 presents the summary of findings which emanated from the group interviews.

(a)

Table 6.3 Respondents’ perceived current curriculum leadership challenges

| THEME 2 | CATEGORIES | DETAILED RESPONSES |
|------------------------------|--|--|
| <u>Curriculum Leadership</u> | <ul style="list-style-type: none"> ▪ Lack of curriculum knowledge ▪ Lack of industry knowledge and experience ▪ Lack of strategic thinking ▪ Direction of leadership | “CEOs are complying to what they are told. Lack of knowledge of curriculum. Change the way they operate. Lack of strategic thinking. Direction the leadership at DHET is taking is not aligned to what is happening on the ground and CEOs must not accept. Overall knowledge of programme but not necessarily the content of subject. Voice of head of institution is silent. He dwell in his own realm”. (FG1M2) |
| | <ul style="list-style-type: none"> ▪ Comfort zone of leaders ▪ Leaders lack the will to change ▪ Standardisation of planning ▪ Lack of confidence in leadership | “Leaders are ill-informed. There mindset must change. Leaders are scared of unknown. Leaders do not have the will to change. Leaders are in a comfort zone. No confidence in the leadership – not competent to bring |

| | | |
|--|---|--|
| | | about the change. Or are they fed the wrong information?”. (FG2M3) |
| | <ul style="list-style-type: none"> ▪ Relevant stakeholders for writing teams | <p>“The right people from industry is not responding to come to the writing teams. Trade unions don’t attend and when they attend they reject everything that was done. DHET must invite all stakeholders for the curriculum writing process. They do not get the correct people to sit in the SGBs”. (FG2M5)</p> |
| | <ul style="list-style-type: none"> ▪ Leaders need a new mindset change ▪ Funding drives change and programme offerings | <p>“Leadership did not evolve in their thinking to suit the new change required. Funding is driving how far change will be driven because programme offering is driven by funding and not the need”. (FG3F1)</p> |
| | <ul style="list-style-type: none"> ▪ Industry involvement in curriculum change and training | <p>“Linkages or career path between college and HE does not exist. DHET curriculum leaders are not adequately qualified in their fields. Industry must also be involved in curriculum change and training process”. (FG4M1)</p> |
| | <ul style="list-style-type: none"> ▪ Lack of vision ▪ Leaders in a comfort zone ▪ Lack of confidence ▪ Lack of will to change | <p>“The executive management is far removed from reality in terms of campus management. They lost perspective. Lack of vision – not keeping up with the external environment. Therefore sometimes, the wrong directives are given and opportunities are lost”. (FG6F1)</p> |
| | <ul style="list-style-type: none"> ▪ Statistical reporting challenges | <p>“Statistical reporting; administration slog; Time constraints; Manpower; Leadership is spread thinly”. (FG7F1)</p> |
| | <ul style="list-style-type: none"> ▪ Constant change | <p>“Constant changes during 2007 with the implementation of NCV and then the phasing out of Report 191 programmes and then</p> |

| | | |
|--|--|--|
| | | phasing it in again. Now the occupational programmes are not thought through. Who will fund the programmes and how many students will be enrolled on programmes?”. (FG8F1) |
| | <ul style="list-style-type: none"> ▪ Lack of resources ▪ Competition for space between NCV and occupational programme to deliver | “NCV was not properly resourced from inception and now we are busy catching up. “We are flying the aeroplane while we putting on the wheels”. Roll-out /timetabling of occupational programmes take preference to NCV delivery because of funding availability. Playing the numbers game for funding via SETAs”. (FG10F1) |

Table 6.3 shows that college leaders seem to be faced with a myriad of critical curriculum related leadership challenges. These challenges include the problem of constant change, statistical reporting, the need for staff development, a lack of industry experience and involvement, funding that drives the curriculum change agenda, poor articulation opportunities to higher education institutions, poorly resourced institutions, and infrastructure limitations.

Table 6.4 presents the key findings related to Question 6 which elicited respondents’ views regarding leadership features needed to enhance curriculum change.

(b)

Table 6.4 Leadership features to enhance curriculum change as proposed by interviewees

| THEME 2 | CATEGORIES | DETAILED RESPONSES |
|--|--|--|
| <u>Curriculum</u> <u>Leadership</u> | <ul style="list-style-type: none"> ▪ Broad curriculum knowledge and understanding ▪ Industry knowledge and experience ▪ Planning, organising, monitoring and follow-up ▪ Quality assurance | “Leaders must have industry knowledge. Leaders must have a broad understanding of the intent of the curriculum or post they are in. Quality assurance of the curriculum. They must be able to support the lecturers and other staff. Planning; knowing your college; organise; monitor; support; follow up”. (FG1F1) |

| | | |
|--|--|---|
| | <ul style="list-style-type: none"> ▪ Business acumen ▪ Sense of urgency ▪ Change management ▪ Emotional intelligence | “Leadership should operate in a business sense. A sense of urgency to address issues, service delivery, respect, integrity, trust staff if propose solution. Change management programmes are required, emotional intelligence et cetera to lead occupational programmes”. (FG3F1) |
| | <ul style="list-style-type: none"> ▪ Charismatic leadership ▪ Proactive leadership ▪ Foresight | “Leaders must lead from the front. Charismatic proactive person. Predict challenges and develop plans to implement or mitigate. Leaders must be dynamic and engage with lecturers. College leaders must be proactive and not re-active”. (FG4F1) |
| | <ul style="list-style-type: none"> ▪ Pragmatic ▪ Visionary skills ▪ Adaptability ▪ People skills | “Leadership qualities must include Pragmatism; Human relationships; wisdom; sensitivity; adaptability; enthusiasm; energy and visionary skills”. (FG7F1) |
| | <ul style="list-style-type: none"> ▪ Consultative leadership approach ▪ Servant leadership approach ▪ Situational leadership approach | “Consultative leadership is lacking. servant leadership is missing so is situational leadership and power struggles are rife”. (FG13M2) |

Table 6.4 indicates critical leadership features for enhancing curriculum change in the college sector. These include industry knowledge and experience, vision, and people skills with a consultative approach, change management, and pragmatism. In addition to these leadership features, servant, situational and consultative leadership approaches seem appropriate for the enhancement of curriculum change.

6.1.6 Summative findings from semi-structured group interviews on ‘Curriculum Change and Curriculum Leadership’

The results as illustrated in the tables above (see Tables 6.1 to 6.4) provide a succinct overview of the results related to theme 2. The sub-theme ‘Curriculum Change’ highlighted factors such as the need for proper research before reviewing or developing a new curriculum, stronger

industry involvement in curriculum development processes, proper systems for student screening, and the use of technology to improve curriculum standards. Furthermore, key competencies which appear to be important for TVET leaders to manage the required curriculum change include research skills, knowledge of the sector, and networking skills. Innovation, creativity, and subject expertise were also indicated as crucial competencies.

From the data on ‘Curriculum Leadership’ it seems that challenges such as lack of industry knowledge and experience, a lack of strategic thinking, and a lack of the will to change are observed, as well as the lack of vision and acquiring the necessary resources. Leadership features viewed as important for enhancing curriculum change comprise participative, charismatic, situational and servant leadership approaches, as well as business acumen and change management strategies.

DISCUSSION OF THE FINDINGS ON ‘CURRICULUM CHANGE AND CURRICULUM LEADERSHIP’

6.1.7 ‘Curriculum Change’ and ‘Curriculum leadership’

6.1.7.1 Curriculum Change

Vally and Spreen (1998:14) caution that “concerns over the new educational policy are not just about curriculum change, but also about institutional change”. In support of this view, other sources (DoE, 2001; Gewer, 2002) also indicate that TVET colleges are currently functioning in an environment filled with both institutional and curricular changes and challenges. The motivation for change in TVET colleges is mainly external in nature and is driven by factors such as changing demographics, financial constraints, and economic and political interests. The main drive for change in TVET colleges comes from the government through new and amended policies.

Change is a process through which organisations acquire, grow and utilise resources such as human, financial, knowledge-based, and other pivotal assets that can be combined in unique and powerful ways in order to bring about change (Graetz, Rimmer, Lawrence & Smith 2006:12).

The key findings which emerged (see section 6.2.1.1) consist of a myriad of both negative and positive curriculum change factors, which will be discussed in relation to relevant literature in the sections that follow.

(a) Employability and student success rates could be enhanced through curriculum change

According to the findings from the empirical data, curriculum change could enhance students' employability. Unemployment among TVET students is high and range from 20,4% in 2011 to 47,7% in 2015 according to a recent tracer study commissioned by the National Business Initiative on behalf of the Department of Higher Education and Training (DHET, 2015b:16, 24). Contributing factors for the high unemployment rate include the slowdown in the economy, non-responsiveness of curricula to industry needs, and the lack of TVET colleges' ability and credibility. Some of the Report 191 engineering and business programmes date back to the 1980s, while NC(V) has been in operation for 9 years already. Although some of the NC(V) and Report 191 business subjects have been reviewed in the recent past, it does not seem sufficient. The content and design of these programmes need urgent review in its entirety to become relevant to industry needs. Against this background of challenges (see section 6.3.2), it might be understandable why industry is reluctant to host and employ public TVET college graduates.

Before South Africa's first democratic elections in 1994, the previous technical colleges had good relationships with industry through the apprenticeship model which arranged that the national accredited technical education (NATED) Report 191 engineering students were indentured with companies. A block release system between the employer and the college was followed to ensure that workplace experience and theory were integrated. Some respondents now blame the current unsatisfactory situation on the decline of apprenticeships, which increased the distance between colleges and industry. Currently, the majority of TVET students are unemployed youth who register for the Report 191 engineering programmes with the hope to be indentured after completion of their theory knowledge components (also see Kraak *et al.*, 2016:25). According to Gewer (2010:16), the general perception is that the NC(V) has further disrupted any attempts to forge relationships with industry, while on the other hand Dif, Sidlauskiene, Pranculyte and Spankis (2012) note that, while employers are fundamental to the success of apprenticeship training, they do not always feel that their needs are fully understood.

Although the NCV curriculum does not have a compulsory workplace component, many colleges attempt to place the students in industry to gain some practical work place exposure. A few pockets of success were reported during one interview group who indicated that the college does not experience challenges with student placements in the industry (see section 6.4.1.2 [a]). Interestingly, local companies demand the employment of specific campus graduates, whereas other campuses that are linked to the same college report challenges with placing students in industry (see section 6.4.1.2 [a]).

The Report 191 programmes for general and business studies N4-N6 have a compulsory 18 months' work place experience. It has been reported in previous research that the majority of these students also do not find jobs in the areas of their study fields. In support of these statements Kraak and Hall (1999) confirm that the then FET colleges were branded at the time with a poor image, especially because of their lack of responsiveness to labour market requirements and their low graduate placement rates.

Furthermore, according to the National Treasury budget review of 2010, students younger than 35 years old account for 73% of the unemployed (RSA, 2010a:42). High unemployment rates of youth take place within a labour market context where skilled unemployment growth in the period 2004 to 2009 was, on average, more than twice the growth in semi- and unskilled job growth (RSA, 2010a:42). The middle level type of skills are central to the mandate of colleges and provide further evidence of high unemployment rates of TVET college graduates. Furthermore, the National Treasury budget review of 2010 (RSA, 2010a) also indicates that "...a review of the curriculum in consultation with business and labour may be required to ensure a better match between training and skills" (RSA, 2010a:50).

From the findings in this study (see section 6.2.1.1), student success rates might also improve through curriculum change. A tracer study found that only 38% of respondent students obtained the National Certificate Vocational (NC(V)) level 4 qualification, while less than 1% obtained a certificate, diploma or degree at a university or university of technology (DHET, 2015b:16). The NCV (V) curriculum has many strengths, but unfortunately the TVET college sector mainly attracts students who cannot cope at school, which might be an indication that they have foundational academic gaps. The subject pass requirements are higher for vocational subjects (minimum 50% with no condonation option) than for the school sector in general. This seems to be a contributing factor to the high failure and drop-out rates of NC(V) students. The

fundamental subjects such as Mathematics, Mathematical Literacy, English and Life Orientation compare with those of the school sector, where 40% for languages and Life Orientation and 30% for Mathematics or Mathematical Literacy are the pass requirements.

It is clear from the previous discussion that a mismatch exists between the NC(V) standard and the low academic foundation level of the students, which contribute to the current high failure rates. Although the academic standard of the existing Report 191 engineering programmes is perceived to be a lower level than NC(V) programmes, the failure rate is also high. This could be related to Mathematics and Science requirements, which make up 2 of the 4 compulsory subjects, and students that register with low school level results in Mathematics. The Report 191 N4 to N6 business studies attract Grade 12 learners who are not accepted at universities due to low subject marks and low pass averages, hence they struggle with the curriculum content (refer to a more detailed discussion on student success rates in (sections 5.6.1.1[f], 5.6.1.2[e] and 6.2.1.1).

Against this background it seems imperative that curriculum reform should take place as a matter of urgency to address the discussed issues in an attempt to improve student success rates and as envisaged by the findings of the empirical data.

(b) Productivity improvement through curriculum change

Improved productivity in the work place might be facilitated by TVET college curriculum change (see section 6.2.1.1). Students cannot be productive in the work place if they are not exposed to the latest technology, equipment and machinery, and knowledge and skills needed by industry (see section 6.3.1.1 [e]). Regular curriculum review, inclusive of industry involvement and other relevant role players, seems indispensable to improved work place productivity. Clark and Winch (2007:6) strengthen this argument by explaining that "...the aim of VET is to improve the productive capacity of society on the assumption that the greater the effort and investment put into this, the more productive the labour. VET is critical to productivity, to producing value in production".

Colleges are currently micro-managed by the DHET and have very little or no autonomy pertaining to issues such as the type of programmes on offer, funding, student fees, and the development or reviewing of curricula. This is confirmed by the White Paper for Post School Education and Training which states the intention to review and rationalise vocational

programmes and qualifications, and is proposed to be led by both the DHET and the Department of Basic Education (DHET, 2013b:xii).

(c) Change management strategies to facilitate curriculum change

Change management strategies do not readily exist in colleges (see section 6.3.1.1 [e]). This was confirmed by at least 57% (see Figure 6.2) of respondents. A variety of effective change management strategies to manage future curriculum challenges were proposed, such as change management workshops and partnerships with local stakeholders and industry to keep abreast with technological and industrial changes. Student career guidance, labour market information, and utilisation of the latest technology are further proposed change management strategies.

Staff development is also regarded as a key change management strategy and includes areas for development such as curriculum development training, leadership and mentoring, and effective communication strategies (see sections 5.6.1.1h and 6.3.1.1 [d] to [e]). Naidu, Jobert, Mestry, Mosoge and Ngcobo (2008:1-2) assert that competing demands resulting from rapidly changing environments place a huge challenge on leadership and “thus it is important for leaders ...to keep abreast of emerging trends ... to transform”. There is an urgent need for a communication model that comprises a variety of communication methods. Such a model would be a crucial change management strategy to improve the efficiency of communication between the DHET and TVET colleges, as well as between colleges and their multi-campus, as strategic information needs to be communicated by leaders regarding policies and future plans. (For more detail on communication models see Delport, Hay-Swemmer & Wilkinson, 2014; Anyangwe, 2012; Ruck, 2012; Freeman, 2009; Cockett, 2007; Venter, 2006; Steinberg, 2006; Gizir & Simsek, 2005; Barrett, 2002; Asif & Sargeant, 2000; Power & Reinstra, 1999; Van Gemert & Woudstra, 1999; Claassen & Verwey, 1998; Harris, 1993; Pincus, Rayfield & Cozzens, 1991.)

In addition, the proposed participative management strategy and consultative platforms between lecturers and senior management are vital (see Gronn, 2000; Harris, 2003). Leithwood *et al.* (2004) contest the perception of some researchers that instructional and transformational leadership is leadership located in one individual. Thus emerged the conceptualisation of distributed or participative leadership.

Effective change management strategies are also required for managing future curriculum changes. Such strategies include change management workshops and partnerships with international and local stakeholders like industry and universities to keep abreast with technological and industrial changes (see section 6.3.1.1 [e]). A change management strategy framework is necessary for addressing the current and future staff development needs, as well as for addressing the many challenges faced by the college sector (see section 6.4.1.1 [b]). Thus, the need for professional instructors with good technical and pedagogical skills are central to quality, while adequate maintenance of facilities and equipment is essential for good training (Middleton *et al.* 1991:26, 27, 47, 50; Young, 2006; Eastern Cape Consortium for Socio-Economic Cooperation (ECCSEC)-Joint Initiative for Priority Skills Acquisition (JIPSA), 2009; Papier, 2010; RSA, 2016:21-22). The promulgation of the policy on professional qualifications for lecturers in TVET colleges, dated 13 June 2013, envisages a progressive improvement of qualifications to graduate level (RSA, 2013a; DHET, 2013b:16-17). Green and McDade (1991:165) maintain that academic staff must take initiative for their own development by taking an active role in creating opportunities, staying active with colleagues in the discipline, developing a contract for personal and leadership development, and taking action.

A central challenge underpinning many other challenges is the issue of the mission, purpose and scope of TVET college, or as the South African Colleges Principals Organisation (SACPO) stated: “What is the ideal college?” (Gewer, 2010:29). Fundamental curriculum reform is needed, thus colleges cannot be expected to be everything to everybody. There is a need for finding a niche for the sector so that an identity can be formed and branded to improve the poor public image, including the quality of programmes and service delivery. TVET colleges should either focus on programmes that prepare students for the workplace or programmes that should articulate to higher education institutions (see Hippach-Schneider & Wichert, 2015 and section 3.1.2).

Furthermore, the notion of one type of programme (with practical and theoretical components) providing for both routes to the work place and university is a central flaw in the current content and design of the vocational and occupational programmes. TVET colleges cannot have a situation of ‘one programme fits all’. Students’ needs and abilities are different, therefore we should develop programmes based on their individual student needs that will open career paths or options for further learning opportunities within the confines of the set curriculum. Different

academic entry requirements should apply to programmes leading to the work place and those articulating to universities for higher education programmes (see sections 5.4.1.2 [a], 5.4.2, 5.6.1.1 [f], 7.2.2, 7.3.2.1 and 7.3.2.2, as well as Papier, 2009 and HSRC, 2006).

In support of the change management strategy and purpose redefining of colleges, Cloete (2009) estimates that education and career progression has ended in a cul de sac for 2 million young adults who have gone to school, but have not successfully completed 12 years of schooling. This category of school sector drop-outs, as described by Cloete (2009), is exactly who the TVET college sector caters for. Hence, different student centred streamlined curricula are proposed. A curriculum change framework as well as the redefining of the purpose and scope of the TVET sector thus seem eminent.

(d) The impact of new legislation on curriculum change

In South Africa the past higher education and training curriculum has perpetuated race, gender and ethnic divisions. It has emphasised separateness, rather than a common citizenship and nationhood. It was thus imperative that a new curriculum be restructured to reflect the values and principles of our new democratic society (DoE, 1994). It is indeed sad that 23 years after 1994 the TVET college sector is still offering the very same old curriculum linked to Report 191 engineering and business studies.

Some positive spin-offs from post-1994 policy releases include a new national certificate vocational and occupational qualification framework, whereby new programmes were implemented, although with numerous shortcomings. TVET colleges were recognised and placed on the radar by government as a key role player in the development of the economy by branding the sector as ‘first choice’. In this sense, the South African government is one of the most powerful and persistent forces for change (Green & Hayward, 1997:18; Brock-Utne, 1996:338).

Although legislation such as the Skills Development Act no 97 of 1998 and the National Certificate Vocational (NC(V)) policy of 2006 was to bring about curriculum reform in the TVET college sector, the respondents in the study survey perceived the impact thereof as either too slow or having no impact at all on curriculum change (see section 3.3.3). The occupationally directed and vocational programmes are regulated by these two policies, albeit engulfed in its own challenges (see section 5.6.1.2 [c] to [d]). These programmes were meant to replace the Report 191 programmes, but after 22 years it is still part of the ministerial

mandatory funded programmes with all its challenges (see section 5.6.1.2[a] to [b]). Although the Report 191 programmes had been withdrawn, they were later reinstated due to pressure from some college and industry leaders. The Green Paper (DHET, 2012b:23) supports this finding by stating the decision to “...extend the life of these programmes until the NATED courses are fully reviewed” (DHET, 2012b). Some of these qualifications date back to the 1980s, with curriculum content and design still catering for the needs of an economy that existed back then.

Taken from the perspective of Kotter (1995), it seems that the DHET lacks leadership direction-setting, and hence the TVET college sector still offers NATED programmes. Offering these outdated Report 191 programmes seems to be a waste of public funds, because students fail to find jobs due to the lack of industry related skills and knowledge. They also battle to gain access to other institutions of higher education such as universities (also see Branson, Hofmeyr, Papier & Needham, 2015:46-48). Badroodien and Kraak (2006:20) confirm this statement and remark that “...there is a powerful sense of failure within the system with regard to the quality and relevance of FET programmes in inadequate preparation for higher levels of learning”. They continue by stating that “...the FET sector has failed to link many young learners to real employment prospects in the world of work, and it has also failed to provide a meaningful learning pathway for employed adult workers to return to formal study so as to improve their overall skills and competencies”.

A recent policy change took place in 2014 regarding the artisan qualification processes. The use of section 13 and 28 of the Manpower Training Act (No 56 of 1981) (RSA, 1981a) has finally and officially been discontinued and replaced by section 26(d) of the Skills Development Act (No 97 of 1998) as amended (DOL, 1998). Although the funding regime has improved over the last five years through the release of the new TVET funding norms and standards policy, the TVET college sector currently remains the most under-funded and under-resourced sub-system of the education system in South Africa (see section 6.3.1.1 [a] and DHET, 2015c:10). The White Paper for Post-School Education and Training states that the DHET will provide core funding for programmes and staff cost, which has to be complemented by funds from SETAs, the National Skills Fund (NSF), as well as private funding (DHET, 2013b:24).

However, it is expected of colleges to expand on their student numbers and offer a variety of programmes, including services such as academic support and student support services (see section 6.3.1.1 [d] and DHET, 2015c:12). Due to poor SETA integration and relationships with public TVET colleges, funding for the delivery of occupational qualifications are limited and remain a challenge to access. Some positive trends stemming from the promulgated legislation include prioritisation of TVET colleges as key role players in the development of the economy of South Africa, the implementation of the national certificate vocational programmes, and occupationally directed programmes such as learnerships and skills programmes.

(e) Proposed policy changes to improve curriculum standards

Policy changes regarding artisan development needs, content and design seem to be in urgent need of revision (see sections 6.4.1.1 [a] and 6.3.1.1 [a]) to suit the current needs of the economy, ensure growth and enhance economic job opportunities. Fisher *et al.* (2003:327) cite that colleges are expected to provide “the intermediate-to high level skills required in a changing global and national economic environment”. SETA funds should be diverted to the DHET and earmarked for colleges to offer occupational programmes. This may increase the income stream of colleges, and can be utilised for upgrading infrastructure and other curriculum resources (see section 6.3.1.1 [e] and DHET, 2015c:9).

Proposed policy changes must ensure regular update and review of all college programmes every three to five years. Stronger industry involvement during the curriculum review process and development of new curricula is a critical factor to ensure responsiveness to industry and to uplift standards. These actions could improve opportunities for work place experience and job readiness of students, which could lead to future employment. The President’s State of the Nation Address of 11 February 2010 reiterated the expansion of access in the context of the need to develop a skilled and capable workforce to support growth and job creation; however, seven years later the TVET college sector is still lagging behind in leading the skills revolution as envisaged by the State.

Articulation of college programmes between college qualifications and school curriculum and between college qualifications and university qualifications should be strengthened by legislation, and through stakeholder engagement in the review and development of curricula on both sides. Admission requirements should also be adjusted to be more programme specific and not generic for all programmes, due to the inherent differences between programmes such

as engineering and business studies. Moreover, an additional language and academic support structures for English and Mathematics could enhance the standard of vocational programmes.

The inclusion of a compulsory work placement component and shortening of the curriculum and duration could also improve the standard. According to Gewer (2010:33), "...the aim for the NC(V) of bringing together theory and workplace experience is falling short as a result of difficulties in securing workplaces". Furthermore, the ability and educational level of students seem to be a focal area to consider in changing the content and design. Due to the low academic entry level of students, the development of bridging programmes for foundational learning, and the need to certify part qualifications have become crucial to contribute to the success rate of students. Young people who are not in employment, education or training (NEET), for example young people who fail NSC and NC(V), or drop out earlier in their school career, "is a consequence of the poor outcomes of basic education in combination with poor labour market absorption" (Gewer, 2010). It is assumed that as basic education improves, so will the college system, which will include changing the college curriculum to suit the needs of industry as well as those of students.

