



Cape Peninsula
University of Technology

**Factors influencing programme completion of National Certificate
(Vocational) students at a college in the Western Cape, South
Africa.**

by

Aasief Gaffoor

Dissertation submitted in fulfilment of the requirements for the degree

Master of Technology: Business Administration

in the Faculty of Business and Management Science

at the Cape Peninsula University of Technology

Supervisor: Dr A van der Bijl

**Cape Town
2018**

CPUT copyright information

The dissertation/thesis may not be published either in part (in scholarly, scientific or technical journals), or as a whole (as a monograph), unless permission has been obtained from the University.

DECLARATION

I, Aasief Gaffoor, declare that the contents of this dissertation/thesis represent my own unaided work, and that the dissertation/thesis has not previously been submitted for academic examination towards any qualification. Furthermore, it represents my own opinions and not necessarily those of the Cape Peninsula University of Technology.



Signed

2018 – 07 – 30

Date

DECLARATION BY LANGUAGE EDITOR

DECLARATION

DR CA ROBERTSON

MA (Critical Linguistics *cum laude*). DPhil (Curriculum Studies) (Stellenbosch)

LANGUAGE PRACTITIONER: WRITER, PROOFREADER AND LANGUAGE EDITOR

Associate Member: Professional Editors' Guild

72 Foxglove Street
PAARL
7646

021 872-4404
082 823 8384

cathy@tcrobertson.co.za

Date: 19 July 2018

Editing of Master's Thesis for Aasief Gaffoor

I confirm that I have edited the following document submitted by Aasief Gaffoor in fulfilment of the requirements for the degree of Masters of Technology: Business Administration, Faculty of Business and Management Science at the Peninsula University of Technology, South Africa.

Research title	<i>Factors influencing programme completion of the National Certificate (Vocational) students at a college in the Western Cape, South Africa.</i>
Document type	M.Tech. thesis
Editing services	Editing of chapters 1 – 5: correcting spelling and grammar mistakes; editing for consistency, style and flow; checking of inclusion and accuracy of 115 references as well as cross-referencing.

The edited document was emailed to Mr A Gaffoor on Thursday, 19 July 2018 with all the changes marked up using MSWord's Review (Track Changes). Mr Gaffoor is responsible for accepting the editor's changes and finalising the references. He is also responsible for the quality and accuracy of the final submission.

Yours faithfully



C A ROBERTSON

ABSTRACT

Since its inception in 2007, the National Certificate (Vocational) (NC(V)) programme offered at Technical and Vocational Education and Training (TVET) colleges in South Africa, has experienced low programme completion and high drop-out rates. Acknowledging the importance of investigating factors that influence high drop-out and low programme completion rates, this study uses an alternative approach to the research problem. This study focuses on the factors that have influenced the decision of final year Level 4 NC(V) Business Studies students to complete their programme during 2017 at a selected TVET college, located in the Western Cape, South Africa. The study was guided by understanding and combining two student retention theories and models, namely those of Vincent Tinto and John Bean.

The study is positioned in a critical research paradigm. By applying a mixed methods approach, the strengths of both qualitative and quantitative methods are used. The mixed methods approach is motivated by sequential and converged data contribution, employing both rating-scale and exploratory questionnaire methods of data collection. Applying random sampling and a 99% confidence level, an $n=62$ sample was identified from an $N=63$ population, from which 46 consented to participate in the initial quantitative study. Purposive and convenience sampling derived a converging $n=6$ sample, of which three participated in the qualitative study. The population and sample was derived from two Business Studies NC(V) programmes at the selected TVET college campus. Computer-aided spreadsheet software was used to collate and analyse quantitative data and qualitative responses were summarised and collated, using computer-aided word-processing software. Frequent responses or themes were identified in participant responses.

Secondary data indicated a 46% retention rate of the study population since their enrolment in 2015. Analysed data indicated that the factors influencing the decision to complete the NC(V) programme include, amongst others, financial assistance, progression to higher education, employment prospects within their vocation, well-informed career guidance, lecturer support and patience, embarrassment about failure, parent and family support, and college environment compared to high school. The four main factors, ranked in order of importance, were, teaching quality/style, friendly teachers, general social interaction and then friends. Recommendations for potential improvement of student retention and NC(V) programme completion are provided, based on the factors within direct control of the TVET college.

Keywords

Programme completion, retention, National Certificate (Vocational), public TVET college, Western Cape, South Africa.

ACKNOWLEDGEMENTS

I wish to thank:

- The Almighty, for granting me the strength and perseverance each day to pursue my academic goals and life achievements;
- My mother, for instilling a sense of lifelong learning and nurturing my commitment towards my education;
- My wife, for always believing in me and encouraging me to never give up and reach for my goals;
- Family and friends, for their support and understanding during times of absence while pursuing my education;
- My supervisor, Dr Andre van der Bijl for his continuous understanding, support and guidance. Your conversations and time dedicated towards my thesis are highly appreciated;
- My language editor, Dr Catherine Robertson for her valued contribution, ensuring the linguistic strength of my work;
- Mr Nigel Prinsloo, of the Further Education and Training Institute (FETI), for the initial thought-generating conversations that led to the development of my thesis topic;
- Mr Matthew Benjamin, a kind MTech CPUT student, who happened to see me busy with my thesis and offered time on a weekly basis to assist me with my work.

DEDICATION

To all lifelong learners, knowledge seekers and knowledge contributors

GLOSSARY OF TERMS

DHET	Department of Higher Education and Training
FE	Further Education
FET	Further Education and Training
HE	Higher Education
ILO	International Labour Organisation
NC(V)	National Certificate (Vocational)
NQF	National Qualifications Framework
NQF L4	Grade 12 (main stream secondary schooling) and NC(V) Level 4 (TVET college)
NSC	National Senior Certificate (Grade 12)
Post-school	'Learners who have completed school; those who did not complete their schooling; and those who never attended school' (South Africa, 2013:xi)
PSET	Post School Education and Training
TVET	Technical and Vocational Education and Training
VET	Vocational Education and Training
Young	Persons aged 15–34 years (Statistics South Africa, 2015:2)
Youth	Persons aged 15-24 years (ILO, 2014:73)