The key competencies needed by leaders to manage the required curriculum change include research skills, knowledge of the sector, networking skills, innovation and creativity, and subject expertise (see section 6.3.1.2 [a]). According to Clark (1993) (also see Van Der Westhuizen, 1998), academic staff members are important actors in the process of change, because changes flow from their work. As teachers and scholars they are acutely aware of changes in their fields, technological advancement, and new approaches that require restructuring of their fields and their institutions. In conclusion, Lachiver and Tardif (2002) postulate the key factors for initiating curriculum change: strong leadership accepted by the academic staff, sharing and accepting the need for change, the extend of the curricular change, whether change is wide-scale or minor, and lastly, the degree of flexibility for departmental staff.

6.1.7.2 Curriculum Leadership

Change has become a constant feature in the TVET college sector since 1995 (DoE, 2007). The TVET college sector is predominantly affected by political and economic changes. Through the passing of multiple pieces of legislation, some changes were implemented, while others

failed to be implemented. Change in the TVET college sector has thus been marked with an accelerated pace of change, characterised by impermanence, uncertainty and unpredictability for the past decade (see Binney, Wilke, & Williams, 2005; Kotter, 1992; Middlehurst 1993; as well as sections 2.4.1, 6.4.1.1 [a] and 6.4.1.2, 6.3.1.1 [a] to [c]).

Badroodien and Kraak (2006:181) cite that curriculum development for vocational education is a national competency. Therefore, there is minimal room for institutional innovation and curriculum customisation. Likewise, Littledyke (1997:259) is of the view that an over-prescriptive curriculum and an instrumental, directive management style can inhibit the process of development, while collaborative, democratic approaches to curriculum development encourage ownership of the changes, which makes effective translation of policy into practice more likely.

(a) Curriculum related leadership challenges

It is evident from the study (see section 5.6.1.1 and 5.6.1.2) that college curriculum leaders are faced with a myriad of critical curriculum related leadership challenges. Most of these challenges were discussed in detail in section 6.3.2.

It is a fact that funding drives curriculum change. However, TVET colleges are restricted by the rigidly structured programme qualification mix consisting of NC(V) and Report 191 NATED programmes which are mandatory DHET funded through the TVET funding norms and standards (DHET, 2015b:14-20). Colleges cannot accommodate more students or implement new modern industry related programmes, due to severe infrastructure limitations and lack of dedicated capex funding from the DHET (see section 6.3.1.1 [e] and DHET, 2012b:9-10). According to Gewer (2010:48), there are signs that some TVET colleges are ill prepared for the management of the opportunities and challenges which greater institutional autonomy brings them. This is particularly the case with respect to funding and managing different, and sometimes contesting, income-generating opportunities. Gewer's view is supported by the DHET who states that: "the college principal is in need of a suite of comprehensive leadership competencies such as strategic capability and leadership, financial management, people management and empowerment, client orientation and customer focus, change management and honesty and integrity to effectively lead the college" (DHET, 2012b).

Academic excellence and student development seem important as core focal areas of TVET colleges, while all other activities may support and strengthen the delivery of quality teaching and learning. Academic institutions function significantly different from business or industrial organisations. Lathrop (1990:7) indicates that over the years there has been a tendency to apply general leadership theories and approaches to higher education and that many organisational characteristics of academic institutions make them more difficult to manage (and lead) than business (Birnbaum, 1988:29). Many scholars such as Gumport (2000), and Mora, Parker and Jary (1995) believe that traditional collegial governance conflicts with business-like leadership and management, while Birnbaum (2004:11) states that “if institutions become less academic, governance is less likely to be shared, and as governance is less shared, institutions are likely to become less academic”.

Curriculum development of NC (V) and Report 191 is currently a national DHET competency. College leadership, therefore, have to strengthen their role through increased pressure on the DHET for curriculum change to be prioritised. The curriculum change required is twofold, firstly for programmes to address the needs of industry, which would lead to improved student employability, and secondly programmes that may lead to improved articulation to higher education institutions.

(b) Leadership features needed for the enhancement of curriculum change

Survey respondents cited a plethora of curriculum leadership features required for leading curriculum change, namely vision, creative thinking, trustworthiness, negotiation, project management, decision-making, and strategic planning skills (see section 6.3.1.2 [a]). Middlehurst, Pope and Wray (1992) also emphasise the importance of certain characteristics and abilities in the perceptions of institutional leadership. They list professional and technical competence, interpersonal skills, intellectual and conceptual abilities, communication skills, and information-processing skills under these leadership skills and abilities. Due to the complicated nature of leading and managing people, successful and effective leadership cannot be ensured by one trait only; a combination of traits are needed within the changing context of future student and staff generations (see Lussier, 2000:456).

To illustrate the complexity of skills required for curriculum leadership and to support the findings from the study in this respect (sections 6.3.1 2, 6.3.1. 2 [a] and 6.3.2), Table 8 may be

helpful (see Table 6.5) as an amended division, as suggested by Middlehurst (1993:14), to summarise the findings.

Table 6.5 Leadership skills needed for enhancing curriculum change

| HUMAN SKILLS | COGNITIVE SKILLS | TECHNICAL MANAGEMENT SKILLS |
|-----------------------------|-------------------------|--|
| Integrity | Assertiveness | Strategic planning skills |
| Trustworthiness | Vision | Knowledge of policies |
| Passion | Creative thinking | Curriculum knowledge |
| Energy | Flexibility | Industry knowledge and experience |
| Honesty | Persuasiveness | Negotiation skills |
| Commitment | Resilience | Project management skills |
| Modesty | | Decision-making skills |
| The will to change | | Communication skills |
| Empathy | | Listening skills |
| Accessibility | | Risk taking skills |
| Interpersonal people skills | | Knowledge and understanding of macro-economic trajectory |
| Sincerity | | |

Source: Adopted from Middlehurst 1993: Summary of findings in sections 6.3.1.2, 6.4.3.1.2 (a) and 6.3.2

Table 6.5 illustrates the leadership challenges posed to TVET college principals as leaders of curriculum change processes who are expected to initiate, lead, manage and support curriculum change in their institutions. Furthermore, it demonstrates that the role of the TVET college principal is to ensure that the purpose and vision of change is well-defined and communicated to all stakeholders. Evidently college leaders have to have knowledge of industry to influence curriculum change and build industry partnerships. At the same time it is expected of them to have empathy and interpersonal people's skills to support the change process and the staff, who are at the coal face of the change (see sections 6.3.2, 6.4.1.2 [a] and Table 3, as well as Candy, 2000; Teichler, 1999; Gnanam, 2000; Barnett & Coate, 2005).

These requirements indicated by the study results and literature are also supported by the DHET and other research. According to the DHET (2012), the college principal needs a suite of leadership competencies, such as strategic vision ability, skills for financial management, people management and empowerment, a client orientation and customer focus, skills for change management, and characteristics such as honesty and integrity to effectively lead the college. In addition, Stogdill (as cited by Yukl, 1998:237), points out the characteristics most frequently associated with successful leaders to be clever (intelligent), conceptually skilled, creative, diplomatic and tactful, fluent in speaking, knowledgeable about group task, organised (administrative ability), persuasive and socially skilled.

(c) Comparison between current and future leadership capacity training needs

Table 6.6 compares the perceived current and future leadership capacity training needs of TVET college leaders for addressing the curriculum challenges.

Table 6.6 *Comparison between current and future leadership capacity training needs*

| CURRENT LEADERSHIP CAPACITY TRAINING NEEDS | FUTURE LEADERSHIP CAPACITY TRAINING NEEDS |
|---|--|
| Vision | Insight of global and international future curricula |
| Effective communication | Futuristic leaders |
| Listening skills | Improved leadership qualifications |
| Assertiveness | A workable organisational structure with capable leaders |
| Conflict management | Visionary leaders with foresight to develop programmes that will meet future needs |
| Strategic management | Research and development skills |
| Curriculum management | Understanding of vocational curriculum |
| People skills | Ability to set up collaborative structures between college and industry to develop relevant curriculum |
| Emotional intelligence | Use of latest technology |
| Research and industry training needs | Networks and partnerships |

| | |
|--|--|
| Mutually beneficial partnerships with local industry and international organisations | Economic literacy |
| The need for skilled, dynamic, strong, consistent and decisive leadership | Quality management |
| Strong ethical leaders | Be able to think out of the box |
| Understanding of curriculum and labour needs | Make provision for needs that do not exist yet |

Source: Summary of findings in sections 6.2, 6.4.1.1 (b), 6.3, 6.4.1.2 (b) and Table 6.4

Table 6.6 emphasises current and future needs for leadership capacity training to address curriculum challenges. The open-ended section of the survey (see section 6.3.1.2) herald many skills development initiatives to build leadership capacity in colleges. Effective communication and conflict-handling skills are critical to resolve day-to-day staff and student matters. These include the use of various communication channels and systems through the use of technology. Strategic planning and curriculum management skills are crucial to lead and manage all strategic areas such as finance, human resources, infrastructure and all curriculum activities. Leaders must be knowledgeable about quality management assurance systems that could enhance the quality of teaching and learning. Research skills are equally important for making important strategic decisions based on facts.

On the other hand, future leadership capacity training for future curriculum challenges include the provision for programmes that will meet future employment needs, economic literacy, research and development skills, as well as training in the use of latest technology. Developing future skills and becoming economically literate will assist college leaders in planning for the future and being ready for future challenges. In an attempt to prepare leaders for the uncertainties, leadership training should be prioritized by the DHET as a matter of urgency to ensure a capable and effective leadership for future curriculum training needs.

More than half (55%) of the respondents in the closed-question section agreed that leaders are equipped with the necessary knowledge to lead curriculum change. Albeit a small margin of the majority respondents who agreed to the statement, it could indicate that there are some leaders in the system who are perceived by their staff as competent to lead curriculum change. The same respondents of the survey disagreed overwhelmingly (76%) that leadership programmes exist that could capacitate and enable staff to lead curriculum change (see section 6.2.2 and Figure 6.4). This disagreement by the majority of respondents place doubt on the

previous finding, which declares just over 50% of the leaders as competent to lead curriculum change.

Amidst the numerous curriculum challenges discussed (see section 5.6.1.2), it is imperative that continuous leadership capacity building become a compulsory performance area of all college leaders. Leadership in academic settings is associated with academic excellence and it is practiced either collectively or individually and can be practiced in a variety of academic settings. Individual leadership based on the concept of intellectual leadership can be achieved in research, teaching and scholarship. While academic leadership is associated with influencing the direction of academic activities and areas of studies within departments, schools or faculties, institutional leadership provides opportunities for effecting meaningful change (also see Middlehurst, 1993:69).

(d) Curriculum challenges and leadership capacity training needs

Table 6.7 displays the perceived current curriculum leadership challenges and the proposed current leadership capacity training needs that could address the current curriculum challenges.

Table 6.7 *Current curriculum challenges and proposed current leadership capacity training needs*

| CURRENT CURRICULUM LEADERSHIP CHALLENGES | PROPOSED CURRENT LEADERSHIP CAPACITY TRAINING NEEDS |
|--|--|
| Lack of curriculum knowledge | Broad curriculum knowledge and understanding |
| Lack of industry knowledge and experience | Industry knowledge and experience |
| Lack of strategic thinking | Planning, organising, monitoring and follow-up |
| Comfort zone of leaders | Quality assurance |
| Leaders lacks the will to change | Business acumen |
| Standardised planning | Sense of urgency |
| Relevant stakeholders for writing teams | Change management |
| A new mindset change | Charismatic |
| Funding drives change and programme offerings | Proactive |
| Industry involvement in curriculum change and training | Pragmatic |

| | |
|-----------------------|----------------------------------|
| Lack of vision | Visionary skills |
| Statistical reporting | Adaptability |
| Constant change | People skills |
| Lack of resources | Consultative leadership approach |
| | Servant leadership approach |
| | Situational leadership approach |

Source: Sections 6.4.1.1 (b), 6.4.1.2 (a), Table 6.2 and Table 6.3

Table 6.7 illustrates the current curriculum leadership challenges and highlights numerous current challenges, such as the lack of resources, vision, curriculum knowledge, strategic thinking, as well as the lack of industry knowledge and experience. According to the DHET (2012b), the college principal needs a suite of comprehensive leadership competencies, such as strategic capability and leadership, financial management, people management and empowerment, client orientation and customer focus, change management, and honesty and integrity to effectively lead the college.

Leaders are perceived to be in comfort zones and lack the will to change, thus respondents proposed training of leaders in various leadership styles, such as situational, servant and consultative leadership. It is also suggested that TVET leaders need curriculum and industry training to gain insight. Other suggested capacity training needs include quality assurance, change management, planning, organising and quality monitoring skills (see section 2.4.1).

6.1.8 Synthesis of the findings on ‘Curriculum Change and Curriculum Leadership’

From the findings it emerged that curriculum change can potentially contribute in several ways to bring about improved employability, productivity and success rates of TVET college graduates, taking into consideration all the mitigating factors as discussed regarding curriculum reform. The findings also point towards a mismatch between the cognitive demands posed by NC(V) programmes and the low levels of academically preparedness of school leavers, which negatively influence the success rates of TVET students (see sections 6.5.1.1a and 6.5.1.1 [b]; also see Papier, 2009; RSA, 2013b:316 and Gewer, 2010:29).

What further stands out is a need for change management strategies (see section 6.5.1.1 [c]), crucial to prepare for and combat current and future TVET curriculum challenges. The central

challenge underpinning much of the feedback regarding TVET colleges is the confusing state of its purpose and scope (see section 6.5.1.1 [c]). These elements of college leadership currently seem too wide and complex and need to be streamlined to create a unique identity, such as in the case of schools and universities. Another important finding is that the influence of new legislation (6.5.1.1 [d]) on the TVET college sector, which was meant to be substantial since the dawn of democracy in South Africa, was met with little successes, and that some policy imperatives have not been implemented.

Another important finding is the need for stronger industry involvement in the TVET curriculum review process. This seems to be a critical factor to enhance responsiveness to industry needs and requirements and to uplift TVET standards. Findings from the empirical part of the study also indicate a lack of skills training capacity (see section 6.5.1.2 [c] and 6.5.1.2 [d]), which seems to be crucial in enhancing college leadership to address the magnitude of changes in and challenges to the TVET college sector. Equally important is the need for staff development in curriculum matters (see section 6.5.1.2 [b]), as well the development of curriculum leadership capacity.

Amidst all the challenges pointed out by the findings from this study, Gewer (2010) indicates insufficient knowledge levels in college leadership and management. His view has been largely confirmed by this study and it thus seems urgent to assess the current capacity of knowledge and skills of all college staff if the sector wishes to turn away from the current state of affairs. This need was also indicated by Bush (2004) who suggests that all staff with leadership responsibilities in education should adopt a life-long learning approach in order to be able to adapt to and lead amidst changing contexts and conditions.

CONCLUSION

Chapter 6 presented the findings from the empirical data linked to theme 2 of the study by addressing ‘Curriculum Change and Curriculum Leadership’. Three data sets (data from closed and open questions of a questionnaire survey and data from focus group interviews) were explored, followed by a discussion of the findings. The gist of Chapter 6 is focused on curriculum reform that can potentially contribute to bringing about improved employability, productivity and success rates of TVET college graduates, as well as the need for a number of

change management strategies, such as an effective communication model and leadership skills necessary to lead curriculum change.

Chapter 7 will present the conclusions of the study drawn on the basis of its findings and point out various implications and limitations of the study.

CHAPTER 7: CONCLUSIONS AND IMPLICATIONS

INTRODUCTION

This chapter responds to the aim, research questions and main objectives of the study. After briefly summarising the previous chapters of the thesis, some conclusions will be drawn, based on the findings of the study. Then a number of implications of the research related to theory, policy and practice will be suggested, and finally a few limitations of the study will be pointed out.

Chapter 1 dealt with the introduction and background to the study and highlighted the research problem, research questions, research objectives and research methodology. It stated the primary aim of this study as to investigate possible strategies that may potentially assist college leaders in leading sustainable curriculum change in the TVET college sector. It thus sought to problematise the apparent lack of clearly defined leadership features for the enhancement of leading sustainable curriculum change within the new TVET college dispensation in South Africa. Finally, it presented the main objective of the study, which is to suggest a possible framework for leading curriculum change in the TVET college sector.

The need for guidelines towards competent TVET leadership gave rise to the primary research question for the study, which was stated as:

What are the leadership features needed for enhancing curriculum change in the South African TVET college sector?

Subsequently the following subsidiary-questions were stated:

- What are the current and future curriculum leadership challenges faced by TVET college leaders?
- What leadership capacity is needed to address current and future curriculum challenges?
- What strategies might be beneficial to capacitate TVET leaders for current and future curriculum challenges?

Chapter 2 addressed the main theoretical perspectives and concepts within the context of the TVET curriculum. It explored various leadership theories, such as transformational and academic leadership, as well as power and influence theory and constructivist theory. In

addition, the key concepts of vocational and occupational education and curriculum design and development were explored within the context of TVET colleges. A broad conceptual understanding was developed regarding the key concepts of education types, curriculum, and leadership theories. This included an emphasis on the need for a clear distinction between the varied definitions of vocational and occupational education that exist at the moment. Moreover, better comprehension was promoted of the fact that a combination and integration of various leadership styles and theories might be better understood within a TVET college context where change has become a constant feature - mostly externally motivated by legislative demands. What further became clearer was that the concepts of curriculum design and curriculum development have been defined and understood differently by various authors over time, and that the meaning of these concepts is dependent on the contexts within which curriculum development takes place. Chapter 2 thus mainly addressed important curriculum concepts and issues that influence curriculum leadership in general, with TVET colleges as a particular case in time.

Chapter 3 outlined the initial conceptual framework for the study (see Figure 3.1) which emerged from exploring relevant literature on the TVET context. Comparing vocational education in South Africa, the United Kingdom, Germany and Australia provided an international perspective. Some similarities seem to exist between the four TVET contexts, especially with regard to the origin of vocational education in South Africa. However, key differences also emerged, such as the clear distinction drawn by the TVET college sector in South Africa between vocational and occupational education. The dual vocational education system of Germany emerged as of particular interest to this study as a consideration where to base curriculum reform in TVET colleges. This includes the possibility of a parallel curriculum, one for direct pathing into the workplace (more practical), and the other for articulation to higher education institutions (more theoretical) (see more detail in sections 5.4.1.2, 5.4.2, 5.6.1.1 [f], 5.6.1.2 [e] and 7.2.2). A policy overview and analysis on South African TVET indicated that currently minimal 'curriculum change' was visible in the TVET sector in spite of many policy reviews conducted and several new higher education and training policies released since 1994. The first subsidiary question, which concerns the perceived current and future curriculum leadership challenges faced by TVET college leaders, was thus partly answered in Chapter 3.

Chapter 4 outlined the research methodology that applied to the study, while Chapters 5 and 6 offered a detailed report on the findings of the empirical data generated via a questionnaire survey and semi-structured focus group interviews. Chapters 5 and 6 also represented the themes that emerged from the empirical data, namely ‘Curriculum and Curriculum Challenges’ (Chapter 5), and ‘Curriculum Change and Curriculum Leadership’ (Chapter 6). A discussion and synthesis of the key findings appeared at the end of each of these chapters. The other two subsidiary questions, which related to capacity needs of TVET college leaders and proposed changes to the TVET curriculum, were answered by reporting on the empirical data in Chapters 5 and 6. The main research was properly addressed by answering the three subsidiary questions.

Based on the findings of the study, a number of conclusions could be drawn and are elaborated on next.

CONCLUSIONS

Four main conclusions might be drawn from the study findings. These conclusions relate to TVET curriculum leadership, curriculum leadership challenges and TVET curriculum change respectively.

7.1.1 Conclusion 1

From the findings on leadership capacity in TVET institutions represented in this study (see Figure 6.4 and sections 6.2.1.2, 6.5.1.2 [c] to [d]), it appears that an urgent need exists for the development of leadership programmes in the TVET college sector to assist leaders in bringing about curriculum change. In addition, various cognitive and social competencies (see section 6.5.1.2 [b]) are needed to lead curriculum change and its accompanying challenges.

These competencies include an acquisition of industry knowledge and exposure, which seems crucial for TVET college leaders to ensure curriculum responsiveness to industry needs. One can thus conclude that TVET college leaders are in need of being capacitated with change management strategies (see sections 6.2.1.1 and 6.5.1.1 [c]) for current and future curriculum challenges and for leading capacity building for curriculum design and development. Such leadership may, particularly in the Western Cape where the study was located, assist in addressing the vast differences in the understanding of vocational versus occupational education within the TVET college sector.

Thus, in response to subsidiary questions 2 and 3, the leadership capacity to address curriculum challenges was identified and strategies that might be beneficial to capacitate TVET college leaders were determined.

7.1.2 Conclusion 2

In terms of curriculum content and design, the study clearly indicated that current curricula, especially the National Accredited Technical Education (NATED) Report 191 Engineering, and Report 191 Business, and General Studies are outdated (see sections 5.3.1.2, 5.4.1.2, 5.6.1.2 [a] to [b]) and need to be replaced with new and industry responsive qualifications. One may also conclude that the National Certificate Vocational (NCV) qualifications (section 5.3.1.2 and 5.6.1.2[c]) require revision and that curriculum leadership is needed in this respect. The study also indicated that some of the unit standards linked to occupational programmes are in need of revision, coupled with the current fragmented curriculum, which lacks coherence and appropriate knowledge components (see sections 5.3.1.2 and 5.6.1.2 [d]).

In addition, many TVET programmes seem to lack credibility and are tainted with a poor public image (see section 5.6.1.2 [d]). This situation is worsened by the poor articulation opportunities of TVET college graduates to enter higher education programmes (see Figure 5.8, and section 5.6.1.2 [e]). Badroodien and Kraak (2006:20) posit that the significance of the TVET band lies in the coherence of its four subsystems, and also in its external linkages to higher learning and work. TVET systems worldwide are fundamentally shaped and judged by the effectiveness of their articulation with the world of work, on the one hand, and the extent to which they grant meaningful access to further and higher learning, on the other. In South Africa the current TVET system has failed on both counts. One may also conclude that improved vertical articulation possibilities between TVET and higher education programmes (see section 6.5.1.2 [a]) may require more urgent and substantial leadership in the TVET sector. This issue of poor articulation options may be addressed by developing one curriculum in conjunction with the higher education sector, which could better provide for student articulation, as well as by developing the second curriculum in collaboration with industries from the various sectors of the economy that will path directly into the workplace.

One cannot but to conclude further that higher education institutions (such as universities of technology) probably need to be more sensitive to invest into new programmes that might

broaden access for TVET college students to enter into higher certificates and diplomas. Another critical conclusion that emerged, stems from the poor academic qualifications of students entering into the high cognitive of vocational education programmes, which is a consequence of poor outcomes of basic education (see sections 5.4.1.2 and 5.4.2, 5.6.1.1 [f], also see Papier, 2009 and Gewer, 2010).

It further seems that, based on the results of the study, a parallel- or two-stream curriculum may better address current and future TVET training needs. However, pertinent curriculum leadership will be needed to encourage this. The option of a parallel curriculum may be considered based on the success of TVET in Germany (section 3.1.2), where after four years of primary school, pupils move into three different branches: either secondary general, intermediate school, or grammar school. Different pathways exist through the dual system, where training is conducted in both the workplace and the vocational school (known as a TVET college like in South Africa). On completion of their training in the dual system, the majority of participants take up employment as skilled workers, and after a while many of them may make use of the opportunities for continuing vocational training, which can be obtained even from some universities that cater for vocational directed diplomas and degrees. Furthermore, the interface between all sectors of education, including universities, are fully integrated with the vocational schools (Hippach-Schneider & Wiechert, 2012:21-22).

In addition, the following assertion by Papier (2009:44) further motivates the need for a parallel curriculum: Students are regarded by college staff as poorly prepared for the high cognitive and other demands of NCV programmes, have already been failed by systems in school and society, and have looked to the college for alternative opportunities. Moreover, one agrees with her appeal to colleges to recruit the “right learners into the right programmes” and build the culture of learning, trust, accountability and hope that young people so desperately need (also see Badroodien & Kraak, 2006:20 in section 7.2.2).

It can thus be concluded that a parallel medium curriculum might at least be considered to overcome current curriculum related challenges. This is if TVET colleges aim at producing the work skills force at different levels (as indicated by Fisher, Jaff, Powell & Hall, 2003:327) and as envisaged and mandated by the South African government in order to cater for the varied needs of students [also see the appeal by Papier (2009) and consider the findings of this study as reported in Chapter 5 and 6].

7.1.3 Conclusion 3

One important issue that emerged from this study is whether TVET curricula actually encourage and enhance student employability (see section 5.6.1.1 [g]). Subsequently, in terms of curriculum change and leadership, one may question whether TVET programmes are sufficiently responsive to industry needs. It may thus be concluded that industry support and involvement (see section 5.6.1.2 [f]) in the TVET college sector is a critical contributing factor to curriculum renewal, student employability and kerbing the lack of industry knowledge and experience of college leaders. This conclusion has major implications for curriculum leadership, challenging them to counteract the current poor public image and negative perceptions of TVET colleges (see section 6.5.1.1 [a]). TVET programme offerings are expected to be better related to industry needs and should provide for clearer articulation options into higher education programmes.

This study further indicated that flexible modes of delivery, major increases in student numbers, and a broadening of student access are needed in TVET colleges (see section 5.6.1.1 [e]). These issues pose important curriculum and institutional leadership challenges, as one may conclude that TVET college leadership should increasingly focus on student success rates, the real learning needs of TVET college students, and the differentiation of TVET curricula that can accommodate such needs. Although improved funding of TVET colleges occurred in the recent past through the new funding norms (see section 5.6.1.2 [g]), inadequate funding remains a critical leadership challenge to provide for needs such as infrastructure, facilities and resources to support the delivery of quality teaching and learning.

Finally, student success rates, service delivery, productivity in the workplace, and employability opportunities can be improved by changing the curriculum (see Figure 6.1 and section 6.2.1.1). A ‘parallel’ curriculum may play a central role in achieving these goals and improve the articulation options for academically underprepared students who enter vocational education programmes.

7.1.4 Conclusion 4

One final and crucial finding from this study was that no coherent framework or model for curriculum leadership in TVET colleges currently exists (see Figures 6.3 and 6.4, as well as sections 6.2.1.2, 6.2.2, 6.5, 6.5.1.2 [a]). As one may conclude that such a framework is needed

in order to develop TVET college leaders to lead curriculum change, a framework is suggested as one of the outcomes of this study (see Figure 7.1 and the ensuing discussion).

This curriculum leadership framework is based on the findings that emerged from the empirical data, theoretical concepts, and contextual perspectives as discussed in Chapters 2 and 3. For this framework to be implemented requires various policy reviews or newly developed policies regarding curriculum leadership that might ultimately lead to increased curriculum autonomy of TVET colleges. In addition, to phase out outdated curricula and ensure curriculum responsiveness to industry might require multiple policy changes (6.5.1.1 [e]) regarding funding norms, student admission requirements, assessment and certification of qualifications, student and lecturer workplace exposure, articulation policies, and curriculum review policies.

Based on the conclusions as highlighted, a number of observed implications emerged from this study which are pointed out next. These include observed implications related to curriculum leadership theory, curriculum policy and curriculum practice.

IMPLICATIONS

This section deals with the observed and foreseen implications of various curriculum leadership theories upon which the suggested curriculum leadership framework is based. These theories include power and influence theory, transformational leadership theory, social constructivist theory, academic leadership, and change theories. Subsequently the observed implications of a theoretical understanding of TVET curriculum leadership on related policies and practices are discussed.

7.1.5 Possible implications for curriculum leadership theory

7.1.5.1 Power and influence theory

Power and influence theory (Hollander, 1993) has been adopted as an appropriate theory that could assist TVET college leaders in influencing a change in outdated curricula (see sections 6.3.1.1 [d] to [e] and 6.3.1.2). As emphasised earlier (see sections 2.5.2.3, 2.6.1 and Table 2.10), power and influence are clearly different theoretical constructs, and what is argued in this study is that curriculum leadership has to be associated with the constructs of power and

influence, which involve persuasion rather than exerting pressure (also see section 2.7 and Tables 6.5 to 6.7).

The dynamics of influence between leaders and followers, however, is not unidirectional (also see Yukl, 1998), but reciprocal, as followers can also have some influence over leaders. This perspective may pave the way for TVET college leaders to adopt reciprocal processes in an attempt to persuade authorities that curriculum change has become inexorable and that action to lead the change in curriculum is urgent. Such a position paves the way for academic staff to create opportunities for developing new curricula and take action in this respect (see Green & McDade, 1991; Middlehurst, 1993).

Furthermore, the term ‘authority’ is often used when power is seen as legitimate, or when it has some official support (see Middlehurst, 1993). Subordinates, referred to in this instance as the TVET college-based leaders, comply if they view the use of power as legitimate (see Gibson, Ivancevich, Donnelly & Konopaske, 2012). Yet, legitimate power covers a relatively narrow range of influence, and therefore it may be inappropriate to overstep boundaries (see Greenberg, 2011). Leaders can maximize their own power and opportunities for success by rather enabling the employees they supervise to achieve their own sense of power and success (see Tracy, 2001; Steyn, 2001; also see section 2.5.2.3).

The sense of power and influence experienced by employees is referred to as ‘empowerment’, where real power flows from the bottom up, rather than from the top down (Tracy, 1990). From a theoretical perspective, the power to change curricula thus needs to be delegated to institutional level, which points to the need for increased academic autonomy for TVET college environments. This links to the view that academic leadership can be better pursued within a value system of academic freedom, critical reflection, rationality, democratic participation, and autonomy (Van der Westhuizen, 1998). Furthermore, it would be highly beneficial to the TVET college environment if staff viewed principals as passionate leaders and role models who resist stagnation and live out the role of agents for education renewal through goal-directed self-renewal, continuing self-improvement and professional development (also see Fullan, 2001 and Van der Westhuizen & Van Vuuren, 2007).

Within the TVET college context, specific leadership styles, knowledge and skills might better support the ‘power and influence’ theory to capacitate TVET college leaders to influence curriculum change, hence the proposed framework for curriculum leadership (see Figures 6.2

to 6.4 and Figure 7.1). Curriculum leadership is ultimately underpinned by a constructivist theory of learning, whereby knowledge is actively constructed from within by leaders as life-long learners, on the basis of interaction with a social environment, and thus socially constructed (also see Hendry & King, 1994:223; Peterman, 1997:157). In addition, Wertsch (2007) suggests that curriculum leadership should be ‘dynamic and responsive’. As asserted by Wertsch (2007) and Edwards (2014), social constructivist theory maintains that people shape and are shaped by historical, social and cultural conditions, and that students remain the true object of benefitting from curriculum change and leadership.

7.1.5.2 Curriculum leadership

For the purpose of this study Middlehurst’s (1993:69) definition of curriculum leadership was adopted (see section 2.4.2.2). Her definition implies that leadership in educational contexts is mainly associated with influencing the direction of academic activities and studies (see section 2.4.2.2). Translated into the TVET college context, curriculum leadership can be associated with the relevant curriculum authorities influencing the direction of curriculum change by taking innovative action through the involvement of all relevant stakeholders for purposes of consultation and sharing of responsibilities (see section 6.3.1.2 [a], [b], and [c]). In tandem with Middlehurst, Robertson (2005:40) states that educational leadership is associated with informed actions that influence the continuous improvement of learning and teaching (also see Gleeson & Knights, 2008; Quinlan, 2014). Ironically, conflicting forces, such as government mandates and the drive for entrepreneurial business development and profitability, also operate theoretically and practically in a quest to demonstrate innovative educational leadership (see section 2.4.2.2). This reality is often faced by TVET college academic leaders (Trow & Clark, 1994; Foley & Conole, 2003; Webb, 2005; Adams, 2006; Lambert, 2013; Quinlan, 2014).

For TVET curriculum change to happen, at least at a theoretical level, it seems that a combination of leadership theories and styles, as it emerged from the literature and findings in this study (see sections 2.4, 6.3.1.1 [d] to [e]), have to be taken into consideration. Most prominent is transformational leadership, which is seen as a power and influence theory where the leader acts in mutual ways with the followers, appeals to their higher needs, and inspires and motivates followers to move toward a particular purpose (Bensimon, Neumann, & Birnbaum, 1989; Rost, 1991; Daszko & Sheinberg, 2005; Muijs *et al.*, 2006; Bush, 2007; Van Wart, 2011; Twist, 2012). Innovation leadership is another leadership theory that combines

different leadership styles to influence employees to produce creative ideas, products and services (see Gliddon, 2006; Politis, 2004), which might be a theoretically sound way to view leadership within the TVET college sector (also see section 2.4.2.3).

As has been pointed out in this study (see sections 6.4.1.1 [b], 6.4.1.2 [a] and [b]), shared or distributed leadership in addition to transformational and innovation leadership is central to aid the magnitude of change envisaged to bring about curriculum change, as it allows for different people to lead at different times (also see Yukl, 2010). Edwards (2011) points out that a theoretical position makes much sense, as a common, shared organisational knowledge can more easily bring about institutional change.

In the TVET context, curriculum change is a central focus area in the process of organisational change, since it drives the core business of a TVET college, namely teaching and learning. In addition, respondents in the study (see sections 6.3.1.2 [b] to [c] and 6.4.1.1 [b]) expressed the need for leaders to become more consultative in their leadership and to involve staff in bringing about curriculum change. Hence the call for participative and reciprocal leadership to form part of a curriculum leadership framework for curriculum change (see section 6.5.1.2 [a] and [b]).

7.1.6 Possible implications for policy

From the TVET policy overview and analysis in this study (Chapter 3), as well as the findings from the empirical data (see sections 6.3.1.1 [a], 6.3.1.1 [b] to 6.3.1.1 [c]), it became clear that the observed influence of policies released since 1995 is considered to have little direct bearing or minimal influence on curriculum leadership and curriculum change. The findings from the empirical data culminated into findings regarding three prominent policies (see sections 7.3.2.1 to 7.3.2.3) that can be directly associated with curriculum leadership development and that could aid curriculum change and ultimately curriculum autonomy in TVET colleges (see section 6.5.1.1 [e]). It has to be noted that the notion of curriculum autonomy is not a new phenomenon on the international TVET scene. Germany, for instance, operates TVET on a dual system where vocational schools (as TVET colleges are known in Germany) are autonomous places of learning with the task to provide basic and specialised vocational training and to extend previously acquired general education (see Hippach-Schneider & Wiechert, 2012:21-22 and section 3.1.2).

7.1.6.1 Curriculum review policy

The need for the outdated TVET college curricula to be reformed to become more responsive to industry needs featured strongly throughout the three data sets of the empirical data, as well as in the literature review section of the study (see sections 6.3.1.1 [a], [b], [c] and 6.5.1.1 [e]). From these findings it seems that curriculum change could substantially contribute to improve student employment rates, industry relationships and articulation opportunities to higher education.

However, the impact of policy development requires the implementation of multiple policies that could enhance the current status of the outdated curricula, low student employment rates, poor industry relationships and articulation challenges. There seems to exist a need for a policy regime that could address a parallel curriculum, or ‘two stream’ curriculum, where one stream provides career path options directly into industry and the other articulation directly into higher education programmes (see section 7.2.2). The involvement of and relationship between industry and TVET colleges could be enhanced through legislation that will benefit both parties, as it would contribute to curriculum responsiveness as well as student and staff workplace exposure. Moreover, curriculum review should be compulsory for periods of between three and five years to prevent the current outdated status of TVET college curricula to prevail.

7.1.6.2 Student admission requirements, assessment, certification and articulation policy

There seems to exist a disjuncture between the low academic entry level requirements of students into TVET college programmes and the high standard of existing programme assessments that lead to certification and expected articulation to higher education programmes (see sections 6.3.1.1 [a] to [c] and 6.5.1.1 [e]). This disjuncture currently seems to negatively influence student success rates, public image and articulation opportunities of TVET college students. Papier (2009:44) avers that students are regarded by college staff as “poorly prepared for the high cognitive and other demands of NCV programmes” ...and makes an appeal to all colleges to recruit the “right learners into the right programmes ...” (also see Branson, Hofmeyr, Papier & Needham, 2015:48 and section 7.2.2).

The implication for policy developers is to conduct thorough research on the basic school academic levels of the prospective student target market before the commencement of new or revised curriculum design and development processes. The outcome of the policy research should influence and form the basis of the student admission requirements, as well as assessment and certification standards for all TVET college type and level of programmes linked to the proposed parallel curriculum in section 7.3.2.1.

7.1.6.3 Funding norms policy

The current DHET TVET funding norms guideline only includes the mandatory ministerially funded Report 191 (NATED N1-N6) and NC(V) level 2 to level 4 programmes as a fixed funded suite of programmes on the annual programme qualifications mix (PQM) of TVET colleges. The exclusion of the Quality Council for Trades and Occupations (QCTO) certified occupational qualifications from the TVET funding norms creates the perception that the authorities who hold the purse drive and determine when and how curriculum change will occur and what will be offered at TVET colleges as a standard funded programme (see sections 6.3.1.1 [a], [b], to [c] and 6.5.1.1 [e]). At the moment TVET colleges are deprived and stifled from freely selecting and offering the suite of available QCTO accredited occupational programmes, due to the lack of an allocated fixed funding norm for these programmes. Public TVET colleges have to compete with private providers and other government departments to access funding to offer these programmes that are central to the skills development agenda of the South African economy.

The implication for policy developers is to consider all the factors discussed above in the development of the new funding norms policy for TVET colleges, which will include fixed funding for all the different types of programmes linked to vocational and occupational programme delivery as per the TVET college mandate of government. Lastly, the new or amended DHET-TVET funding norms policy will be critical and is central for successful implementation of all policy development areas as mentioned above.

7.1.7 Possible implications for practice

This section deals with the implications of a proposed curriculum leadership framework that could bring about curriculum change in the TVET college sector. The framework is based on

the findings of the study and builds on the preliminary conceptual framework that was initially presented in Chapter 3. The empirical findings from the study obviously influenced the current suggested framework, which is accompanied by some concrete suggestions on the modules and key elements of the framework.

7.1.7.1 A suggested framework for curriculum leadership

Ragland and Rosenstein (2014) suggest that a curriculum differs from a curriculum framework in that a framework represents a ‘looser structure’, consisting of elements which can only guide the construction of a curriculum, whereas a curriculum deals with why and what should be learnt. Similarly, MacTighe and Wiggins (2010) see a curriculum framework as a broad plan and structure for organising a curriculum. The purpose of this study was to develop a framework for leading curriculum change to navigate the construction of a curriculum as part of a leadership capacity building of TVET college leaders.

The framework supports a socio-constructivist approach (see section 2.6.1) to learning and acknowledges that students’ needs are central to the learning component. Grundy (1987) refers to the ‘curriculum as praxis’ or the ‘curriculum as social construct’ when the curriculum is constructed by those involved. The framework for the development of curriculum leadership that can bring about curriculum change in the TVET college sector is supported by Grundy’s definition, since the modules and elements are based on the social context of the respondents as emerged from the empirical data. Hence, the further development of this framework will remain contextually shaped by the experiences and knowledge of those related to the TVET college sector.

The suggested leadership framework is based on four modules which are derived from the elements as listed (see Table 7.1) as they have emerged from the empirical data (see sections 6.3.1.2 [a], [b] and [c]; 6.3.2; 6.4.1.1 [b]; 6.4.1.2 [a] to [b]; and 6.4.2). These elements are grouped under the four modules which can guide the further development of the curriculum design and content, determine learning outcomes and assessment criteria, and suggest teaching and learning strategies. The two way arrows indicate articulation, integration and flexibility between the four sections (which might become learning modules) of the framework (see Figure 7.1 below).

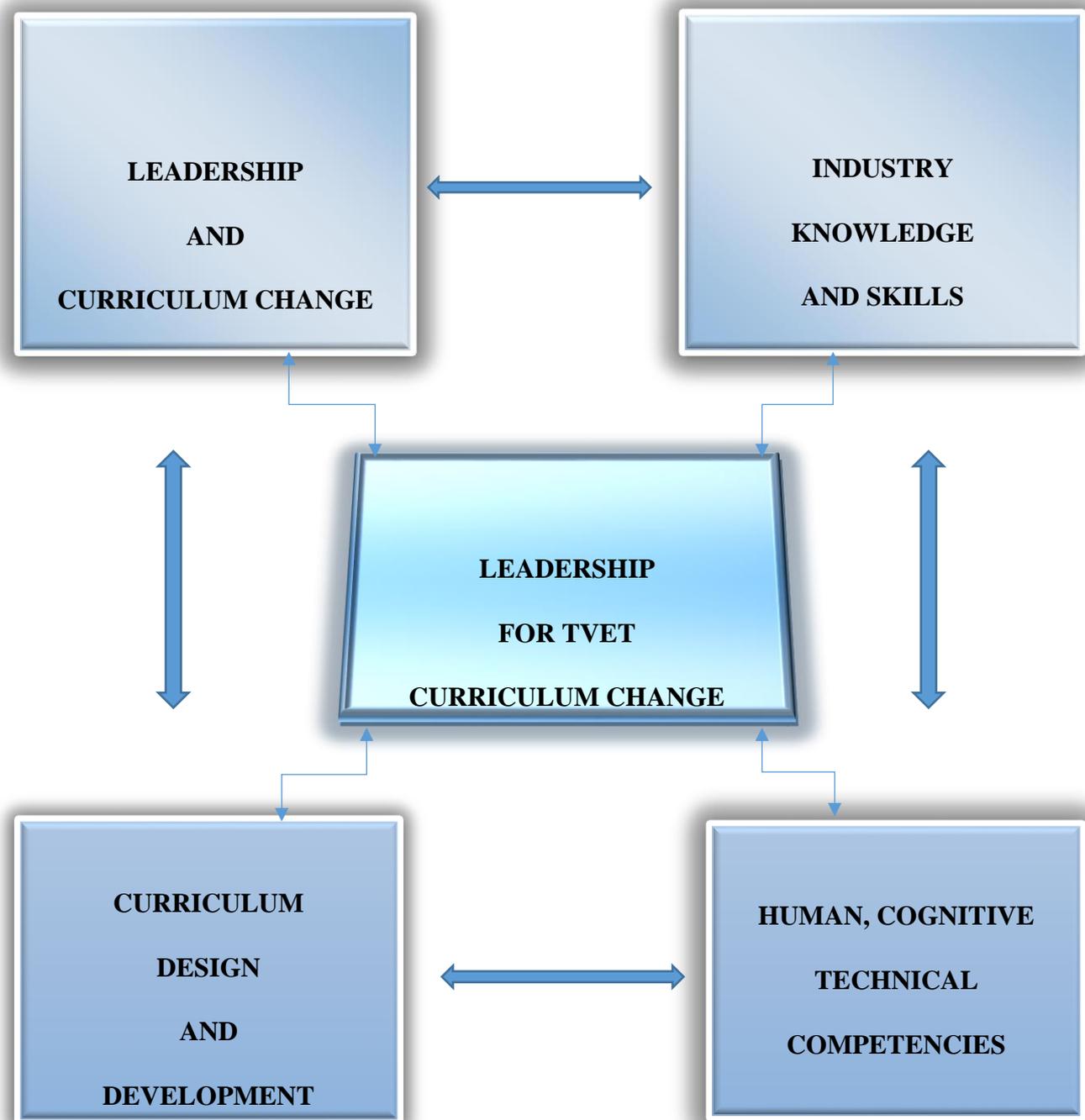


Figure 7.1 A simplified framework for developing capacity in leading curriculum change

DISCUSSION OF A CURRICULUM LEADERSHIP FRAMEWORK

The following elements as listed in Figure 7.1 emerged from the empirical data and literature (see sections 6.3.1.2 [a], [b], [c]; 6.3.2; 6.4.1.1 [b]; 6.4.1.2 [a], [b]; and 6.4.2): leadership and curriculum change, curriculum design and development, human, cognitive and technical competencies, as well as the need for industry knowledge and skills (see Chapters 2 to Chapter 3 and sections 3.3.2 to 3.3.3 and 3.5.2). The framework differs from my initial conceptual understanding (see Figure 3.1) in that it represents a more coherent view of how curriculum change could be led. In the first framework two main strains involved theoretical and contextual perspectives, which mainly focused on key concepts and key challenges for leading curriculum change. In the present framework (Figure 7.1) the focus is primarily on incorporating the conceptual understanding into a more practical orientation in terms of what could be potentially helpful in the development of leaders that need capacity in TVET colleges to lead curriculum change.

The emphasis is on key elements grouped under the four modules with the aim of suggesting elements towards the composition of the curriculum leadership framework, which might contribute to equip college leaders to bring about curriculum change in the South African TVET college sector (see sections 6.3.1.2 [a], [b], [c]; 6.3.2; 6.4.1.1 [b]; 6.4.1.2 [a], [b]; and 6.4.2).

Table 7.1 *Potential modules and elements of a framework for curriculum leadership*

| MODULES | CONTENTS |
|---|---|
| MODULE 1: LEADERSHIP AND CURRICULUM CHANGE | <ul style="list-style-type: none"> ▪ Curriculum or academic leadership ▪ Transformational leadership style ▪ Innovation leadership ▪ Shared or distribution leadership style ▪ Participative leadership style ▪ Policy development and implementation ▪ TVET college knowledge and experience ▪ Curriculum change ▪ Change management strategies ▪ Strategic planning |
| MODULE 2: HUMAN, COGNITIVE AND | Human skills: <ul style="list-style-type: none"> ▪ Integrity, trustworthiness, passion, energy, honesty |

| | |
|--|---|
| TECHNICAL COMPETENCIES | <ul style="list-style-type: none"> ▪ Committed, humble, empathetic, ethical, accessible, flexible ▪ Sincerity ▪ Interpersonal people skills ▪ Motivator <p>Cognitive skills:</p> <ul style="list-style-type: none"> ▪ Critical, analytical and strategic thinking skills ▪ Creativity and innovation thinking skills ▪ Futuristic leadership skills ▪ Influential and persuasive ▪ Negotiation and risk taking ▪ Change agent ▪ Decision making and conflict management skills <p>Technical management skills:</p> <ul style="list-style-type: none"> ▪ Strategic planning, project management skills ▪ Curriculum management skills ▪ Quality management skills ▪ Communication, oral and written presentation skills |
| MODULE 3: INDUSTRY KNOWLEDGE AND SKILLS | <ul style="list-style-type: none"> ▪ Industry knowledge, exposure and experience ▪ Labour market needs for current and future jobs ▪ Industry collaboration, linkages and partnership establishment and maintenance ▪ Global industry knowledge and trends of the labour market ▪ Macro and micro-economics |
| MODULE 4: CURRICULUM DESIGN AND DEVELOPMENT | <ul style="list-style-type: none"> ▪ Curriculum writing and language skills ▪ Curriculum design and development ▪ General knowledge of TVET college programmes ▪ Distinction between vocational and occupational education ▪ Specific subject knowledge and expertise ▪ Flexible modes of delivery and Technology ▪ Knowledge of international trends specific to the learning area ▪ Research skills |

Module 1 (leadership and curriculum change) is suggested to equip college leaders with the necessary knowledge and skills through applying a combination of leadership styles best suited for influencing curriculum change in the TVET college sector. Barnett and Coate (2005) are of the view that change should be reflected in curricula, which is confirmed by Bitzer and Botha

(2011), who assert that curriculum learning has to adapt to accommodate changing societies and new ways of knowledge production.

A combination of leadership styles has emerged from the empirical data and literature study, which comprise transformational, innovation, shared and participative leadership styles to lead curriculum change in the TVET college sector (see sections 6.3.1.1 [e], 6.3.1.2 [b] to [c], 6.4.1.1 [b], 6.4.1.2 [a], [b], 6.5.1.1 [c], and 6.5.1.2 [c]). To adapt to new demands from industry, new technologies and change, it is necessary for TVET college leaders to think innovatively, which could result in a powerful influence on curriculum change in the TVET sector. A transformational leadership style is the most appropriate for an innovative leader to bring about the desired change, which is in this instance, to the TVET college curriculum. Therefore, a strong innovative culture within the entire TVET college sector is necessary in addition to innovative leaders with a transformational leadership style.

Apart from a transformational leadership style, the magnitude of change involved in curriculum reform, as well as the number of relevant stakeholders, also require the application of shared and participative leadership styles. The application of these additional leadership styles by the innovative leader will allow the full participation, consultation, and division of tasks to be shared by the relevant stakeholders during the various stages of curriculum change in the TVET sector.

Finally, a variety of change management strategies (see section 6.3.1.1 [e]) will feature in the curriculum, such as the critical exploration and evaluation of who is responsible for the development of curricula; creation of a mentorship system to support and guide leaders; and formation of partnerships with local and international universities and industry to keep abreast with technological and industrial changes. An exploration of adequate funding to support programme delivery in terms of resources, equipment and facilities will also need to feature in module 1. Relevant policy changes, as mentioned in sections 7.3.2.1 to 7.3.2.3, will thus be central to the achievement of curriculum change.

Module 2 (human, cognitive and technical competencies) can potentially empower leaders with human, cognitive and technical management skills. A combination of these traits should be applied, since one trait only cannot ensure effective leadership to bring about curriculum change.

Human skills include development areas such as interpersonal people's skills, motivating and inspiring people, flexibility and trustworthiness. Cognitive skills relevant to the context of leading curriculum change include critical, analytical and strategic thinking skills. Influence and persuasiveness also need to feature strongly to bring about current and future curriculum change. College leaders will obtain skills to become curriculum change agents through a mindset change that must inculcate the will to change.

Lastly, technical management skills, which are central features to bringing about curriculum change, involves curriculum planning and management skills, strategic planning and project management skills. Knowledge of quality management and effective verbal and written communication are also vital skills (see section 6.5.1.2 [b]).

Module 3 (industry knowledge and skills) can provide leaders with a wide range of industry related information for local, provincial, national and international labour market needs and trends (see Tables 6.6 and 6.7). It is thus important that a compulsory industry or work place component will form a critical part of the curriculum design and implementation plan. Whilst at the work place, leaders will be exposed to industry operations, as well as to the latest technology, equipment and machinery. Equally important is the acquisition of basic macro- and microeconomics as a central leadership knowledge feature to gain an understanding of how the economy operates.

Curriculum change can result in improved productivity in the work place (see section 6.5.1.1 [b]), hence it become important for leaders to gain knowledge and skills of industry and the economy to ensure regular curriculum review and responsiveness of TVET college curricula. TVET college graduates can contribute to improved productivity in the work place if they possess relevant industry knowledge and experience. Besides, industry involvement in curriculum development is vital to ensure improved TVET college relationships with industry, which can support the enhancement of student employment rates (see section 5.6.1.1 [g]).

Module 4 (curriculum design and development) can equip leaders with knowledge and skills linked to basic elements of curriculum design and writing processes. The distinction between vocational and occupational education will be clarified to ensure a unified understanding and definition of these two education types as a central theme and focus of the entire curriculum. In addition, this element can provide extensive capacity building to develop the parallel

curriculum, as explained in conclusion number 2, that will either path directly to the workplace or articulate to higher education programmes (see sections 7.2.2 and 7.3.2.1).

Another important factor is that capacity building towards research will produce results on the academic school level and social background of prospective TVET college students. These results will critically influence considerations by the curriculum writing team to determine admission requirements, design and content of the parallel curriculum (see sections 7.2.1 and 7.3.2.2). In addition, the need to recognise and include flexible modes of delivery, including the use of technology, during the design and development phase is important to ensure inclusivity of the varied needs of students. The role of technology as a mode of curriculum delivery, diversification of programmes, student target market and growth in student numbers are key factors to broaden access and expansion of programme offerings. Furthermore, knowledge of South African and international labour market and economic trends, specific to the learning area field, is necessary for curriculum benchmarking and industry responsiveness. Moreover, development of futuristic job opportunities will form the backbone for international benchmarking, as well as responsiveness to local and national demands.

To enhance practical industry relevance, as well as academic disciplinary knowledge, theory and practical subject matter knowledge and experience of TVET college leaders will be developed or upgraded. In this manner, the knowledge and experience of the relevant learning field and required resources to develop a curriculum will be achieved. In addition, TVET college leaders must also have knowledge of assessment, moderation and verification processes. Administrative and organisational skills, good communication and language are also vital skills, besides knowledge, to obtain for effectively leading the curriculum design and development processes. Finally, basic research skills will form an integral part of the curriculum leadership programme to enable leaders to conduct and analyse information relevant to curriculum change and broader TVET college sector challenges upon which important curriculum related decisions are based (see sections 5.4.1.1 [b] and 5.6.1.1 [h]).

IMPLICATIONS FOR FUTURE RESEARCH

The study pointed towards a number of possible future research topics that could add further value to this research. However, the topics are not limited to those suggested.

Firstly, studies in TVET colleges within the other eight provinces of South Africa should be considered. This could add value to the verification, credibility, and expansion of modules and key elements, as well as to the need of a framework for facilitating curriculum change. The extension of the research to other provinces could ensure general support and acceptance of the need for such a framework and can strengthen the approval process for such a curriculum to be developed by the relevant authorities.

Secondly, the influence on TVET college student retention and certification rates due to the level of academic preparedness of students coming from the basic education sector needs further investigation. The results of this study could influence the level and type of curriculum design and content developed, which should make provision for different types of student academic abilities. That could lead to increased student success rates, career paths and articulation opportunities to higher education programmes or the work place.

Thirdly, public TVET college graduate employment rates of occupationally directed programmes inclusive of qualified artisans, Report 191 (National Accredited Technical Education) and the National Certificate Vocational programmes, and its impact on the South African economy, should be investigated. Proper monitoring and evaluation of programmes could provide return on investment, since millions of rands are invested by government on an annual basis to produce these TVET college graduates.

Fourthly, the current experience and view of industry regarding TVET college programme offerings, as well as graduates in their employment, also needs investigation. The results of the proposed future research could provide an insight into the needs of industry that should be incorporated into the curriculum to ensure programme responsiveness, as well as enhancement of industry involvement, and possible student employability and work readiness opportunities.

LIMITATIONS

The study was conducted at five TVET colleges of the Western Cape Province due to reasons of close proximity, time constraints and costs involved. Furthermore, the closed-question section of the online survey questionnaire compelled respondents to answer all questions regardless of their subject expertise, which led to some of the contradictory comments found in the closed-question section. Another limitation of the research was the availability of staff

to participate in focus group interviews, due to their hectic work schedules. That resulted in over-representation of the views expressed by specific subject specialists in relation to other programmes or subject areas. The researcher's distance from the five TVET colleges and personal workload also played a role in accessing opportunities to probe respondents. Lastly, it needs to be noted that only a limited number of published sources on TVET (especially in South Africa) are available, which did impact on the scope of the study.

CONCLUSION

The aim of the study was to develop and suggest a curriculum leadership framework for curriculum change in the TVET college sector. In this sense the study has substantially contributed to the extension of a conceptual understanding of the key factors and leadership features needed for TVET college leaders to lead curriculum change. In addition, the study reported on current and future challenges, and subsequently partly addressed the strategies needed to capacitate TVET college leaders for current and future curriculum challenges.

As its main contribution the study postulates a better understanding of vocational and occupational education in general. More specifically, it highlighted key factors such as leadership features that are necessary for TVET college leaders to effectively lead curriculum change in TVET colleges. It is hoped that this study will make some modest contribution to research into higher education and the TVET college sector, in particular in the Western Cape, but also in South Africa at large.

REFERENCES

- Abedian, I. & Standish, B. 1992. *Economic growth in South Africa: Selected policy issues*. Cape Town: Oxford.
- Adams, F. 2006. Managerialism and higher education governance: Implications for South African Universities. Unisa Press: *SAJHE*, 20(1):2-14.
- African National Congress. 1994. *The Reconstruction and Development Programme*. Johannesburg: Umanyano Publications.
- Agrawal, T. 2012. Vocational Education and Training in India: Challenges, status and labor market outcomes. *Journal of Vocational Education and Training*, 64(4):453-474.
- Akomaning, E., Voogt, J.M. & Pieters, J.M. 2011. Internship in Vocational Education and Training: Stakeholders' perceptions of its organization. *Journal of Vocational Education and Training*, 63(4):575-592.
- Albashiry, N.M., Voogt, J.M. & Pieters, J.M. 2015. Curriculum Design Practices of a Vocational Community College in a Developing Context: Challenges and Needs. *Community College Journal of Research and Practice*, 39(12): 1137–1152. DOI: 10.1080/10668926.2014.942894 (Published online: 20 March 2015). Retrieved from <http://dx.doi.org/10.1080/10668926.2014.942894> [2017, June 8].
- Ali, M. 2002. *Successful manager's handbook*. London: Doeling Kindersley.
- Allais, S.M. 2007. Why the South African NQF failed: Lessons for countries wanting to introduce National Qualification Framework. *European Journal of Education*, 42(4): 523-547.
- Allais, S.M. 2012. Will Skills Save Us: Rethinking the Relationship between Vocational Education, Skills Development Policies, and Social Policy in South Africa. *International Journal of Education Development*, 32(5):632-642.
- Anyangwe, E. 2012. *Making the case for internal communications in higher education*. Retrieved from <http://www.theguardian.com/highereducationnetwork/blog/-2012/jul/17/internal-communications-in-highereducation> [2017, May 15].

- Ashton, D. & Green, F. 1996. *Education, training and the global economy*. Cheltenham: Edward Elgar.
- Asif, S. & Sargeant, A. 2000. Modelling internal communications in the financial services sector. *European Journal of Marketing*, 34(3/4):299-317.
- Assiter, A. 1995. *Transferable skills in Higher Education*. London: Kogan Page.
- Australian Government. 2008. *Australian Qualifications Framework Council (AQFC)*. National Centre for Vocational Education Research: Glossory of VET.
- Australian Government. 2011a. *Council of Australian Government (COAG) Reform Council (2011). Skills and Workforce development 2010: Comparing performance accross Australia. Report to the Council of Australian Governments*. Canberra: Council of Australian Government.
- Australian Government. 2011b. *Department of Education Employment and Workplace Relations (2011). Australian Jobs*. Canberra: DEEWR.
- Australian Government. 2011c. *National Vocational Education and Training Regulator Act No. 12 of 2011*.
- Australian Government. 2012. *Labour Market Research and Analysis Branch (2012). Skills Shortages Australia (2011)*. Canberra: DEEWR.
- Babbie, E. 2001. *The Practice of Research*. (9th Edition). Belmont: Wadworth.
- Badroodien, A. & Kraak, A. 2006. *Building FET College responsiveness: The role of linkages and programmes*. Pretoria: Department of Education, Science and Skills Development.
- Bakah, M.A., Voogt, J.M. & Pieters, J.M. 2012. Professional development needs of polytechnic lecturers in a curriculum reform scenario. *International Journal of Training and Development*, 16:67-76.
- Banathy, BH. & Jenks, C. L. 1990. *The transformation of education by design: A leadership guide for educational decision makers*. San Fransisco: Far West Lab for Educational Research and Development.

- Baqadir, A., Patrick, F. & Burns, G. 2011. Addressing the skills gap in Saudi Arabia: Does vocational education address the needs of private sector employers? *Journal of Vocational Education and Training*, 63(4):551-561.
- Barnett, R. & Coate, K. 2003. *Learning to effect*. Buckingham: Society for Research into Higher Education and Open University Press.
- Barnett, R. & Coate, K. 2005. *Engaging the curriculum in higher education*. Berkshire: The Society for Research into Higher Education and Open University Press.
- Baron, P. 1993. Case study: A college considers university status. *Nonprofit management and leadership*, 3(4):429-431.
- Barr, R.B. & Tagg, J. 1995. From teaching to learning – A new paradigm for undergraduate education. *CHANGE- NEW ROCHELLE- 27*, 3(6):12-25.
- Barrett, D.J. 2002. Change communication: Using strategic employee communication to facilitate major change. *Corporate communication: An International Journal*, 7(4): 219-231.
- Barth, R.S. 1990. *Improving schools from within: Teachers, parents and principals can make the difference*. San Francisco: Jossey-Bass.
- Bass, B.M. & Stogdill, R.M. 1990. *Bass and Stogdill's handbook of leadership: Theory, research and managerial applications*. (3rd Edition). New York: Free Press.
- Bass, B.M. 1985. *Leadership and performance beyond expectations*. New York: The Free Press.
- Bennet, C.A. 1937. *History of manual and industrial education 1870 to 1917*. Peoria, IL: C.A. Bennet Co.
- Bennis, W.G. 1984. The four competencies of leadership. *Training and Development Journal* 38(8):14:19.
- Bennis, W.G. & Nanus, B. 1985. *Leaders: The strategies for taking charge*. New York: Harper & Row.

- Bensimon, E.M. 1993. *Redesigning collegiate leadership: Teams and teamwork in higher education*. Baltimore: Johns Hopkins University Press.
- Bensimon, E.M., Neumann, A. & Birnbaum, R. 1989. *Making sense of administrative leadership: The 'L' word in higher education. (ASHE - Eric Higher Education Report No.1)*. Washington, DC: George Washington University.
- Bentley, T., 2002. Distributed intelligence: leadership, learning and creativity. Leading Edge Seminar at NCSL, November. *National College for Leadership*, 9:1.
- Biernacki, R. 1995. *The fabrication of labor: Germany and Britain, 1640-1914*. Berkeley, CA: University of California Press.
- Binney, G., Wilke, G. & Williams, C. 2005. *Living Leadership. A practical guide for ordinary heroes*. London: Prentice Hall.
- Birley, G. & Moreland, N. 1998. *A Practical Guide to Academic Research*. London: Kogan Page Ltd.
- Birnbaum, R. 1988. *How colleges work: The cybernetics of academic organization and leadership*. San Francisco: Jossey-Bass.
- Bitzer, E. & Botha, N. 2011. *Curriculum Inquiry in Higher Education*. Stellenbosch: SUN MeDIA.
- Bitzer, E. 2009. *Higher Education in South Africa: A scholarly look behind the scenes*. Stellenbosch: SUN MeDIA.
- Boud, D. and Garrick, J. eds., 1999. *Understanding learning at work*. Washington: Taylor & Francis.
- Blake, R.R. and Mouton J.S., 1978. *"The new management grid"*. Houston: Gulf Publishing.
- Blake, R.R., Mouton, J.S. & Williams, M.S. 1981. *The academic administrator grid*. San Francisco: Jossey-Bass.
- Booth, C. 1895. *Life and labour of the people in London* (Vol. 5, Population classified by trades). London: Macmillan.

- Bottery, M. 2007. Reports from the front line: English headteachers work in an era of practice centralization. *Educational Management Administration & Leadership*, 35(1):89-110.
- Branson, N., Hofmeyr, C., Papier, J. & Needman, S. 2015. Post-school education: Broadening alternative pathways from school to work. *South African Child Gauge*, 1:1-8.
- Bray, R.A. 1909. The apprenticeship question. *Economic Journal*, 19:404-15.
- Brink, P.J. & Wood, M.J. 1998. *Advanced design in nursing research*. (2nd Edition). London: Sage.
- Brockbank, A. & McGill, I. 1998. *Facilitating reflective learning in higher education*. Buckingham: Open University Press.
- Brock-Utne, B. 1996. Globalisation of learning – The role of the universities in the south: With a special look at Sub-Saharan Africa. *International Journal of Educational Development*, 16(4):335-346.
- Brockmann, M., Clarke, L. and Winch, C. 2008. "Knowledge, skills, competence: European divergences in vocational education and training (VET)—the English, German and Dutch cases." *Oxford review of education*, 34(5):547-567.
- Brotherson, M.J. 1994. Interactive focus group interviewing: A qualitative research method in early intervention. *Topics in early childhood special education*, 14(1):101-118.
- Bryman, A. 2006. *Mixed Methods. A four-volume set*. London: Sage.
- Bulmer, M. & Warwick, D.P. 1993. *Social research in developing countries: Surveys and censuses in the third world*. London: UCL Press.
- Bunting, I. 2007. *Student tuition fees and the resourcing of public higher education*. Pretoria: Department of Education.
- Burns, J. 1978. *Leadership*. New York: Harper and Row Publishers.
- Burns, M. 2002. Making innovation stick. *Education Review Innovation and Autonomy*, 16(1):51-55.

- Bush, T. & Glover, D. 2003. *School Leadership: Concepts and Evidence*. Nottingham: National College for School Leadership.
- Bush, T. & West-Burnham, J. 1994. *The principles of educational management*. Oxford: Longman Group Ltd.
- Bush, T. 2003. *Theories of educational leadership and management*. (3rd Edition). New Delhi: Sage.
- Bush, T. 2004. The National College for School Leadership. Purpose, Power and Prospects. *Educational Management Administration & Leadership*, 32(3):243-249.
- Bush, T. 2007. Educational leadership and management: Theory, policy and practice. *South African Journal of Education*, 27(3):391-406.
- Busher, H. 2006. *Understanding educational leadership: People, power and culture*. Maidenhead: Open University Press.
- Callan, V.J. 2001. *What are the essential capabilities for those who manage training organisations?* Adelaide: National Centre for Vocational Education Research (NCVER).
- Callan, V.J., Mitchell, J., Clayton, B. & Smith, L. 2007. *Approaches for sustaining and building management and leadership capability in VET providers*. Adelaide: National Centre for Vocational Education Research (NCVER).
- Candy, P.C. 2000. *July learning and earning: Graduate skills for an uncertain future*. Yeppoon, Australia: Paper presented at the International Lifelong Learning Conference.
- Carbonnier, G. Carton, M. & King, K. 2014. *Education, Learning, Training Critical Issues for Development*. Boston: Leiden.
- Carl, A.E. 1995. *Teacher empowerment through curriculum development: Theory into practice*. (1st Edition). Kenwyn: Juta.
- Carl, A.E. 2012. *Teacher empowerment through curriculum development: Theory into practice*. (4th Edition). Cape Town: Juta.

- Central Advisory Council for Education (CACE). 1967. *Children and their primary schools (The Plowden Report)*. London: HMSO.
- Chandler, D. 2002. *Semiotics: The basics*. London: Routledge.
- Chappell, C., Rhodes, C., Solomon, N., Tennant, M. and Yates, L., 2003. *Reconstructing the lifelong learner: Pedagogy and identity in individual, organisational and social change*. London: Routledge.
- Cherryholmes, C.H. 1992. Notes on pragmatism and scientific realism. *Educational Researcher*, 21(6):13-17.
- Chisholm L. 1983. Redefining skills: Black education in South Africa in the 1980s. *Comparative Education*, 19(3):357-371.
- Chisholm, L. 1992. *South Africa's Technical Colleges: Policy options, paper presented to National Education Policy Investigation, Human Resource Development Group*. University of Durban-Westville and University of the Witwatersrand, Education Policy Unit.
- Chisholm, L. 2012. Higher education and lifelong learning: renewing the educational and social mission of universities in Europe. *Second International Handbook of Lifelong Learning*. Dordrecht: Springer.
- Christie, P. & Collins, C. 1984, in P. Kallaway (ed.). *Apartheid and Education*. Johannesburg: Ravan Press.
- Claassen, T. & Verwey, S. 1998. Managing communication in the organisation: An integrated communication management model. *Communicare*, 17(2):73-89.
- Clark, B. 1983. *The Higher Education System*. Berkeley, CA: University of California Press.
- Clark, B.R. 1993. *Faculty: Differentiation and dispersion*. Baltimore: The Johns Hopkins University Press.
- Clarke, L. & Herrmann, G. 2004. The institutionalisation of skill in Britain and Germany: examples from the construction sector. *The skills that matter*. London: Palgrave.

- Clarke, L. & Winch, C. 2007. *Vocational Education (International Approaches, Developments and Systems)*. London: Routledge.
- Cloete, N. 2009. *Responding to the educational needs of post-school youth: Determining the scope of the problem and developing a capacity-building model*. Wynberg, Cape Town: Centre for Higher Education and Training (CHET).
- Clough, P. & Nutbrown, C. 2002. *A student's guide to methodology*. London: Sage.
- Coates, H., Meek, L., Brown, J., Friedman, T., Noonan, P. & Mitchell, J. 2013. VET leadership for the future – characteristics, contexts and capabilities. *Journal of Further and Higher Education*, 37(6):819-843.
- Cockett, L. 2007. *Models of communication*. Retrieved from <http://faculty.juniata.edu/-cockett/teaching/130/modelsmain.html> [2017, May 12].
- Coghlan, D. & McAuliffe, E. 2003. *Changing healthcare organisations*. Dublin: Blackhall Publishing.
- Cohen, L., Manion, L. & Morrison, K. 2007. *Research Methods in education*. Abingdon, Oxon: Routledge.
- Coles, M. & Oates, T. 2005. *European reference levels for education*. London: Quality and Curriculum Authority.
- Coles, M. & Southworth, G. 2004. *Developing leadership: Creating the schools of tomorrow*. Berkshire: McGraw-Hill.
- Collinson, D. (2005). Dialectics of leadership. *Human Relations*, 58(11):1419-1442.
- Connor, P. E. & Lake, L.K. 1988. *Managing organizational change*. New York: Praeger.
- Cornbleth, C. 1990. *Curriculum in context*. Basingstoke: Falmer Press.
- Corson, J.J. 1960. *Governance of colleges and universities*. New York: McGraw Hill.
- Cotgrove, S.F. 1958. *Technical Education and Social Change*. London: Allen & Unwin.
- Cotton, K. 2003. *Principles and student achievement: What the research says*. City, VA: Association for Supervision and Curriculum Development.

- Creswell, J.W. 2009. *Research Design: Qualitative, quantitative and mixed methods approaches*. (3rd Edition). Thousand Oaks, CA: Sage.
- Cross, K. 1999. *Learning is about making connections: The Cross Papers Number 3*. Mission Viejo, CA: League for Innovation in the Community College & Educational Testing Services.
- Cross, M. & Chisholm, L. 1990. *The roots of segregated schooling in twentieth century South Africa. Pedagogy of domination: Toward a democratic education in South Africa*. New Jersey: Africa World Press Inc.
- Crosser, M., Kraak, A. & Winnaar, L. 2011. *Further Education and Training (FET) Colleges at a glance in 2010: FET Colleges Audit May to July 2010*. Cape Town: Human Sciences Research Council (HSRC) Press.
- Cummings, T.G. & Worley, C.G. 2001. *Essentials of organization development and change*. Ohio: South-Western College Publications.
- Currie, G., Boyett, I. & Suhomlinova, O. 2005. Transformational leadership within secondary schools in England. A panacea for organizational ills? *Public Administration*, 83(2): 265-96.
- Daszko, M. & Steinberg, S. 2005. Survival is optional: Only leaders with new knowledge can lead the transformation. *Transformation*, 408, pp. 247-7757. Retrieved from http://cflcs.com/docs/Survival%20is%20Optional_Daszko_Sheinberg.pdf [2015, February 20].
- Day, D.V., Gronn, P. & Salas, E. 2004. Leadership capacity in teams. *The Leadership Quarterly*, 15(6):857-880.
- De Vos, A.S. 1998. *Research at grassroots: A primer for the caring professions*. Pretoria: Van Schaik.
- Dearden, L. 1999. The effects of family and ability on men's educational attainment in Britain. *Labour Economics*, 6(4):551-567.
- Dearden, R.F. 1984. Education and Training. *Westminster Studies in Education*, 7:57-66.

- Delpont, M. Hay-Swemmer, D. & Wilkinson, A. 2014. An internal communication model for multi-campus higher education institutions in South Africa. *Journal for New Generation Sciences*, 12(1):21-46. SA ePublication Journal Collection.
- Den Hartog, D.N., House, R.J., Hanges, P.J., Ruiz- Quintanilla, S.A. & Dorfman, P.W. 1999. Culturally specific and cross-culturally generalizable implicit leadership theories: Are attributes of charismatic or transformational leadership universally endorsed? *The Leadership Quarterly*, 10: 219-256. Science Publishing Company Inc.
- Diamond, R. M. 2008. *Designing and assessing courses and curricula: A practical guide*. (3rd Edition). San Francisco, CA: Jossey-Bass.
- Department of Education. 1994. *Report of an Ad Hoc Committee of the CHED. The future engagement of technical college education*. Pretoria: Department of Education.
- Department of Education. 1995. *COTEP document*. Pretoria: Department of Education.
- Department of Education. 1997. *Outcomes-Based Education in South Africa*. Pretoria: Department of Education.
- Department of Education. 1998a. *Education White Paper 4: A programme for the transformation of further education and training: Preparing for the twenty-first century through education, training and work*. Pretoria: Department of Education.
- Department of Education. 1998b. *Further Education and Training Colleges Act No. 98 of 1998*. Pretoria: Department of Education.
- Department of Education. 1998c. *Green Paper on Further Education and Training: Preparing for the twenty-first century through education, training and work*. Pretoria: Department of Education.
- Department of Education. 1998d. *National Curriculum Framework for the Further Education and Training Band. Discussion Document of Education*. Pretoria: Department of Education.
- Department of Education. 1999. *National Strategy for Further Education and Training 1999-2001. Preparing for the twenty-first century through education, training and work*. Pretoria: Department of Education.

Department of Education. 2001. *A new institutional landscape for public further education and training colleges: Reform of South Africa's technical colleges*. Pretoria: Department of Education.

Department of Education. 2006a. *Further Education and Training Colleges Act No. 16 of 11 December 2006*. Government Gazette No. 29469. Pretoria: Department of Education.

Department of Education. 2006b. *National Certificate Vocational Certificate (NCV) Policy 2006*. Pretoria: Department of Education.

Department of Education. 2006c. *National Policy regarding the amendment of Further Education and Training programmes*. Government Gazette number 28677 (Vol. 302). Pretoria: Department of Education.

Department of Education. 2007a. *FET Colleges: Institutions of first choice*. Pretoria: Department of Education.

Department of Education. 2007b. *Information on the State Budget of Higher Education*. Pretoria: Department of Education.

Department of Education. 2008a. *Approval for the phasing out of the programmes of the National N Certificates: N4–N6 and National N Diploma Qualifications offered at Further Education and Training Colleges*. Government Gazette No. 31711. (Vol. 522). Pretoria: Department of Education.

Department of Education. 2008b. *National Plan for Further Education and Training*. Government Gazette Number 31712 (Vol. 522). Pretoria: Department of Education.

Department of Education. 2009. *National Policy regarding the amendment of Further Education and Training programmes*. Government Gazette Number 32810 (Vol. 534). Pretoria: Department of Education.

Department of Higher Education and Training. (2009). *FET Colleges (FETC) Amendment Bill 2011 and 2012*. Government Gazette No. 32367. Pretoria: Department of Higher Education and Training.

Department of Higher Education and Training. 2010a. *Discussion Document for: Challenges facing the FET College Subsystem. FET Round Table on 9 April 2010. Toward Finding Resolutions in Partnership with Stakeholders*. Pretoria: Department of Higher Education and Training.

Department of Higher Education and Training. 2010b. *FET College Round Table and Summit. Report to the Further Education and Training Summit 2010. Summary of Task Team Reports (Task Teams 1–3) on 31 August 2010*. Pretoria: Department of Higher Education and Training (DHET) in collaboration with Swiss-South African Cooperation Initiative (SSACI).

Department of Higher Education and Training. 2010c. *National Policy regarding the amendment of Further Education and Training programmes*. Government Gazette number 33793. (Vol. 545). Pretoria: Department of Higher Education and Training.

Department of Higher Education and Training. 2010d. *Strategic Plans 2010-2015 and Operational Plans 2010-2011*. Pretoria: Department of Higher Education and Training.

Department of Higher Education and Training. 2011. *FET Colleges Amendment Bill 2011*. Pretoria: Department of Higher Education and Training.

Department of Higher Education and Training. 2011/2012. *Annual Report*. Pretoria: Department of Higher Education and Training.

Department of Higher Education and Training. 2012a. *Further Education and Training (FET) Amendment Bill 2012*. Pretoria: Department of Higher Education and Training.

Department of Higher Education and Training. 2012b. *Green Paper for Post-School Education and Training*. Pretoria: Department of Higher Education and Training.

Department of Higher Education and Training. 2013a. *Further Education and Training Colleges (FETC) Amendment Act No. 1 of 2013*. Pretoria: Department of Higher Education and Training.

Department of Higher Education and Training. 2013b. *White Paper for Post-School Education and Training. Building an expanded, effective and integrated post-school system*. Pretoria: Department of Higher Education and Training.

- Department of Higher Education and Training. 2015a. *Draft National Register of Artisans Regulations, 2015 Skills Development Act, 1998 (Act 97 of 1998)*. *Government Gazette No. 38458, 13 February. Notice 104 of 2015*. Pretoria: Department of Higher Education and Training.
- Department of Higher Education and Training. 2015b. *Funding norms and standards for Technical and Vocational Education and Training (TVET) Colleges*. *Government Gazette No. 38796*. Pretoria: Department of Higher Education and Training.
- Department of Higher Education and Training. 2015c. *Tracer Study of the Transition of Students from TVET Colleges to the Labour Market. South Africa Joint Report by SSACI, JET Education Services and the NBI*. Pretoria: Department of Higher Education and Training.
- Department of Labour. 1994. *A discussion on a National Training Strategy Initiative*. Pretoria: National Training Board.
- Department of Labour. 1998. *Skills Development Act No. 97 of 1998 (amended in 2011)*. Pretoria: Department of Labour.
- Department of Labour. 1999. *National Skills Development Levy (SDLA) of Act 9 (1999)*. Pretoria: Department of Labour.
- Department of Labour. 2001. *The National Skills Development Strategy: Skills for Productive Citizenship for All*. Pretoria: Department of Labour.
- Department of Labour. 2011–2016. *National Skills Development Strategy (NSD III)*. Pretoria: Department of Labour.
- Descy, P. & Tessaring, M. 2000. *Training in Europe: Second Report on Vocational Training Research in Europe. Background Report*. Volumes 1–3. CEDEFOP Reference Series (2001).
- Descy, P. & Tessaring, M. 2001. *Training and Learning for Competence: Second Report on Vocational Training Research in Europe*. *CEDEFOP Reference Series*. Greece: CDEFOP.

- Dif, M., Sidlauskiene, D., Pranculyte, J. & Spankis, L. 2012. Funding and stakeholder roles in the development of apprenticeship – What can be learnt from the experience of other countries? Change management in TVET Colleges. Presented at the European Conference on Educational Research (ECER): The Need for Educational Research to Champion Freedom, Education and Development for All. University of Cádiz, 2012.
- Dimmock, C. 2003. Leadership in learning-centred schools: cultural context, functions and qualities, in M. Brundrett, N. Burton & R. Smith (eds.). *Leadership in Education*. London: Sage.
- Doll, R.C. 1974. *Curriculum improvement – decision making and process*. (3rd Edition). Boston, MA: Allyn & Bacon.
- Domatob, J.K. 1998. Communication Training in Africa. *Issues in Mass Communication: The Basic Concepts*, 1:88.
- Drucker, P.F. 1989. What business can learn from nonprofits. *Harvard Business Review*, 67(4): 88-93.
- Du Toit, G. 2011. Curriculum types and models, in E. Bitzer & N. Botha (eds.). *Curriculum inquiries in South African Education: Some scholarly affirmations and challenges*. Stellenbosch: SUN MeDIA.
- Duffy, B. 1993. The analysis of documentary evidence, in J. Bell (ed.). *Doing Your Research Project*. Buckingham: Oxford University Press.
- Duncan, K. 2009. The current state of the FET college sector in South Africa. Paper presented at the Colloquium on the State and Role of FET Colleges in South Africa held at Johannesburg Central, 5 December 2009. Johannesburg.
- Eastern Cape Consortium for Socio-Economic Cooperation (ECCSEC) – Joint Initiative for Priority Skills Acquisition (JIPSA). 2009. *Further Education and Training (FET) Colleges Systemic Audit 2008/2009: Towards improving performance in the FETC sector*. Bisho: Eastern Cape: Department of Education, ECCSEC and JIPSA.

- Economic and Social Research Institute. 2012. *Quarterly Economic Review Winter 2011/Spring 2012*. CSO Ireland. Retrieved from http://www.esri.ie/irish_economy/[2015, February 20].
- Eddy, P.L. 2010. *Community College Leadership: A multi-dimensional model for leading change*. Virginia: Stylus.
- Edwards, A. 2011. Building common knowledge at the boundaries between professional practices: Relational agency and relational expertise in systems of distributed expertise. *International Journal of Educational Research*, 50(1):33-39.
- Edwards, A. 2014. *Task design, subject pedagogy and student engagement*. London: Routledge.
- Eisner, E.W. 1985. *The educational imagination*. New York: Macmillan.
- Ellström, P.E. 1999. *The role of labour market programmes in skill formation: The case of Sweden*. In *bridging the skills gap between work and education*. Dordrecht: Springer.
- Engeström, Y. 1999. *Learning by expanding: 10 years after*. Marburg: BdWi-Verlag.
- Feinberg, W. 1983. *Understanding Education: Towards a Reconstruction of Educational Inquiry*. Cambridge University Press.
- Ferreira, M. and Puth, G., (1988). *Focus group interviewing. Introduction to qualitative research methods*. Pretoria: Human Sciences Research Council (HSRC) Press.
- Fiedler, F.E. 1993. *The leadership situation and the black box in contingency theories*. San Diego: Academic Press.
- Finance and Fiscal Commission. 2013. Funding of the South African Further Education and Training Sector. *Submission for the division of revenue (budget proposals) 2014/2015*. Pretoria: Finance and Fiscal Commission. Chapter 3, Table 7: Participation of 19-24 year olds in FET college education per province – 2011, p.39. Retrieved from <http://www.ffc.co.za/index.php/2uncategorised/90-chapters-2014-15>, [2015, December 4].

- Fisher, G., Jaff, R., Powell, L & Hall, G. 2003. Public further education and training colleges. *Human Resources Development Review 2003: Education, Employment and Skills in South Africa*. Cape Town and East Lansing: Human Sciences Research Council (HSRC) Press and Michigan University Press.
- Foley, J. & Conole, L. 2003. *A draft leadership capability framework to assist leadership development in the Victorian TAFE sector*. Melbourne: Wheeler & Stobel.
- Fourie, M. 1998. Institutional Governance of Higher Education in Transition: A South African Perspective. Unpublished Ph.D Thesis. Bloemfontein: University of the Orange Free State.
- Freeman, A. 2009. *Reinventing internal communications*. Retrieved from <http://www1.umn.edu/-urelate/pdf/RICrecommendations4-09.pdf> [2017, May 16].
- Fullan, M. 2001. Planning, doing and coping with change, in M. Preedy, R. Glatter & C. Wise (eds.). *Strategic leadership and educational improvement*. London: Sage.
- Fullan, M. 2014. *Principal: Three keys to maximizing impact*. New Jersey: Wiley.
- Gamble, J. 2003. *Curriculum Responsiveness in TVET Colleges*. Pretoria: Human Sciences Research Council (HSRC) Press.
- Gamble, J. 2004. Tacit knowledge in craft pedagogy: A Sociological Analysis. Unpublished Ph.D Thesis. Cape Town: University of Cape Town.
- Gelb, S. 1991. South Africa's economic crisis. An overview in South Africa's economic crisis, in S. Gelb (ed.). *South Africa's economic crisis*. Cape Town: David Philip.
- German Government. 2010. *National Education Report. German version 2010*. German Government. Retrieved from full text: http://www.bildungsbericht.de/daten2010/-bb_2010.pdf VET Data Report Germany 2011; English short version: <http://www.bildungsbericht.de/daten2010-/summary10.pdf> [2017, May 16].
- German Government. 2011a. *Report of VET in Germany 2011*. Federal Ministry for Education and Research. Retrieved from http://www.bmbf.de/pub/bbb_2011_en.pdf [2017, May 16].

- German Government. 2011b. *VET Data Report Germany. The Federal Institute for Vocational Education and Training (2011)*. <http://www.bibb.de/en/index.htm> conducts research on VET issues. The Institute for Employment Research (IAB; <http://iab.de/en/iab-aktuell.aspx>) on the labour market. [2017, May 16].
- German Government. 2011c Vocational Training Regulations and the Process Behind Them. (2011c). Retrieved from http://www.bibb.de/dokumente/pdf/a45_entstehung-von-ausbildungsordnungen_en.pdf [2017, May 16].
- Gervedink Nijhuis, C.J., Voogt, J.M. & Pieters, J.M. 2012. The cultural complexity of international collaboration: Conditions for sustainable curriculum development in Ghana. *International Journal of Intercultural Relations*, 36(5):647-658.
- Gewer, A. 2001. Macro-strategies and Micro-realities: Envolving policies in Further Education and Training (FET), in A. Kraak and M. Young (eds.). *Education in retrospect: Policy and implementation since 1990*. Cape Town: Human Sciences Research Council (HSRC) Press.
- Gewer, A. 2002. *Evaluation of the Colleges Collaboration Fund: Report on baseline TVET Colleges*. Johannesburg: JET Education Services.
- Gewer, A. 2010. *Choices and chances: FET Colleges and the transition from school to work. National Business Initiative. Report on FET Research Study, commissioned by HRD Support Unit*. Johannesburg: Department of Higher Education and Training.
- Gibson, J.L., Ivancevich, J.M., Donnelly, J.H. & Konopaske, R. 2012. *Organizations: Behavior, structure, processes*. (14th Edition). New York: McGraw-Hill Irwin.
- Gillis, A. & Jackson, W. 2002. *Research for nurses: Methods and interpretation*. Philadelphia: FA Davis Company.
- Giroux, H. A. 1992. *Border Crossings. Workers and the politics of education*. New York: Routledge.
- Gittens, B. 2008. Transformational leadership behaviour: An opportunity for academic departmental chairs, in R.S. Morse & T.F. Buss (eds.). *Innovations in public leadership development*. New York: ME Sharpe.

- Gizir, S. & Simek, H. 2005. Communication in an academic context. *Higher Education*, 2005, 50:197-221.
- Gleeson, D. & Knights, D. 2008. Reluctant leaders: An analysis of middle managers' perception of leadership in further education in England. *Leadership*, 4(1):49-72.
- Gliddon, D.G. 2006. *Forecasting a competency model for innovation leaders using a modified Delphi technique*. Unpublished Ph.D Thesis. Pennsylvania State University.
- Gnanam, A. 2000. Core competency & Higher Education. *South African Journal of Higher Education*, 14(2):147-151.
- Gorard, S. & Taylor, C. 2004. *Combining methods in educational and social research*. Maidenhead: Open University Press.
- Gospel, H. & Fuller, A. 1998. The modern apprenticeship: New Wine in old bottles? *Human Resource Journal*, 8(1):5-22.
- Gospel, H. 1995. The decline of apprenticeship training in Britain. *Industrial Relations Journal*, 26 (1), 32-44.
- Graetz, F., Rimmer, M., Lawrence, A. & Smith, A. 2006. *Managing organisational change*. (2nd Edition). Milton Qld: John Wiley & Sons Ltd.
- Green, M.F. & Hayward, F.M. 1997. Forces for change, in M.F. Green (ed.). *Transforming Higher Education: Views from leaders around the world*. Phoenix, Arizona: American Council on Education & Oryz Press.
- Green, M.F. & McDade, S.A. 1991. *Investing in Higher Education: A handbook of Leadership Development*. Washington: American Council on Education.
- Greenberg, J. 2011. *Behaviour in organizations*. Upper Saddle River. New Jersey: Prentice Hall.
- Greinert, W.D. 2001. Die Übertragbarkeit des Dualen Systems in Entwicklungsländer: Möglichkeiten und Begrenzungen einer politischen Strategie, in T. Deissinger (ed.). *Berufliche Bildung zwischen nationaler Tradition und globaler Entwicklung*. 45-60.

- Greinert, W.D. 2007. The German philosophy of vocational education, in L. Clarke & C. Winch (eds.). *Vocational Education: International approaches, developments and systems*. London: Routledge.
- Grint, K. 2005. *Leadership: Limits and Possibilities*. Basingstoke: Palgrave Macmillan.
- Grogan, M. 2013. *Jossey-Bass reader on educational leadership*. (3rd Edition). New Jersey: Wiley.
- Gronn, P. 1996. From transactions to transformations. *Educational Management and Administration*, 24(1):7-30.
- Gronn, P. 2000. Distributed Properties: A new architecture for leadership. *Educational Management and Administration*, 28(3):317-338.
- Gronn, P. 2002. Distributed leadership, in K. Leithwood, P. Hallinger, K. Seashore-Louis, G.Furman-Brown, P. Gronn, W. Mulford & K. Riley (eds.). *Second International Handbook of Educational Leadership and Administration*. Dordrecht: Kluwer.
- Grubb, W.N., Davis, G. & Lum, J. (1991). *The cunning hand, the cultured mind: Models for integrating Vocational and Academic Education*. Berkeley, CA: National Centre for Research in Vocational Education.
- Grumet, M. 1981. Restitution and reconstruction of educational experience: An autobiography method for curriculum theory, in M. Lawn, L. Barton (eds.). *Re-thinking curriculum studies*. London: Groom Helm.
- Grundy, S. 1987. *Curriculum: Product or praxis?* Lewes: Falmer Press.
- Guiraud, P. 1975. *Semiology*. London: Routledge.
- Gumport, P. J. 2000. Academic restructuring: Organizational change and institutional imperatives. *Higher Education*, 39:67-91.
- Gustafson, K. L. & Branch, R. M. 2002. *Survey of instructional development models* (4th Edition). Syracuse, NY: ERIC Clearinghouse on Information and Technology.
- Hager, P. 2004a. Front Loading. *Workplace Learning and Skills Development, Educational Philosophy and Theory*, 36(5):523-534.

- Hager, P. 2004b. The competence affair or why vocational education and training urgently needs a new understanding of learning. *Journal of vocational education and training*, 56(3):409–433.
- Hallinger, P. 2003. Leading educational change. Reflections on practice of instructional and transformational leadership. *Cambridge Journal of Education*, 33(2):329-352.
- Hammersley-Fletcher, L. & Brundrett, M. 2008. Collaboration, collegiality and leadership from the head. The complexities of shared leadership in primary school settings. *British Educational Leadership, Management & Administration Society (BELMAS)*, 22(2):11-16.
- Hammersley-Fletcher, L. & Kirkham, G. 2007. Middle leadership in communities of primary school practice: distribution or deception?. *School Leadership and Management*, 27(5):423-435.
- Handy, C. 1985. *Understanding organizations*. (3rd Edition). Harmondsworth: Penquin.
- Hanks, P. & Urdang, L. 1980. *Collins Dictionary of the English Language*. London: Collins.
- Harris, T.E. 1993. *Applied Organisational Communication: Perspectives, principles and pragmatics*. New Jersey: Lawrence Erlbaum Associates, Inc.
- Harris, A. 2003. Distributed leadership in schools: leading or misleading?. *Management in Education*, 16(5):10-13.
- Harris, A. & Bennett, N. 2001. *School effectiveness and school improvement: alternative perspectives*. London: Continuum.
- Hellriegel, D. 1989. *Organisational behaviour*. (5th Edition). New York: Addison-Wesley.
- Hendry, G.D. & King, R.C. 1994. Theory of learning and knowledge: Educational implications of advances in neuroscience. *Science Education*, 78(3):223-253.
- Henning, E., Van Rensburg, W. & Smit, B. 2004. *Finding your way in qualitative research*. Pretoria: Van Schaik.

- Hersey, P. & Blanchard, K. 1988. *Management of Organizational Behavior – Utilizing Human Resources*. (5th Edition). Englewood Cliffs: Prentice Hall.
- Hippach-Schneider, U. & Wiechert, M. 2012. *International social dialogue on Technical and Vocational Education and Training (TVET). Country Report – Germany*. Federal Institute for Vocational Education and Training (BIBB).
- Hollander, E.P. 1985. *Leadership and power*. New York: Random House.
- Hollander, E.P. 1993. *Legitimacy, power and influence: A perspective on relational features of leadership*. San Diego: Academic Press.
- House, R.J. & Mitchell, T.R. 1974. Path-goal theory of leadership. *Journal of Contemporary Business*, 4: 81–97.
- Howell, J.M. & Shamir, B. 2005. *The role of followers in the charismatic leadership process: Relationships and their consequences*. Academy of Management Review.
- Hugo W. 2010. *Drawing the Line in Post-Apartheid Curriculum Studies*. In: Pinar W.F. (eds) *Curriculum Studies in South Africa*. International & Development Education. New York: Palgrave Macmillan.
- Human Sciences Research Council. 2006. *Gross Geographic Product*. Dataset. Cape Town: Human Sciences Research Council (HSRC) Press.
- Hunt, J.G. 1984. Organizational leadership: The contingency paradigm and its challenges. *Leadership: Multidisciplinary perspectives*. Chicago: Science Research Associates.
- Huxley, T.H. 1895. "Technical Education". *Essays III*. First published 1877. London: Macmillan and Co.
- Hyslop, J. 1987. *School Student Movements and State Education Policy: 1972–1987*. Johannesburg: Association for Sociology in South Africa.
- Jackson, R.J. 2013. *Never underestimate your teachers: Instructional leadership for excellence in every classroom*. City, VA: Association for Supervision and Curriculum Development.

- Jaworski, J. 1996. *Synchronicity: The inner path of leadership*. San Francisco: Berrett-Koehler.
- Johnson, M. 1967. *Definitions and models in curriculum theory*. *Educational Theory*, 17(2): 127-140. Wiley Online Library.
- Kallaway, P. 1984. *Apartheid and Education: The Education of Black South Africans*. Johannesburg: Ravan Press.
- Kayode, A.A. & Adeyemi, A.O. 2016. *Revitalization of Technical and Vocational Education for Youth Employment and Poverty Alleviation*. Kamla-Raj, *Int J Edu Sci*, 13(3):262-270.
- Keep, E. 2002. The changing meaning of skill and the shifting balance of responsibility for Vocational Education and Training – are employers calling the shots? Conference on Training, Employability and Employment. London: Monash University Centre.
- Kerr, J.F. 1968. *Changing the curriculum*. London: University of London Press Ltd.
- Kerr, S. & Jermier, J.M. 1978. Substitutes for leadership: Their meaning and measurements. *Organizational Behaviour and Human Performance*, 22(3):375-403.
- Kessels, J.W. 1999. A relational approach to curriculum design, in J. Van den Akker, R. Branch, K. Gustafson, N. Nieveen, & T. Plomp (eds.). *Design and Development methodology in Education*. Dordrecht: Kluwer Academic.
- Koen, M. 2011. *Exploring assessment for learning in one higher education classroom*. <http://hdl.hanle.net/10019.9/6846> [Accessed: 3 March 2015].
- Kotter, J.P. 1992. *What leaders really do*. Oxford: Blackwell Publishers.
- Kotter, J.P. 1995. *Leading change: Why transformation efforts fail*. Boston, MA: Harvard College.
- Kotter, J.P. 1999. *Change leadership. Executive excellence*. Boston, MA: Harvard Business School Press.

- Kouzes, J.M. & Posner, B.Z. 2007. *The leadership challenge: How to get extraordinary things done in organisations*. (3rd Edition). (First published 1978). San Francisco: Jossey-Bass.
- Kouzes, J.M. 1987. *The leadership challenge: How to get extraordinary things done in organizations*. San Francisco: Jossey-Bass Publishers.
- Kozlowski, S.W., Gully, S.M., Salals, E. & Cannon-Bowers, J.A. 1996. Team leadership and development: Theory, principles and guidelines for training leaders and teams. *Advances in interdisciplinary studies of work teams: Team leadership*, 3:253-291. Elsevier Science/JAI Press.
- Kaul, R. 1998. 'Disorders in Education: Private Enterprise and the State' in S.Shukla and R.Kaul (eds.). *Education, Development and Underdevelopment*. New Delhi: Sage.
- Kraak, A. & Hall, G. 1999. *Transforming further education and training in South Africa*. Pretoria: Human Sciences Research Council.
- Kraak, A., Paterson, A. & Boka, K. 2016. *Change Management in TVET Colleges: Lessons Learnt from the Field of Practice*. Cape Town: African Minds.
- Krueger, R.A. & Casey, M.A. 1994. *Focus groups. A practical guide for applied research*. (3rd Edition). London: Sage.
- Kruger, A.G. 2003. Instructional leadership: The impact on the culture of teaching and learning in two effective secondary schools. *South African Journal of Education*, 23(3):2006-2011.
- Kruss, G., Wildschut, A., Janse van Rensburg, D.J., Visser, M., Haupt, G. & Roodt, J. 2014. *Learnerships and apprenticeships: Key mechanisms for skills development and capability building in South Africa*. Cape Town: Human Science Research Council (HSRC) Press.
- Lachiver, G. & Tardif, J. 2002. Fostering and managing curriculum change and innovation. Boston: MA: Thirty-second ASEE/IEEE Frontiers in Education Conference.
- Lafasto, F. & Larson, F. 2001. *When teams work best: 6,000 team members and leaders tell what it takes to succeed*. Thousand Oaks: Sage.

- Lai, M. and Lo, L.N., 2008. Perceived workplace competences at three sites on the Chinese Mainland. *Journal of Vocational Education and Training*, 60(2):189-204.
- Lambert, S. 2013. Defining a tri-dimensional role for leadership in Further Education Colleges. *Management in Education*, 27(1):39-42.
- Lang, J. 1979. *City and Guilds of London Institute, 1878-1978 Century*. London: Guilds of London Institute.
- Lathrop, J.J. 1990. *Sharing Leadership: The nature of relationships between Presidents and Chief Academic Officers in Colleges and Universities*. Columbia University.
- Lauglo, J., 1993. Vocational Training: Analysis of Policy and Modes. *Case Studies of Sweden, Germany and Japan. IIEP Research and Studies Programme*. Paris: International Institute for Educational Planning.
- Lee, D. 1979. Craft union and force of tradition. *British Journal of Industrial Relations*, 17(1): 34-49.
- Leedy, P.D. & Ormrod, J.E. 2001. *Practical research planning and design*. (7th Edition). New Jersey: Merrill Printice Hall.
- Legal Information Institute. 2002. *United State Code Collection*, Title 20, Chapter 44, section 2302, subsection 29. Retrieved from <http://www4.law.cornell.edu/uscode/20/2302.html> [2013, March 15].
- Leininger, M.M. & McFarland, M.R. 2002. *Transcultural nursing concepts, theories, research and practice*. New York: McGraw-Hill.
- Leithwood, K. & Louis, K.S. 2011. *Linking leadership to student learning*. New Jersey: Jossey-Bass.
- Leithwood, K., Jantzi, D. & Steinbach, R. 1999. *Changing Leadership for changing Times*. Buckingham: Open University Press.
- Leithwood, K., Louis, K.S., Anderson, S.E. & Wahlstrom, K. 2004. *How leadership influences student learning*. (1st Edition). New York: The Wallace Foundation.

- Leithwood, K., Louis, K.S., Wahlstrom, K.L. & Anderson, S.E. 2010. *Investigating the links to improved student learning: Final report of research findings*. City, MN: University of Minnesota Press.
- Lewin, K. 1947. *Frontiers in group dynamics: concept, method and reality in social science: social equilibria and social change*. Indianapolis, Ind.: Bobbs-Merrill, College Division.
- List, F. 1991. *The National System of Political Economy*. New Jersey: Augustus Kelly.
- Littledyke, M. 1997. Managerial style, the National Curriculum and teachers' culture: responses to educational change in a primary school. *Educational Research*, 39(3):31-42.
- Lolwana, P. 2010. *Expanding the South African post-secondary education system through differentiation and new forms of institutions. Draft Paper commissioned by Higher Education South Africa*. Johannesburg: Wits Education Policy Unit.
- Lumby, J. 2000. Technical Colleges in South Africa: Planning for the future. *Journal of Vocational Education and Training*, 52(1):101–118.
- Lussier, R.W. 2000. *Management Fundamentals, Concepts, Applications and Skills Development*. Springfield: South-Western College Publishing.
- MacFarlane, B. 2014. Editorial: Challenging leaderism. *Higher Education Research and Development*, 33(1):1-4.
- MacTighe, J. & Wiggins, G. 2010. *Understanding by design: Professional development workbook*. Alexandria: Association for Supervision and Curriculum Development.
- Magnus, P. 1888. *Industrial Education*. London: Kegan, Paul, Trench & Co.
- Malherbe, E.G. 1977. *Education in South Africa. Volume II*. Cape Town: Juta.
- Marsden, D. 1999. *A Theory of Employment Systems*. Oxford: Oxford University Press.
- Marsh, C. 2004. *Key concepts for understanding curriculum*. (3rd Edition). London: Routledge.
- Marsh, C.J. & Willis, G. 1999. *Curriculum: Alternative approaches, ongoing issues*. (2nd Edition). Upper Saddle, New Jersey: Prentice Hall.

- Marsh, H.W. 1982. SEEQ: A reliable, valid and useful instrument for collecting students' evaluations of university teaching. *British Journal of Educational Psychology*, 52(1): 77-95.
- Marzano, R.J., Waters, T. & McNulty, B.A. 2005. *School leadership that works: From research to results*. City, VA: Association for Supervision and Curriculum Development.
- Maxwell, J. C. 2004. *The 21 irrefutable laws of leadership*. (1st Edition). Cape Town: Struik Christian Books.
- McGarth, S. 2005. *Skills development in very small and micro enterprises*. Cape Town: Human Sciences Research Council (HSRC) Press.
- McGrath, S., Needham, S., Papier, J., Wedekind, V., Attwal, H. & Calitz, M. 2010. *Employability in the College Sector: A Comparative Study of England and South Africa*. London: British Council.
- McKenney, S., Nieveen, N. & Van den Akker, J. 2006. Design research from a curriculum perspective, in J. Van den Akker, K. Gravemeijer, S. McKenney & N. Nieveen (eds.). *Educational design research*. London: Routledge.
- McKerron, M.E. 1934. *A history of education in South Africa*. Pretoria: Van Schaik.
- Mestry, R. 2013. The innovative role of the principal as instructional leader: A prerequisite for high student achievement. *International Proceedings of Economics Development and Research*, 60(25):119-123.
- Middlehurst, R. 1993. *Leading academics*. Buckingham: Society for Research into Higher Education & Open University Press.
- Middlehurst, R., Pope, M. & Wray, M. 1992. *The Changing Roles of University Managers and Leaders: Implications for Preparation and Development*. Sheffield, Yorks: Universities of the United Kingdom, Universities Staff Development and Training Unit.
- Middleton, J., Zideman, A. & Van Adam, A. 1999. *Forthcoming skills training for productivity: Vocational Education and Training in developing countries*. Washington, DC: World Bank.

- Middleton, J., Ziderman, A., & Van Adams, A. 1991. *Vocational and Technical Education and Training*. Washington, DC: World Bank.
- Moll, I., Steinberg, C. & Broekmann, I. 2005. *Being a Vocational Educator: A guide for lecturers in FET Colleges*. Braamfontein: South African Institute for Distance Education.
- Molteno, F. 1984. The historical foundations of the schooling of black South Africans, in P. Kallaway (ed.). *Apartheid and Education: Education of Black South Africans*. Johannesburg: Ravan Press.
- Moodie, G.C. & Eustace, R. 1974. *Power and Authority in British Universities*. London: Allen & Unwin Ltd.
- Moodie, G.C. 2008. *From vocational to higher education: An International Perspective*. Society for Research into Higher Education (SRHE). Maidenhead: Open University Press.
- Mora, J.G., Palafox, J. and Pérez, F. 1995. The financing of Spanish public universities. *Higher Education*, 30(4):389-406.
- Morgan, G. 2007. *Images of organization*. London: Sage.
- Mouton, J. & Marais, H.C. 1990. *Basic concepts in the methodology of the social sciences*. Pretoria: Human Sciences Research Council (HSRC) Press.
- Mouton, J. 1998. *Understanding social research*. Pretoria: Van Schaik.
- Mouton, J. 2001. *How to succeed in your Master's and Doctoral Studies*. Pretoria: Van Schaik.
- Muczyk, J.P. & Reimann, B.C. 1987. Has participative management been oversold. *Personnel*, 64(5):52-56.
- Muijs, D., Harrid, A., Lumby, J., Morrison, M. & Sood, K. 2006. Leadership and leadership development in higher effective further education providers. Is there a relationship? *Journal of Further and Higher Education*, 30(1):87-106.
- Münk, D. 2003. Einflüsse der Europäischen Union auf das Berufsbildungssystem in Deutschland. *European Journal of Vocational Training*, 30:46-60.

- Murray-Smith, S. 1965. Technical Education in Australia: A historical sketch, in E. L. Wheelwright (ed.). *Higher education in Australia*. Melbourne: F.W. Cheshire.
- Murray-Smith, S. 1966. A History of Technical Education in Australia: with special reference to the period before 1914. Unpublished Ph.D Thesis. Parkville: University of Melbourne.
- Nahavandi, A. 1997. *The Art and Science of Leadership*. Upper Saddle River: Prentice-Hall.
Retrieved from http://ac.els-cdn.com/S1048984397900175/1s2.0S1048984397900175-main.pdf?_tid=08e95b38-1a1d-11e7-98be00000aab0f6b&acdnat=1491409946_fdae4d4895b496f451451798409155f [2013, March 24].
- Naidu, A., Joubert, R., Mesty, R. & Mosoge, J. 2008. *Education Management and Leadership: a South African Perspective*. Cape Town: Oxford University Press.
- Nasson, B. & Samuel, J. 1990. *Education: From poverty to liberty*. Cape Town: David Phillip.
- National Business Initiative. 2000. *A situational analysis of FET Institutions in the Northern Cape*. Auckland Park: Report of the Head of Education.
- National Training Board & Human Sciences Research Council. 1991. *Investigation into a National Training Strategy for the Republic of South Africa*. Pretoria: National Training Board & Human Sciences Research Council (HSRC) Press.
- Natras, J. 1981. *The SA economy: Its growth and change*. Cape Town: Oxford University Press.
- Northouse, P.G. 2013. *Leadership: Theory and Practice*. Thousand Oaks, CA: Sage.
- Nwogu, P.O. & Nweanoruo, C.C. 2011. Vocational Technical Education and Training for self-reliance: Towards National Development. *Mediterranean Journal of Social Sciences*, 2(5):55-59.
- Oliva, P.F. 1988. *Developing the curriculum*. (2nd Edition). Glenview, Ill: Scott, Foresman.
- Oosterheert, I.E. & Vermunt, J.D. 2003. Knowledge construction in learning to teach: The role of dynamic sources. *Teachers and teaching, theory and practice*, 9(2):157-173.

- Ozga, J. 2005. Modernizing the education workforce: A perspective from Scotland. *Education Review*, 57(2):207-19.
- Palestini, R.H. 2003. *The human touch in educational leadership. A postpositivistic approach to understand educational leadership*. Lanham, MD: Scarecrow Press Inc.
- Papier, J. 2009. *Getting the right learners into the right programmes: An investigation into factors that contributed to the poor performance of FET college learners in NCV 2 and NCV 3 programmes in 2007 and 2008 – Reasons and recommendations*. FET Institute: University of Western Cape.
- Papier, J. 2010. From policy to curriculum in South African vocational teacher education: A comparative perspective. *Journal of Vocational Education and Training*, 62(2):153-162.
- Papier, J. 2017. Improving college-to-work transitions through enhanced training for employment. *Research in Post-Compulsory Education*, (Published online: 16 May 2017), 22(1): 38–48, DOI: 10.1080/13596748.2016.1272084. Retrieved from <http://dx.doi.org/10.1080/13596748.2016.1272084> [2017, June 8].
- Parker, M. and Jary, D. 1995. The McUniversity: Organization, management and academic subjectivity. *Organization*, 2(2):319-338.
- Patton, M.Q. 1990. *Qualitative Evaluation and Research Methods*. (2nd Edition). Newbury Park, CA: Sage.
- Peterman, F. 1997. The lived curriculum of constructivist teacher education, in V. Richardson (e.d.). *Constructivist teacher building new understanding*. London: Falmer Press.
- Pinar, W.F. 2003. *International handbook of curriculum research*. New Jersey: Lawrence Erlbaum Associates Publishers.
- Pinar, W.F. 2010. *Curriculum studies in South Africa: Intellectual histories & present circumstances*. New York: Palgrave Macmillan.

- Pincus, J.D., Rayfield, R.E. & Cozzens, M.D. 1991. The chief executive officer's internal communication role: A benchmark program of research. *Journal of Public Relations Research*, 3(1-4):1-35.
- Pittendrigh, A. 1988. *Technikons in South Africa: An evaluative analysis of the factors influencing the development of the Technikons (1967 – 1985) and an assesment of their role in educational change at tertiary level in the RSA*. Halfway House, South Africa: The Building Industries Federation of South Africa.
- Plano Clark, V.L. & Creswell, J.W. 2008. *The mixed methods reader*. Thousand Oaks, CA: Sage.
- Plowright, D. 2011. *Using mixed methods: Frameworks for an integrated methodology*. London: Sage.
- Pocock, B., 1988. *Demanding skill: women and technical education in Australia*. Sydney: Allen & Unwin Australia.
- Polit, D.F. & Hungler, B.P. 1996. *Essentials of Nursing Research Methods, Appraisal and Utilization*. (4th Edition). Philadepia: Lippincott-Raven.
- Polit, D.F. & Hungler, B.P. 1997. *Essentials of Nursing Research Method, Appraisal and Utilization*. Philadepia: Lippincott-Raven.
- Politis, J. D. 2004. Transformational and transactional leadership predictors of the ‘stimulant’ determinants to creativity in organisational work environments. *Electronic Journal of Knowledge Management*, 2(2):23-34.
- Powell, L. & Hall, G. 2000. *Quantitative overview of South African Technical Colleges*. Johannesburg: Colleges Collaboration Fund, National Business Initiative.
- Power, M. & Rienstra, B. 1999. Internal communication in new corporate conglomerates: Developing a corporate communication model for loosely coupled businesses in local government. *International Journal of Public Sector Management*, 12(6):501-515.
- Punch, K. F. 2009. Introduction to research methods. London: Sage.

- Quality Council for Trades and Occupations (QCTO) Newsletter. 2012, 1(1). January 2012.
Pretoria: Quality Council for Trades and Occupations (QCTO).
- Quigley, J.V. 1993. *Vision: How leaders develop it, share it and sustain it*. New York: McGraw-Hill.
- Quinlan, K. M. 2014. Leadership of teaching for student learning in higher education: what is needed?. *Higher Education Research & Development*, 33(1):32-45.
- Raelin, J.A. 2003. *Creating leaderful organization: How to bring out leadership in everyone*. San Fransisco: Barrett- Koehler Publishers, INC.
- Ragland, R. G., & Rosenstein, D. 2014. Holocaust Education: Analysis of Curricula and Frameworks: A Case Study of Illinois. *The Social Studies*, 105(4):175-183.
- Rauner, F. & Maclean, R. 2008. Vocational Education and Training Research – An introduction, in F. Rauner and R. Maclean (eds.). *Handbook of Technical and Vocational Education and Training Research*. Berlin: Springer.
- Republic of South Africa. 1923. *The Higher Education Act No. 30 of 1923*. Pretoria: Government Printer.
- Republic of South Africa. 1979. *Education and Training Act for Blacks. Act No. 90 of 1979*. Pretoria: Government Printer.
- Republic of South Africa. 1981a. *Manpower Training Act No. 56 of 1981*. Pretoria: Government Printer.
- Republic of South Africa. 1981b. *Technical College Act No. 104 of 1981*. Pretoria: Government Printer.
- Republic of South Africa. 1990. *Manpower Training Amendment Act No. 39 of 1981*. Pretoria: Government Printer.
- Republic of South Africa. 1995a. *National Qualifications Framework (NQF) by Act No. 95 of 1995*. Pretoria: Government Printer.

Republic of South Africa. 1995b. *South African Qualifications Authority Act No. 58 of 1995*. Pretoria: Government Printer.

Republic of South Africa. 1996. *Constitution of the Republic of South Africa Act No. 108 of 1996*. Pretoria: Government Printer.

Republic of South Africa. 1998. *Skills Development Act No. 97 of 1998*. Pretoria: Government Printer.

Republic of South Africa. 1999a. *Skills Development Review Act No. 9 of 1999*. Pretoria: Government Printer.

Republic of South Africa. 1999b. *The National Qualifications Authority Act No. 95 of 1995*. Pretoria: Government Printer.

Republic of South Africa. 2008. *National Qualifications Framework (NQF) by Act No. 67 of 2008*. Pretoria: Government Printer.

Republic of South Africa. 2010-2030. *Human Resource Development Strategy of South Africa*. Pretoria: National Treasury.

Republic of South Africa. **2010a.** *National Treasury Budget Review 2010*. Pretoria: National Treasury.

Republic of South Africa. **2010b.** *Quality Council for Trades and Industry (QCTO)*. *Government Gazette No. 33059*. National Gazettes.

Republic of South Africa. **2013a.** *Policy and Professional Qualifications for Lecturers in Technical and Vocational Education and Training (TVET)*. *Government Gazette No. 36554 of June 2013*. Pretoria: Government Printer.

Republic of South Africa. **2013b.** *National Development Plan 2030*. Our future-make it work. Pretoria: Government Printers.

- Republic of South Africa. 2016. *South African Qualifications Authority (SAQA). SAQA Bulletin, 15(1), March 2016*. In collaboration with Professor Wedekind who participated in the writing and overseeing of the compilation of the papers on the TVET college system .Co-authors of SAQA Bulletin 2016: V. Wedekind, & A.Watson; V. Wedekind, A. Watson & Z. Buthelezi; J. Towani, Z. Buthelezi & V. Wedekind; A. Watson & V. Wedekind; J. Keevy & C. Jaftha; C. Jafhtha, Z. Zuzani & F.Burger. Pretoria: South African Qualifications Authority (SAQA).
- Republic of South Africa. 2017. UMALUSI Council for General and Further Education and Training. *Policy Review of the National Certificate Vocational (NCV). norms and standards for Technical and Vocational Education and Training (TVET) Colleges. Government Gazette No. 40847 dated 19 May 2017*. Pretoria: Department of Higher Education and Training. Available online at www.gpwonline.co.za
- Richard, H.B. & Catano, N. 2008. *Qualities of effective principals*. City, VA: Association for Supervision & Curriculum Development.
- Riekert Commission. 1979. *Report of the Commission of Inquiry into Legislation affecting the utilization of Manpower R.P.32/1979*.
- Riggio, R.E., Murphy, S.E. & Pirozzolo F.J. 2002. *Multiple intelligences and Leadership*. Mahweh. New Jersey: Lawrence Erlbaum Associates.
- Robbins, S.P. 1998. *Organizational behaviour: Concepts, Controversies and Applications*. (2nd Edition.). New Jersey: Prentice-Hall.
- Robertson, I. 2005. *Coaching Leadership: Building educational leadership capacity through coaching partnerships*. Wellington: NZCER Press.
- Ross, A. 2000. *Curriculum: Construction and critique*. London: Falmer Press.
- Rossmann, G.B. & Wilson, B. (1985). Numbers and words: Combining quantitative and qualitative methods in a single large-scale evaluation study. *Evaluation Review*, 9(5): 627-643.
- Rost, J.C. 1991. *Leadership for the twenty-first century*. London: Praeger .

- Ruck, K. 2012. *A single theory of internal communication*. Retrieved from <http://www.pracademy.co.uk/2012/11/22/a-single-theory-of-internalcommunication/> [2017, May 15]
- Samuel, J. 1990. The state of education in South Africa, in B Nasson & J. Samuel (eds.). *Education: From poverty to liberty*. Cape Town: David Phillip.
- Saul, J.S. & Gelb, S. 1976. *The crisis in South Africa*. London: ZED Books.
- Schmidt, C., 2010. Vocational education and training (VET) for youths with low levels of qualification in Germany. *Education+ Training*, 52(5):381-390.
- Schwella, E. 2008. Administrative reform as adaptive challenge: Selected public leadership implications. *Politeia*, 27(2):25-50.
- Seaman, M.A., Levin, J.R. & Serlin, R.C. 1991. New developments in pairwise multiple comparisons: Some powerful and practicable procedures. *Psychological Bulletin*, 110(3):577.
- Seltzer, J., & Bass, B. M. 1990. Transformational leadership: Beyond initiation and consideration. *Journal of management*, 16(4):693-703.
- Shao, J. & Steel, P. 1999. Variance estimation for survey data with composite imputation and nonnegligible sampling fractions. *Journal of the American Statistical Association*, 94(445):254-265.
- Siriwardene, P.L. & Qureshi, M.A. 2009. TVET in the Asian region: Issues, concerns and prospects. *International Handbook of Education for the Changing World of Work*. Dordrecht: Springer.
- Smith, P.B. and Peterson, M.F., 1988. *Leadership, organizations and culture: An event management model*. Thousand Oaks, CA: Sage.
- Smith, P.L. & Ragan, T.J. 2004. *Instructional design*. (3rd Edition). Danvers, MA: John Wiley & Sons.
- Smuts, A.J. 1937. *The education of adolescents in South Africa, Cape Town and Johannesburg*. Johannesburg: Juta.

- South African Government. 1955. *Vocational Education Act No 70 of 1955*. Pretoria: Government Printer.
- Stark, J.S. & Lattuca, L.R. 1997. *Shaping the College Curriculum. Academic Plans in Action*. Boston: Allyn and Bacon.
- Steedman, H. 1992. *Mathematics in Vocational Youth Training for the Building Trades in Britian, France and Germany*. London: National Institute for Economic and Social Research: discussion paper no. 9.
- Steinberg, S. 2006. *An introduction to Communication Studies*. Cape Town: Juta.
- Stephens, D. 2009. *Qualitative research in international settings: A practical guide*. London: Routledge.
- Stevenson, H. 2007. Restructuring teachers' work and trade union responses in England: Bargaining for change? *American Educational Research Journal*, 44(2):224–51.
- Stevenson, J. 1997. Legitimate learning. *Australian and New Zealand Journal of Vocational Education Research*, 5(2):77.
- Steyn, T. 2001. Staff empowerment: Creating an empowered work environment in schools. *Acta academica*, 33(2):146-167.
- Stogdill, R.M. 1948. Personal factors associated with leadership: A survey of the literature. *The Journal of Psychology*, 25(1):35–71.
- Stoner, J.A.F. & Freeman, R.E. 1992. *Management*. (5th Edition). New Jersey: Prentice-Hall, Inc.
- Stronge, J.H., Xu, X. & Leeper, L.M. 2013. *Principal evaluation: Standards, rubrics and tools for effective performance*. City, VA: Association for Supervision & Curriculum Development.
- Strydom, H., Fouche, C.B., Poggenpoel, M. & Schurink, E.W. 1998. *Research at grass roots: a primer for the caring professions*. Pretoria: Van Schaik.

- Stumph, R., Papier, J., Newman, S. & Nel, H. 2009. *Increasing educational opportunities for post- NQF level 4 learners in South Africa through the further education and training college sector*. Cape Town: Centre for Higher Education Transformation & Further Education and Training Institute.
- Swartz, E., & Foley, P. 1996. Higher education in South Africa: the skills debate. *Education and Training*, 38(9):34-40.
- Swiss-South African Cooperation Initiative (SSACI). 2010. *Providing workplace-based experience for FET college students: A Manual for College Managers and Lecturers*. Houghton: Swiss-South African Cooperation Initiative (SSACI).
- Symonds, J.E. & Gorard, S. 2010. Death of mixed methods? Or the rebirth of research as a craft. *Evaluation & Research in Education*, 23(2):121–136.
- Taba, H. 1962. *Curriculum development: Theory and practice* . New York, NY: Harcourt, Brace & World.
- Tashakkori, A & Teddlie, C. 2003. *Handbook of mixed methods in social and behavioural research*. London: Sage.
- Tashakkori, A. & Teddlie, C. 2010. *Handbook of mixed method research in social and behavior sciences*. Thousand Oaks, CA: Sage.
- Taylor, N. & Pereira, C. 2004. *The Role of College-Industry Partnerships in Ensuring Graduate Employability*. Project commissioned by the Gauteng Provincial Legislature.
- Technical and Further Education Commission. 1976. *Report for the Triennium 1977-1979*. Canberra: Australian Government Publishing Service.
- Teichler, U. 1999. Higher education policy and the world of work: Changing conditions and challenges. *Higher Education Policy*, 12(4):285-312.
- Tichy, N.M. & Devanna, M.A. 1990. *The transformational leader*. New York: John Wiley & Sons.
- Tracy, D. 1990. *The power pyramid: How to get power by gifting it away*. New York: HarperCollins.

- Tracy, D. 2001. *Take this job and love it: How to turn the job you have into the job you want*. Naperville, IL: Sourcebooks.
- Transvaal (Colony). Indigency Commission. 1908. *Report of the Transvaal Indigency Commission, 1906 – 08: Presented to both Houses of Parliament by Command of His Excellency the Governor*. Pretoria: Government Printing and Stationery Office, 1908.
- Trow, M. & Clark, P. 1994. *Managerialism and the academic profession: Quality and control*. London: Hensel Press.
- Tyler, R. 1949. *Basic principles of curriculum and instruction*. Chicago, IL: The University of Chicago Press.
- Union of South Africa. 1922. *Apprenticeship Act No. 26 of 1922*. Pretoria: Union Of South Africa.
- United Nations Educational, Scientific and Cultural Organisation. 1997. *International Standard Classification of Education*. Paris: United Nations Educational, Scientific and Cultural Organisation. Retrieved from http://www.unesco.org-/education/docs/isced_1997.htm [2013, March 15].
- United Nations Educational, Scientific and Cultural Organisation. 2008. *Education for All Global Monitoring Report 2007*. Paris: United Nations Educational, Scientific and Cultural Organisation.
- United Nations Educational, Scientific and Cultural Organisation. 2012. *Youth and Skills: Putting education to work*. Paris: United Nations Educational, Scientific and Cultural Organisation.
- Vally, S. & Spreen, C. 1998. Implementation of curriculum 2005. *Quarterly Review of Education and Training in South Africa*, 5(3):13-16.
- Van den Akker, J. 2003. Curriculum perspectives: An introduction, in J. Van den Akker, W. Kuiper & U. Hameyer (eds.). *Curriculum landscape and trends*. Dordrecht: Kluwer Academic.

- Van Der Westhuizen, A.J. 1998. *An academic leadership model for transformation towards learning organisations in higher education*. Unpublished Ph.D Thesis. Stellenbosch: Stellenbosch University.
- Van der Westhuizen, P. & Van Vuuren, H. 2007. Professionalising principalship in South Africa. *South African Journal of Education*, 27(3):431-445.
- Van der Westhuizen, P.C., Mosoge, M.J. & Van Vuuren, H.J. 2004. Capacity-building for educational managers in South Africa: a case study of the Mpumalanga province. *International Journal of Educational development*, 24(6):705-719.
- Van Gemert, L. & Woudstra, E. 1999. Designing a strategic communication plan. *Communication*, 25(1 & 2):73-87.
- Van Rooy, M.P. 1996. The curriculum. In Fraser, W.J., Loubser, C.P. and Van Rooy, M.P. (eds). *Didactics for the undergraduate student*. Johannesburg: Heinemann.
- Van Wart, M. 2001. *Dynamics of leadership in public service: Theory and Practice*. (2nd Edition.). New York: ME Sharpe.
- Varoufakis, Y. & Hargraves-Heap, S. 1995. *Game Theory: An introduction*. London: Routledge.
- Venter, M.J. 2006. The role of management in the changing higher education sector. *Word and Action*, 46(395):16-19.
- Visscher-Voerman, I., Gustafson, K., & Plomp, T. 1999. Educational design and development: An overview of paradigms. In *Design approaches and tools in education and training*. Dordrecht: Springer.
- Vygotsky, L. 1981. The instrumental method in psychology, in J.V. Wertsch (ed. & trans.). *The Concept of Activity Soviet psychology*. Armonk, New York: ME Sharpe.
- Watson, L. 2003. *Lifelong learning in Australia*. Department of Education, Science & Training.
- Webb, R. 2005. Leading teaching and learning in the primary school: from 'educative

- leadership’ to ‘pedagogical leadership’. *Educational Management Administration and Leadership*, 33(1):69-91.
- Wedekind, V. 2008. *Report on the research on Further Education and Training (FET) Colleges in South Africa*. Pietermaritzburg, South Africa: University of KwaZulu-Natal.
- Wertsch, J.V. 2007. Mediation, in H. Daniels, M. Cole & J.V. Wertsch (eds.). *The Cambridge companion to Vygotsky*. Cambridge: Cambridge University Press.
- Westerhuis, A. 2007. The role of the state in vocational education: A political analysis of the history of vocational education in the Netherlands, in L. Clarke & C. Winch (eds.). *Vocational education: International approaches, developments and systems*. London: Routledge.
- Wheeler, D.K. 1967. *Curriculum Process*. London: University of London Press.
- Wiersma, W. & Jurs, S.G. 2005. *Research methods in education* (8th Edition). Boston: MA.
- Williams, H. S. 1961. Technical education-state or national. *The Australian Journal of Higher Education*, 12:98-103.
- Williams, H.S. (1963). *Tertiary Technical Education in Australia*. The Australian University.
- Wolverton, M. and Gmelch, W.H., 2002. *College Deans: Leading from within*. American Council on Education/Oryx Press Series on Higher Education. Westport: Oryx Press.
- World Bank. 2000. *Higher Education in developing countries: Peril and promise*. Washington, DC: World Bank.
- World Bank. 2010. *Stepping up skills for more jobs and higher productivity*. Washington, DC: World Bank.
- Young, M. 2006. FET College teachers: A knowledge-based profession of the future. *Perspectives in Education*, 24(3):153-160.
- Yudelowitz, J., Koch, R. & Field, R. 2002. *Smart things to know about Leadership*. Oxford: Capstone.

- Yukl, G.A. 1998. *Leadership in Organizations*. (4th Edition.). London: Prentice-Hall International.
- Yukl, G.A. 2010. An evaluative essay on current conceptions of effective leadership. *European Journal of Work and Organisational Psychology*, 8(1):33-48.
- Zaccaro, S.J., Rittman, A.L. & Marks, M.A. 2001. Team Leadership. *The Leadership Quarterly* 12(2001):451–483.
- Zais, R.S. 1976. *Curriculum: Principles and Foundations*. New York: Crowell.
- Zideman, A. 1997. National programmes in Technical and Vocational Education: Economic and Education Relationships. *Journal of Vocational Education and Training*, 49(3): 351-366.
- Zikmund, W.G. 2003. *Business Research Methods*. Bangalore: Thomson Learning Inc. Eastern Press.

ADDENDA

ADDENDA

NUMBER 1 - 8

ADDENDUM 1

REQUEST LETTER

TO THE DEPARTMENT OF HIGHER EDUCATION AND
TRAINING (DHET) TO CONDUCT RESEARCH

PO Box 10438
GEORGE
6530

13 February 2011

Mr G. Qonde
(ACTING DIRECTOR GENERAL)
Department of Higher Education and Training
PRETORIA
8000

Dear Mr Qonde

PERMISSION TO CONDUCT ACADEMIC RESEARCH WITHIN PUBLIC FURTHER EDUCATION AND TRAINING COLLEGES

I hereby seek permission to conduct quantitative surveys within the fifty public FET colleges as well as group interviews in two provinces (Eastern Cape and Western Cape) during the 2011 academic year. I am registered as a student to conduct academic research towards a PhD Degree at Stellenbosch University. The title of the thesis read as follows: *Further Education and Training (FET) colleges within a new educational dispensation in South Africa: A framework for leading curriculum change.*

The purpose of the research study is to potentially contribute to the field of knowledge and the extension of conceptual understanding regarding the following key factors:

- leadership competencies needed for FET college leaders to effectively lead curriculum change;
- strategies needed to capacitate FET college leaders for curriculum challenges; and
- curriculum policy development in the FET sector.

The respondents identified in the research study include staff currently employed at FET colleges within the job categories of lecturers, CEO's, Academic Deputy CEO's, Academic Heads of Departments and Programme Managers. I am currently employed as Deputy CEO: Education and Training at South Cape FET College.

Please note that the research study involves no invasion of individual rights or privacy, nor will it apply any procedures which may be found ethically objectionable. No personal information regarding those who participate in the research study will be made known.

The researcher undertakes to:

- Share the outcomes of the research study with the office of the DHET, FET Colleges and Provincial Education Departments and any other interested stakeholders.
- Send a copy of the surveys one month prior to due date to all participants.
- Suggested dates for conducting the focus group interviews will be forwarded two weeks in advance to all participants.

I trust that my application will receive your favourable consideration.

Yours sincerely


Tercia Terblanche (Ms)

ADDENDUM 2

**DEPARTMENT OF HIGHER EDUCATION AND
TRAINING (DHET)
PERMISSION LETTER**



higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

Private Bag X174, PRETORIA, 0001, 123 Schoeman Street, PRETORIA, 0002, South Africa
Tel: (012) 312 5911, Fax: (012) 321 6770
Private Bag X9192, CAPE TOWN, 8000, 103 Plein Street, CAPE TOWN, 8001, South Africa
Tel: (021) 469 5175, Fax: (021) 461 4761

Ms Tercia Terblanche
South Cape Public FET College
PO Box 10400
GEORGE
6530

e-mail: tercia.terblanche@sccollege.co.za

Dear Ms Terblanche

Request for Permission to Conduct Research in FET Colleges

I acknowledge receipt of your letter, dated 13 February 2011, requesting permission to conduct academic research activities within public FET Colleges as part of your studies towards a PhD Degree at Stellenbosch University.

The public FET College system is central to the government's programme of skilling and re-skilling the youth and adults in South Africa and are seen as priority institutions to increase access to training and skills development across the country.

The Department supports the research project provided that there is no disruption of normal work activities of participants in institutions. You are however still requested to follow the necessary protocols and obtain permission in writing from the relevant principals of FET Colleges before commencing with the research activities. You are further required to conduct all the research in an ethical manner and should you have any queries in this regard, please contact Ms Mapaseka Letho at the Department of Higher Education and Training (letho.m@dhet.gov.za 012 312 6212)

The Department requests that you submit a copy of the final report and data to Ms Letho upon completion of your research activities.

I wish you all of the best with your studies.

Yours sincerely

Mr GF Qonde
Acting Director General: Department of Higher Education and Training
Date: 10/06/2011

ADDENDUM 3
EXAMPLE OF
AN INSTITUTIONAL PERMISSION LETTER



PRINCIPAL AND CHIEF EXECUTIVE OFFICER

Main Road Muizenberg
Private Bag X25, Tokai, 7966
Tel: 021 003 0600 Fax: 086 603 0669
www.falsebaycollege.co.za

23 July 2014

TO WHOM IT MAY CONCERN

INSTITUTIONAL PERMISSION TO CONDUCT QUALITATIVE AND QUANTITATIVE RESEARCH

I hereby grant permission that Ms Tercia Terblanche (PhD Candidate at Stellenbosch University) may conduct quantitative and qualitative research at False Bay College.

The staff at the college will participate on a voluntarily basis and it is expected that confidentiality will be adhered to.

Yours sincerely

MR C.J.H. KRUGER

Principal and Chief Executive Officer

ADDENDUM 4

**ETHICAL CLEARANCE APPROVAL LETTER:
HUMAN RESEARCH ETHICS COMMITTEE
(HUMANITIES)**



UNIVERSITEIT-STELLENBOSCH-UNIVERSITY
Jou kennisvennoot • your knowledge partner

Approved with Stipulations
Response to Modifications- (New Application)

07-Jul-2015
Terblanche, Tercia TE

Proposal #: HSI143/2014

Title: Further Education Training FET Colleges within a new educational dispensation in South Africa: A framework for leading curriculum change.

Dear Mrs Tercia Terblanche,

Your **Response to Modifications - (New Application)** received on 20-Apr-2015, was reviewed by members of the **Research Ethics Committee: Human Research (Humanities)** via Expedited review procedures on 07-Jul-2015.

Please note the following information about your approved research proposal:

Proposal Approval Period: 07-Jul-2015 -06-Jul-2016

The following stipulations are relevant to the approval of your project and must be adhered to:
This study has been approved with the stipulation that the researcher excludes her own staff members from this study, as she has indicated in the revised documents submitted to the REC.

Please provide a letter of response to all the points raised IN ADDITION to HIGHLIGHTING or using the TRACK CHANGES function to indicate ALL the corrections/amendments of ALL DOCUMENTS clearly in order to allow rapid scrutiny and appraisal.

Please take note of the general Investigator Responsibilities attached to this letter. You may commence with your research after complying fully with these guidelines.

Please remember to use your **proposal number (HSI143/2014)** on any documents or correspondence with the REC concerning your research proposal.

Please note that the REC has the prerogative and authority to ask further questions, seek additional information, require further modifications, or monitor the conduct of your research and the consent process.

Also note that a progress report should be submitted to the Committee before the approval period has expired if a continuation is required. The Committee will then consider the continuation of the project for a further year (if necessary).

This committee abides by the ethical norms and principles for research, established by the Declaration of Helsinki and the Guidelines for Ethical Research. Principles Structures and Processes 2004 (Department of Health). Annually a number of projects may be selected randomly for an external audit.

National Health Research Ethics Committee (NHREC) registration number REC-050411-032.

We wish you the best as you conduct your research.

If you have any questions or need further help, please contact the REC office at 218089183.

Included Documents:

REVISED_Response to Modifications

Interview schedule

Institutional permission_Boland College
Institutional permission_South Cape College
Institutional permission_False Bay College
REVISED_Interview schedule
REVISED_Research proposal
REVISED_Informed consent form
REVISED_Survey instrument
Institutional permission_Northlink
Institutional consent forms
Research proposal
Institutional permission_West Coast College
Institutional permission_College of Cape Town

Sincerely,

Clarissa Graham
REC Coordinator
Research Ethics Committee Human Research (Humanities)

Investigator Responsibilities

Protection of Human Research Participants

Some of the general responsibilities investigators have when conducting research involving human participants are listed below.

1 Conducting the Research. You are responsible for making sure that the research is conducted according to the REC approved research protocol. You are also responsible for the actions of all your co-investigators and research staff involved with this research. You must also ensure that the research is conducted within the standards of your field of research.

2 Participant Enrollment. You may not recruit or enroll participants prior to the REC approval date or after the expiration date of REC approval. All recruitment materials for any form of media must be approved by the REC prior to their use. If you need to recruit more participants than was noted in your REC approval letter, you must submit an amendment requesting an increase in the number of participants.

3 Informed Consent. You are responsible for obtaining and documenting effective informed consent using **only** the REC-approved consent documents, and for ensuring that no human participants are involved in research prior to obtaining their informed consent. Please give all participants copies of the signed informed consent documents. Keep the originals in your secured research files for at least five (5) years.

4 Continuing Review. The REC must review and approve all REC-approved research proposals at intervals appropriate to the degree of risk but not less than once per year. There is **no grace period**. Prior to the date on which the REC approval of the research expires, **it is your responsibility to submit the continuing review report in a timely fashion to ensure a lapse in REC approval does not occur**. If REC approval of your research lapses, you must stop new participant enrollment, and contact the REC office immediately.

5 Amendments and Changes. If you wish to amend or change any aspect of your research (such as research design, interventions or procedures, number of participants, participant population, informed consent document, instruments, surveys or recruiting material), you must submit the amendment to the REC for review using the current Amendment Form. You may **not** initiate any amendments or changes to your research without first obtaining written REC review and approval. The **only exception** is when it is necessary to eliminate apparent immediate hazards to participants and the REC should be immediately informed of this necessity.

6 Adverse or Unanticipated Events. Any serious adverse events, participant complaints, and all unanticipated problems that involve risks to participants or others, as well as any research related injuries, occurring at this institution or at other performance sites must be reported to Malene Fouch within **five (5) days** of discovery of the incident. You must also report any instances of serious or continuing problems, or non-compliance with the REC's requirements for protecting human research participants. The only exception to this policy is that the death of a research participant must be reported in accordance with the Stellenbosch University Research Ethics Committee Standard Operating Procedures. All reportable events should be submitted to the REC using the Serious Adverse Event Report Form.

7 Research Record Keeping. You must keep the following research related records, at a minimum, in a secure location for a minimum of five years: the REC approved research proposal and all amendments, all informed consent documents, recruiting materials, continuing review reports, adverse or unanticipated events, and all correspondence from the REC.

8 Provision of Counselling or emergency support. When a dedicated counsellor or psychologist provides support to a participant without prior REC review and approval, to the extent permitted by law, such activities will not be recognised as research nor the data used in support of research. Such cases should be indicated in the progress report or final report.

9 Final reports. When you have completed (no further participant enrollment, interactions, interventions or data analysis) or stopped work on your research, you must submit a Final Report to the REC.

10 On-Site Evaluations, Inspections, or Audits. If you are notified that your research will be reviewed or audited by the sponsor or any other external agency or any internal group, you must inform the REC immediately of the impending audit/evaluation.

ADDENDUM 5
PARTICIPANT CONSENT FORM



UNIVERSITEIT • STELLENBOSCH • UNIVERSITY
jou kennisvenoot • your knowledge partner

**STELLENBOSCH UNIVERSITY
CONSENT TO PARTICIPATE IN RESEARCH**

**Further Education and Training (FET) colleges within a new educational dispensation
in South Africa: A framework for leading curriculum change.**

You are asked to participate in a research study conducted by Tercia Terblanche who is currently studying towards a PhD, from the Centre for Higher and Adult Education at Stellenbosch University. The results of the study will be contributed towards the completion of the thesis. You were selected as a possible participant in this study because of your experience as a lecturer or manager in the FET college sector.

1. PURPOSE OF THE STUDY

The purpose of the research study is to potentially contribute to the field of knowledge and the extension of conceptual understanding regarding the following key factors:

- leadership competencies needed for FET college leaders to effectively lead curriculum change;
- strategies needed to capacitate FET college leaders for curriculum challenges; and
- curriculum policy development in the FET college sector.

2. PROCEDURES

If you volunteer to participate in this study, we would ask you to do the following things:

Questionnaire:

Complete a questionnaire that will take approximately 40 minutes. The questionnaire will be web-based and a website link will be provided for on-line completion of the questionnaire. Adequate time (two weeks) will be given for participants to complete the on-line questionnaire.

Semi-structured group interviews:

Participate in one semi-structured group interview. The venue will be in close proximity of your workstation. The group interview will take place after work hours. The date for the group interviews will be communicated two weeks in advance to ensure maximum availability of participants. The group interviews will be digital-recorded for ease of transcribing and accurate reporting of results. The total length of the group interview will not exceed two hours.

3. POTENTIAL RISKS AND DISCOMFORTS

Foreseeable risks include:

The methodology of the study involves questionnaires and analysis of documents which were prepared in conjunction with universities in the course of undertaking the project. At the end of the project institutions will be informed that they are at liberty to treat the reports as confidential or make them available to the public. Hence, permission will be sought from participating institutions to enable the researcher to have access to these reports. There will therefore be no personal risk or discomfort whatsoever to individual participants in this study.

4. POTENTIAL BENEFITS TO SUBJECTS AND/OR TO SOCIETY

The information shared in the questionnaire and group interviews will potentially enhance participants' understanding of and growth in the FET college sector. The broader society, students and FET college sector will potentially benefit from the findings of the study that could influence curriculum change and college leadership.

5. PAYMENT FOR PARTICIPATION

Participants will not receive any remuneration for participation in the study.

6. CONFIDENTIALITY

Any information that is obtained in connection with this study and that can be identified with any participant will remain confidential and will be disclosed only with personal permission or as required by law. Confidentiality will be maintained by means of categorizing participants and colleges alpha-numerical, lock audio digital-recordings and notes of group interviews and completed questionnaires in fire proof safe at my house. The researcher will be the only person with access to the safe. The transcriptions, notes and questionnaires will be destroyed six months after the researcher completed the research study or as soon as required by Stellenbosch University.

7. PARTICIPATION AND WITHDRAWAL

You can choose whether to be in this study or not. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind. You may also refuse to answer any questions you don't want to answer and still remain in the study. The investigator may withdraw you from this research if circumstances arise which warrant doing so. If the participant ceases to be in the employment of the FET college sector, the investigator will terminate the participant's involvement in the study.

8. IDENTIFICATION OF INVESTIGATORS

If you have any questions or concerns about the research, please feel free to contact **Professor Eli Bitzer**: my supervisor, at Telephone number: 021-808 3708, E-mail: emb2@sun.ac.za.

9. RIGHTS OF RESEARCH SUBJECTS

You may withdraw your consent at any time and discontinue participation without penalty. You are not waiving any legal claims, rights or remedies because of your participation in this research study. If you have questions regarding your rights as a research subject, contact Ms Maléne Fouché [mfouche@sun.ac.za; 021 808 4622] at the Division for Research Development.

| |
|--|
| SIGNATURE OF RESEARCH SUBJECT OR LEGAL REPRESENTATIVE |
|--|

The information above was described to me by **Tercla Terblanche** in English and I am in command of this language. I was given the opportunity to ask questions and these questions were answered to my satisfaction.

I hereby consent voluntarily to participate in this study. I have been given a copy of this form.

Name of Participant

Name of Legal Representative (if applicable)

Signature of Participant or Legal Representative

January 2014
Date

| |
|----------------------------------|
| SIGNATURE OF INVESTIGATOR |
|----------------------------------|

I declare that I explained the information given in this document to _____

He/she was encouraged and given ample time to ask me any questions. This conversation was conducted in *English* and *no translator was used*.

Tercla Terblanche

Signature of Investigator

January 2014
Date

ADDENDUM 6
QUESTIONNAIRE SURVEY



QUESTIONNAIRE
Further Education and Training (FET) colleges within a new educational dispensation in South Africa: A framework for leading curriculum change.

Dear Participant

It is a great honour to have you as a participant in this research study. I herewith wish to express my heartfelt gratitude to you for granting your consent to participate in the empirical component of this study. Confidentiality will be sustained throughout the study and respondents will not be identified in the research findings.

The questionnaire is divided into two sections namely, Section A: Biographical information and Section B: Curriculum, Leadership and Change. Please answer the closed questions/statements in Section B1 by rating them on a scale of 1-4. Section B2 comprise of open-ended questions. You may indicate NOT APPLICABLE (N/A) for some of the open-ended questions that might be unrelated to your work experience. It will take you approximately 90 minutes to complete the questionnaire in full.

Thank you very much for volunteering your valuable time to complete the questionnaire as the information you provide is of crucial importance to equip future curriculum leaders in the FET sector.

Warm Regards

Tercia Terblanche

PhD CANDIDATE in the Centre for Higher and Adult Education, Department of Curriculum Studies, Faculty of Education, Stellenbosch University.

My telephone: 044-8840359

My cell phone: 082 2024 136

E-mail: tercia.terblanche@sccollege.co.za



SECTION A: BIOGRAPHICAL INFORMATION

Please answer each item in full, or choose the applicable option.

•

JOB TITLE

•

JOB LEVEL

•

AGE GROUP

- 21-30
- 31-40
- 41-50
- 51-60
- 61-70

•

GENDER

- Male
- Female

•

HIGHEST QUALIFICATION

- Certificate
- Diploma
- Degree
- Honours Degree
- Master's Degree



SECTION A: BIOGRAPHICAL INFORMATION

Please answer each item in full, or choose the applicable option.

•
JOB TITLE

•
JOB LEVEL

•
AGE GROUP

- 21-30
- 31-40
- 41-50
- 51-60
- 61-70

•
GENDER

- Male
- Female

•
HIGHEST QUALIFICATION

- Certificate
- Diploma
- Degree
- Honours Degree
- Master's Degree

PhD/Doctorate

Other, Please specify

•

WORK EXPERIENCE IN FET COLLEGE SECTOR

0-2 years

3-5 years

6-10 years

11-15 years

16-20 years

21 years and more



SECTION B: CURRICULUM, LEADERSHIP AND CHANGE

In Section B1, please answer the following CLOSED questions/statements by rating them on a scale of 1-4.

•

KEY CONCEPTS: CURRICULUM, LEADERSHIP AND CHANGE

| | Strongly Disagree | Disagree | Agree | Strongly Agree |
|---|-----------------------|-----------------------|-----------------------|-----------------------|
| 1. An FET college curriculum framework for vocational programmes is currently in place. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 2. An FET college curriculum framework for occupational programmes is currently in place. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 3. FET college lecturers have the necessary competencies to deliver post-school education programmes including vocational programmes such as the National Certificate Vocational (NCV L2-L4). | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 4. FET college lecturers have the necessary competencies to deliver post-school education programmes including Report 191 programmes (N1-N6). | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 5. FET college lecturers have the necessary competencies to deliver post-school education programmes including occupational programmes (NQF L1-L5). | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 6. The Department of Higher Education and Training (DHET) ensures that adequate staff training takes place to facilitate successful implementation of new curricula. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 7. FET colleges are adequately funded to offer quality vocational programmes. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 8. FET colleges are adequately funded to offer quality occupational programmes. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 9. FET colleges offer a variety of vocational programmes that address the diverse needs of students. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 10. FET colleges offer a variety of occupational programmes that address the diverse needs of students. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 11. Most vocational programmes currently offered at colleges contribute towards building the skills workforce in South Africa. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 12. Most occupational programmes currently offered at colleges contribute towards building the skills workforce in South Africa. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 13. The curriculum content of Report 191 (N1-N3) engineering programmes is relevant to Artisan development in South Africa. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 14. The curriculum design of Report 191 (N1-N3) engineering programmes is relevant to Artisan development in South Africa. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 15. The curriculum content of Report 191 (N4-N6) business and general study programmes needs revision. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 16. The curriculum content of the National Certificate Vocational (NCV L2-L4) programmes needs revision. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 17. The curriculum design of the National Certificate Vocational (NCV L2-L4) programmes needs revision. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 18. Vocational programmes currently offered at colleges offer flexible modes of delivery (such as part-time, distance learning and modular block release). | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 19. Occupational programmes currently offered at colleges offer flexible modes of delivery (such as part-time, distance learning and modular block release). | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 20. Vocational programmes articulate seamlessly into higher education programmes. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

- | | | | | |
|---|-----------------------|-----------------------|-----------------------|-----------------------|
| 21. Occupational programmes articulate seamlessly into higher education programmes. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 22. Clearly defined articulation routes exist between academic qualifications of schools and vocational programmes of FET colleges. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 23. DHET ensures adequate industry involvement in the development of FET college curricula to promote industry relevance. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 24. Vocational education in South Africa is benchmarked against international standards. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 25. Occupational education in South Africa is benchmarked against international standards. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 26. FET College leaders are equipped with the necessary knowledge to lead curriculum change. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 27. FET College leaders are equipped with the necessary skills to lead curriculum change. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 28. A leadership training programme exists to capacitate staff members to lead curriculum change. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 29. Curriculum change will lead to enhanced student employability. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 30. Curriculum change contributes to improvement of productivity in the workplace. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 31. Curriculum change contributes to improvement of services in the workplace. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 32. Curriculum change contributes to student success rates. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 33. Workplace integrated learning improve student success rates. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 34. Leadership strategies are in place to manage workplace integrated learning in FET colleges. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 35. Change management strategies exist in colleges to facilitate curriculum change. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |



Section B2: Please answer the following OPEN-ENDED QUESTIONS in detail.
(You may indicate NOT APPLICABLE (N/A) for some of the questions that might be unrelated to your work experience.)

* 1. In your opinion, what are the main *differences* between vocational, occupational and academic education?

2. What are the perceived *current curriculum challenges* faced by FET college leaders with reference to:

* 2.1 Vocational (NCV L2-L4) programmes?

* 2.2 Report 191 (N1-N3) Engineering study programmes?

* 2.3 Report 191 (N4-N6) Business and General study programmes?

* 2.4 Occupational (NQF L1-L5) programmes?

* 3. What elements of *knowledge* are required of lecturers to develop a responsive *vocational* curriculum?

* 4. What elements of *skills* are required of lecturers to develop a responsive *vocational* curriculum?

* 5. What elements of *knowledge* are required of lecturers/facilitators to develop a responsive *occupational* curriculum?

* 6. What elements of *skills* are required of lecturers/facilitators to develop a responsive *occupational* curriculum?

* 7. What are the *leadership features* needed for enhancing *curriculum change* in the South African FET college sector?

* 8. What is the *current* perceived *leadership capacity* in the FET College sector that are needed to address these *current curriculum challenges*?

* 9. What is the *future* perceived leadership capacity in the FET College sector that are needed to address these *future curriculum challenges*?

* 10. Describe the *influence* that the promulgation of the various pieces of *legislation* such as (FET Colleges Act of 2006, FET Colleges amendment Act of 2011, Skills Development Act of 1997) had on *curriculum change* in FET colleges?

11. Which legislative/policy changes would you propose to improve curriculum standards of:

11.1 Vocational education

11.2 Occupational education

12. What change management *strategies* might be beneficial to capacitate FET college leaders to manage *current* curriculum challenges?

13. What *change management strategies* might be beneficial to capacitate FET college leaders to manage *future* curriculum challenges?

Thank you for taking the survey.

ADDENDUM 7
SEMI-STRUCTURED INTERVIEW SCHEDULE

SEMI-STRUCTURED FOCUS GROUP INTERVIEW SCHEDULE

| INTERVIEW TOPICS AND QUESTIONS | |
|---|--|
| TOPICS | QUESTIONS |
| TOPIC ONE: CURRICULUM | <ol style="list-style-type: none"> 1. What are the key differences between vocational, occupational and academic education? 2. What are the perceived current curriculum challenges faced by Technical Vocational Education and Training (TVET) Colleges with reference to the following programmes: <ol style="list-style-type: none"> 2.1 National Certificate Vocational (NCV) Levels 2-4. 2.2 Occupational (Levels 1-5). 2.3 Report 191 (N1-N3) Engineering 2.4 Report 191 (N4-N6) Business and General Studies |
| TOPIC TWO: CURRICULUM CHANGE | <ol style="list-style-type: none"> 3. What curriculum changes do you suggest should be made to the existing TVET college programmes: <ol style="list-style-type: none"> 3.1 National Certificate Vocational (NCV) Levels 2-4. 3.2 Occupational (Levels 1-5). 3.3 Report 191 (N1-N3) Engineering 3.4 Report 191 (N4-N6) Business and General Studies. 4. What competencies are needed to manage the change required that could lead to curriculum change in colleges. |
| TOPIC THREE: CURRICULUM LEADERSHIP | <ol style="list-style-type: none"> 5. What are the perceived current curriculum leadership challenges faced by TVET colleges? 6. What leadership features should college leaders possess to enhance curriculum change in the South African TVET college sector? |

ADDENDUM 8

EXAMPLE OF A GROUP INTERVIEW TRANSCRIPT

EXAMPLE OF AN INTERVIEW TRANSCRIPTION

IV: Interviewer

MI: Male Interviewee

FI: Female Interviewee

Mr (X): Refer to the name and surname of person referred to ensure anonymity and confidentiality of participants.

Ms (X): Refer to the name and surname of person referred to ensure anonymity and confidentiality of participants.

IV: Introduction and opening remarks

Good afternoon colleagues, My name is Tercia Terblanche and I am the Deputy Principal: Academic at South Cape TVET College. I am in 23 year in TVET college education in colleges. I completed the questionnaire survey with the college staff last year and the interview questions are mainly based on the outcomes of the survey responses.

IV: WHAT ARE THE KEY DIFFERENCES BETWEEN VOCATIONAL, OCCUPATIONAL AND ACADEMIC EDUCATION?

MALE 1: Okay, when it come to academic qualifications to me my understanding is basically just theoretical education and that. The Vocational is a mix of theory and practical and the occupational is 95% practical hands-on work.

IV: Mr (X) gave us a good explanation. Do anybody wish to add to it?

MALE 2: For vocational I will agree in terms of the split between skill and practical work and theoretical work. But I think for academic education it also includes a portion of practical work but that practical work is usually past experience or what the student especially in our sector has to go find by himself, it does not exclude it but it is just not formally part of the training. That is what I think is the difference between vocational and academic. I am not a 100% sure about

occupational because I don't know what theory components actually exist there. But I know that vocational has a structured practical course whereas academic has a expected practical course or practical component that we don't deliver but that they are expected to know. That is usually an advantage to them.

MALE 3: I will add that occupational is more work based than vocational and academic. So people are trained for specific occupation and not that much generic – subject based I can say.

FEMALE 1: Is more the same as [Mr X-male 1] in my opinion on vocational and occupational.

IV: WHAT ARE THE CURRENT PERCEIVE CURRICULUM CHALLENGES FACED BY TVET COLLEGES WITH REFERENCE TO NCV, OCCUPATIONAL PROGRAMMES, REPORT 191 ENGINEERING AND REPORT 191 N4-N4 PROGRAMMES. AND WHAT CURRENT CHANGES TO YOU SUGGEST SHOULD BE MADE TO THE EXISTING TVET COLLEGE PROGRAMMES.

MALE 3: If I can start being involve with programme 191. At the moment it is a syllabus that come from the archives. Most of these methods – Most I will say in the building civil – More than 90% of these methods -yes it is standard –but is not being used anymore. The existence of these to use examples does not exist. So, Our students are not aware – you can't send them out on a site or go visit this and go visit that then you will be able to see or see how it is done. But yes, it is difficult, even most of our lecturers that we are using are not even aware of how things are done.

It is basically for the type of student that we have it is difficult for them to perceive or visualize especially for building and drawing component. AND If you don't make a model of it and explain what is what then they will never be able to understand. And then we must also really understand the type of student we receive from schools and it is getting worse and worse as the years go on.

IV: Is the case that lecturers are not placed in industry perhaps part of the reason?

Lecturers are not expose to industry but even if they are they are not expose to the syllabus – there is a disjuncture between the two.

IV: So there is a disjuncture between the syllabus and the workplace?

MALE 3: Yes, that's right, Yes.

MALE 2: I teach Mathematics and Science. Mathematics is a timeless subject, you can't really say it is outdated. The skills are relevant and can be used at any point. –But what I notice is that it is well-suited to a specific trade. So the Mathematics we teach sit well with Electrical engineering student who do N1-N3 but it does not sit well with Building and civil student. That is an important factor because Mathematics is a requirement and the Mathematics does not sit well in terms with the trades.

Engineering Science is the same – It sit really well with Electrical students but if you would teach Engineering Science it to someone with Mechanical engine s – there is a big difference about how much benefit Engineering Science there actually really is. For example Engineering Science N1 has a component where out of 26 marks focuses only on electricity. So that work really well with N1 students because N1 students do electrical trade theory as well. So then passing engine science is almost effortless because they done 25% of the work in 2 other subjects already.

The same engineering science is offered at other campuses where they don't offer electrical trade and so now they don't get the exposure to that 26 marks. So it is too skewed to favour a specific trade. What I did notice is that Electrical trade is the biggest programme but it does not mean that it must get such favourable syllabus in another subject. I think the science subjects need to be must be well distributed amongst all trades instead of working against it. If a mechanical engineering student is doing engine science it should be a component that at least help the student with that trade.

IV: That is a very good observation, I must say it is the first time I hear this response from a respondent.

MALE 1: Okay, I think in order to say about the challenges you need to go back about 40 years ago why the Report 191 was design. It was specifically designed for an Apprentice. A youngster doing an apprenticeship. We will have basically 9 months or 50% of his time he will be in a workplace situation. And, that is why it was easier for the students at that time to get an understanding of what the feel of the actual subject that he is doing in. And that because he could visual it in the construction site and electrical workshop and that. Today the cohort of students has changed drastically, it is actually a 90% turnaround, it is now more voluntary students than apprenticeships. And this is where your challenge is. And in order for us to change the whole curriculum it must be acceptable by industry and industry must come on board and be part of

change the curriculum and then I think we will get the students to like the subject and also the industry to accept the N1-N3 curriculum.

If I can go off a bit, if you go back to the NCV and if you look at the construction side of the curriculum, that was designed by a qualified engineer that wanted to make NCVs engineers out of artisanal students and that is why the NCV is such a big failure but I mean they really need to look at how they can integrate the curriculum with the work situation and N1-N3 and as (Mr X: Male 3) has mentioned, although the principles are the same but some of the methodology that they use today is totally different you know than 40 years ago and that need to be taken into account.

MALE 3: We had a conversation with [Mr X] that we should have semester instead of trimester and to introduce practical component for a certain time. Say for instance you do roofing then you have a practical session to implement the theory. So when you talk about a door frame. Where does a door come in - so that what you see you can do you can understand much better.

MALE 2: Can I also say, that once a new curriculum is changed it will again be another challenge where the lecturers are not going to be familiar because it is like (Mr X: Male 3) said we the lecturers are not exposed to the industry – now the curriculum will be suited to industry and then the lecturers will not be equipped and then the lecturers themselves will have go to industry as well. That is the other challenge with the curriculum change in the field of technical and vocational education.

MALE 1: Just to latch on to that , the only way that it will work is for DHET to say right I give to each campus a post for a year in order so that that campus can send that lecturer out into industry and while that lecturer is out the substitute person can stand in for that person. Unless the government is prepared to spend that money it is no use to ask for reports because it is a challenge for the lecturers. Some of them are so tired and some of them are marking the 1st week of the holidays and still to have time to go to industry. That is what must come from the CEOs and that, they must push for it with the minister.

IV: That's the perfect scenario. Although it remain a challenge at the moment. College receive no funding and some colleges are using own funds and initiative to place some of the lecturers in the absence of a formal structure.

MALE 1: Yes, but that must come from the CEOs , They must push for it with the Minister.

MALE 3: What can also take place is that if you replace somebody when the exams start and release some of the lecturers during examinations and send them somewhere. You can replace them with other invigilators but not the markers because I am not going to mark another lecturers papers.

MALE 1: interjects: But you can't substitute markers, you cannot compromise the integrity of the examinations.

IV: We acknowledge that challenge. Is there any other challenges you wish to highlight?

FEMALE 2: Maybe just the Language - Language is a problem for us especially students who are not - English is not their first language. Now they must receive class in English and it is abstract - They can't make the link between the work they are doing and what they are suppose to experience in industry because they don't see the equipment and they don't work with it physically. So, it is a bit of a problem for us.

MALE 3: What can also be a problem in certain of our indigineous languages say for example a window sill don't exist in any of the indigineous languages then it will be a problem - if I talk about a sill then she talk Setwana then she will not know what it is all about.

MALE 1: Can I also say here, I think analyzing the last couple of exams. Sorry (Ms X : Female 2) sorry coloureds and Xhosa's but the best results came from the Xhosa speaking staff and I discussed in with my academic head (Mr X) and then he said you know the reason because those lecturers are Xhosa speaking so they switch easy in the class and that is the difference. Mr [X] our CEO, always ask why is your campus results always better than other campuses and then I said because we have more Xhosa speaking staff than the other campuses. You see and that does make a difference.

IV: Oh, so it is not just a language barrier for the student but also for some of the lecturers?

MALE 3: YES.

Because it is easy – you see when I used to teach and there were Afrikaans speaking students it was easy for me to switch between English and Afrikaans and they could understand and that is why it is also easy for the IsiXhosa teacher to switch between English and IsiXhosa and when he

or she have to speak / talk in an African language then that student understands so much better and quicker and that is the reality.

IV: WHAT CURRENT CHANGES DO YOU SUGGEST SHOULD BE MADE TO THE EXISTING TVET COLLEGE PROGRAMMES WITH REFERENCE TO NCV, OCCUPATIONAL PROGRAMMES, REPORT 191 ENGINEERING AND REPORT 191 N4-N4 PROGRAMMES.

MALE 3: If I can come in here – Yes Modernise the situation with the trend that we are in now. You must remember and I am going to touch on it again. Schools are supplying us – People want to do engineering are studying Maths Lit. you see . So basically what we need to prevent failures year after year is to introduce a NCOR to prepare the student for engineering studies. And it must be government funded also.

IV: The NCOR which they (DHET) cancelled.

MALE 3: Yes. It will reduce the failure rate after N1.

MALE 1: My suggestion would be – I will concur with [Mr X – Male 3] I will use the bridging for 6 months and then 50% of that will be practical and 50% will be theory. So you start off the youngsters coming into the college with a 3 months or 12 week practical in the field that they want to go so you do the introduction of the N1 and then you do the N1 again for a semester basis and in their he can do a 6 week practical training in the 2nd phase and that can go on until he completed his N3 so every N you will allow 6 week of practical training and the rest is theory so I think in that way he gets a combination of both and how they unpack it. But I am also sure that how they get the youngster to to start at N1 after he has done the 3 month practical and 3 month theory introduction , the product will be right for the TVET college. Currently we get the product from Basic Education which is not right. You see we get the worse of the worse of the worse and sometimes we even get a grade 12 candidates but we all know the guys sit for 2 years in grade 9 and then he gets pushed over 2 years in grade 10 he gets pushed over and 2 years in grade 11 and he gets pushed over. You know.

IV: Do we say that the curriculum researchers must also research the target market for whom they intend writing the new curriculum for?

MALE 3: YES, definitely.

MALE 2: interjects: You can only fail once in a phase so if you fail in grade 9 you get pushed over then he go to grade 10 and if he fail in grade 10 then he can't get pushed over again.

MALE 3: Yes but he will have a grade 11 but technically he don't have a grade 9 and that is the challenge that the country is sitting with – That Basic Education has failed us.

MALE 2: Well I think the biggest problem with the programme we are currently teaching is that the students don't understand what it is designed for and that must be made clear at the beginning. Are we making it a springboard for them to go to a technical university or is this a platform for them to become an artisan. Once they know that exactly then they can design a curriculum. Currently some students expects this to get them into another technical university. Students are constantly concern that – Can we go to CPUT after we done here. That is not clear and in order for the curriculum change to work there has to be something to say that CPUT will accept them. There have to be communication with those role players so that we know what they require because ultimately students using this as a bridging course to get into CPUT or another technical university and this is our biggest problem.

IV: And not necessarily to become an Artisan?

MALE 2: Exactly!

MALE 3: At the moment this is not a springboard for a university. Being as it may- I've been to a school and I was chucked out – I spoke about Maths Literacy. They are working on numbers to pass. This is basically the same thing that wants to happen in TVET to produce qualifications to get the money and it serves the country no good, no good. We are not producing what we are suppose to produce – chasing of numbers and pass rates – Yes, it is good but it does not work – it serves no purpose.

VI: WHAT COMPETENCIES ARE NEEDED TO MANAGE THE CHANGE REQUIRED THAT COULD LEAD TO CURRICULUM CHANGE IN COLLEGES?

MALE 1: You see when you talk about leadership change you talk about the person that can lead in a certain field. So if you look at your current structure but now I am talking about a position in the Western Cape Education Dept. Now somehow or the other you got different subjects – you got electrical, business and if you look at the subject advisors of specialist. For instance a person coming here to look at the construction has never been on a construction site – I think it is a motor mechanic and he comes and look at the electrical and construction side but he is seen as a specialist

– as a curriculum leader. now this is where you are going to go wrong so if you make a change in the curriculum and you don't have people at the top position to guide and lead the institution that have important knowledge about the specific programmes and not you know you not the CEO of a college where you just have to globally manage , you now have be specific and come down to the roll out the curriculum. So unless they have the people that are atuned and trained in those specific fields it is not going to work.

IV: Okay, so we are saying the curriculum leader must be competent and the subject expert and knowledgeable and have experience in order to lead the curriculum.

MALE 1: Must be.

MALE 3: What I wanted to add is to create between colleges work groups that can take the curriculum. The thing for me a curriculum must not be stagnant – it must be a process, beneficial to the workplace, beneficial to the student. So, in other words the private sector and even if they are trained for government institutions they must come to the party, they must be part of that work group to plan and plot the way ahead. Because if they are going to do it on their own, it will only be subject matter based and it will only benefit the college itself but it must benefit the workplace. So in other words the private sector, companies must come on board and be part of the training process.

IV: Thank you. Any other input. Don't be shy.

FEMALE 2: This is my personal experience. A lot of the planning for trimester I must do myself. There is not a focus group like for the Mathematics lecturers have so I have to decide when I am going to do a specific topic. I don't have somebody telling me how to do it, now there is 50 colleges and each one is doing their own thing but at the end of the day everybody are being assessed in the same style. Now shouldn't that be more organized. Planning is a challenge and you are left on your own.

IV: So planning is a challenge.

FEMALE 2: Yes. The programme managers and academic heads moderates your portfolios and that is the only time it gets checked. But you are not advised on how to do it.

MALE 1: interjects: Can I just come here, I think in support of (Ms X-Female 2), and (Mrs X) is the driver of the Maths focus groups in the province and that is why the Maths focus group but

you don't have focus groups for the other subjects and that is the challenge. That is what (Mr X: Male 3) is also alluding to – perhaps they must start something like that in the western cape you have specific a focus groups for subjects and meet where it is once a year or 3 months so that lecturers can say how they gonna plan for the next trimester – Am I right (referring to Mrs X – Female 3).

IV: WHAT ARE THE PERCEIVED CURRENT CURRICULUM LEADERSHIP CHALLENGES FACED BY TVET COLLEGES? AND WHAT LEADERSHIP FEATURES SHOULD THE COLLEGE LEADERS POSSESSES TO ENHANCE CURRICULUM CHANGE IN THE SA TVET COLLEGE SECTOR?

MALE 2: I think the biggest issue at a campus level and eventually a college level, is that we don't really have leaders – what we do have is managers who delegates from the back. We need people that if they want curriculum change or lead from the front and take us by the hand and show us this is the best practice. This is when you teach this content, this is how things should be done when you implement this process. I think this is our biggest challenge. Now should there be curriculum change and should they institute curriculum change it should be a proactive charismatic person who is able to foresee challenges and predict what kind of challenges would be and have a plan for that. At our college we have not receive results for engineering N1-N3, now this is a issue that you can predict before the trimester is done. Last trimester they could have predicted that the results would be withheld because the leak was already a conversation and we were aware of. But there was no proactive leadership. The college have a reactive style, they react to problems. They don't predict and plan for problems and if they want curriculum change there have to be a different kind of management, completely, when they come to dealing with issues like this.

IV: What type of support would you say lecturers would expect if a new curriculum is developed and must be implemented?

MALE 3: I will say lecturer training to prepare them for it. Then in the old dispensation, we had to subject advisor in a school, maybe to implement something like that to get it off the ground properly.

MALE 1: You see the other thing, the QCTO was the driver of the design of the curriculum and that. And with that they involve industry roleplayers. Now I think it is important that they solicit the help/assistance of the teams because they had committees of 10 people. Now that 10 people

need to roll out the nuts and bolts of that 50 institutions or those institutions where the programme is being offered. And I think in that way the lecturers will get a better understanding and come to grip with what it is that the designers of the curriculum had in mind so that they can carry it over to the learners, or so-called students correctly (can't use the term learners anymore).

FEMALE 1: I will expect to be send to training so that I can be prepared and know what to do and especially with the content like electrical – you need to have all the topics to know what to do and if I don't have a syllabus so then I won't be able to know what to expect.

IV: Is the trade test still relevant and what are current challenges with artisan development?

MALE 3: The thing is the problem that we got is work placements. There is a challenge to place people into work. WE were promised by a company that they will come and they will offer artisanship and that but they only chose about 4 or of our students and we have 100s and 100s of students. So yes, apprenticeships are outdated, they gonna train you, a company is only going to train you up to a certain level. In other words the students will feel it and they knew it exactly. Most of them dropped out, so they only going to train you to do 'that'. Because that is only what the company now needs but they are getting paid stipends and things like that. I mean it is unfair towards them – I am not going to encourage students again to do things like that because they want to be a qualified artisan and not a semi-skilled. Because when they are semi-skilled it means the company don't have to pay them that amount of money but they have to do almost that.

IV: Do you also CBMT at this campus?

MALE 1: The CMBT modules are still current and alive – what you did 20 years ago you still have to do today. You got to lay the bricks the same way and no robot is going to lay the bricks for you. So all those things is still current – the trade test is still current so if he come out there he should be able to do his work. So, those are the things that are current that he can go out there and do it. But as (Mr X –male 3) said, there is not always work outside. So then the candidates coming out there don't get work and sometimes when they even finish as a qualified trade tester. They have to wait for their certificates and go do any work. Companies will accept them but the moment they qualify for their trade test they let him go. It was like that also 40 years ago but they use to take on new candidates all the time. Other biggest challenge on the construction, the building side is the drawings. These students can't visualize, whether it is N1 or N3. Most of the students come here and they have not done drawings or woodwork at school also so you have to start from scratch.

IV: Should the theoretical drawings component replace with a computerized subject?

MALE 3: That's why I say the school curriculum perhaps is too theory based, there is no vision when they get to you. In the previous years there were technical schools but apparently the technical schools are coming back. So, hopefully for the future we will be much better a little bit. Both electronic and manual drawings component is recommended. I am involve with drawings since 1980. The most important thing for an engineering person is your hand eye coordination. Your drawing component is the best for that to happen.

MALE 1: My perspective is slightly different. I will say both. To me the guy, You know we are not training Architects. If a guy need to do Architect he needs to go to a university. All I am interested is that the guy must be able to sketch, a proportional sketch. And that is what we should try to get to and not spend too much time to draw lines and angles and all that that he will never use unless he is gonna go further as a foreman and that. All he needs to do is draw a little sketch and show somebody else this is how I want it. But he is never even going to work on a site with a drawing board and that is why I firmly believe that for the artisan all he needs is to sketch, he must memorize the drawings and that and sketch it out.

MALE 1: Some of the engineering fields you will always have a flow of students coming into the workplace. But, when it come to construction site, although the engineering people are also profit driven. Construction companies are much more profit driven, they also work in cycles. Their work is cyclonic in nature so the one day they will have work and after 18 months there is no more work. You know, so they are not prepared to commit themselves to a candidate for 3 years whereas with the other engineering fields it is easier for those companies to commit themselves to a candidate for 3 years and that. For some construction companies contracts are only 6 or 9 months. It is very seldom that they gonna get that is 3 years unless there is another world cup.

MALE 2: The one thing I want to add. The workplace even to find SETA funds for N4-N6 internships for General studies, then surely that problem will be overcome if the department of a department funds it because ultimately it is about gaining experience because without it they cannot gain the experience. So, where the money comes from should not be the problem but where the student works.

MALE 1: Two years ago we got funding for 100 apprenticeships from the construction SETA. I went to all the companies. Very few of them were prepared to commit themselves for 3 years even with the funding. I told them here it is, all they have to do is give a top up every year.

IV: So will workplacements for students be a challenge to roll out a new curriculum?

MALE 3: There is something sinister also going on. It just happened that my daughter was at an internship with a drafting architecture company and then after 2 months she came home with a R2 500,00 stipend and when I challenged the boss about how much money she makes for the company (it is mind boggling) and all of a sudden her stipend increase 3 times because she is making money for them and they getting money from the SETAs. It is not transparent.

MALE 1: But you see the government must just do away with the SETAs because it is just a way for them to make extra money down the line. And, just go back to in the past where they paid technical colleges and apprenticeships came into the college and the company pay them. And, his entitled to tax rebate and you don't need the SETAs or anybody. And there were nobody doing quality assurance. The college use to do all that and the company takes the practical training further in the next 18 months until he is ready to do his trade test or else if he is not ready, the company did not do his job properly. So once we go to that model again. The problem is we cannot get workplace for all the students. We enroll 6000 students a year at this campus. And, the government want us to increase the student numbers but where is the money?

IV: Thank you. Okay I will close now. Do you have any closing remarks?

FEMALE 1: I just want to say that I gained some lots of points and I don't know what the curriculum is all about but now I know and have an exposure to it.

FEMALE 1: I've learnt a lot through the interview session. I did not really know much about the curriculum but now I know.

IV: Okay that's good!

FEMALE 2: I have nothing to add.

MALE 1: Once I retire I will join Parliament and propose that after grade 8 we change the whole schooling system. We only have Maths, Science and a Language. From gr 8-10 and then the rest of the timetable we have work related modules over 3 years. Grade 11-12 he can this do the subjects that he want to specialize in.

MALE 3: I was thinking of the majority of the students here, they cannot even spell correctly. When you ask them what you want, I want to study “lectric”. Do they really want to study and become an artisan or is it just because there is NSFAS bursaries. What we need is a **phycometric** test to determine the ability of that student and I don’t think for our calling there is test available there is only a generic one (but one based especially for building and civil).

If you are, I meant that will be able to pick you up. That will cut out 75% of our failures that will take place. Because most of them are here because their friends are here, or I get free travelling, I get a stipend – It is a waste of money as well.

MALE 2: The one thing I picked up is the evaluation of the student before we even meet them in the class is a bit bias. Now we always say that the quality of the student is poor. What we are teaching is the foundation so then it should not really matter what the quality of that student is. We should instill in that student a work ethic. And, that is what I think is the biggest challenges with our students. They don’t want to but they can. The type of challenges of students covers a wide variety. It should not matter and I as a lecturer already preconception of the type of student that we will receive and it is an unfair assessment. Teacher confidence is poor. We first need to make sure that we are 100% equipped to train the students that come in at the gate. How motivated am I to do this. Motivation is poor and it is poor even coming from the top.

VI: Okay, I will close now. Thank you very much colleagues, this was really a very fruitful and valuable session for me. I am definitely with much more than what I came for.

END OF RECORDING: GROUP 4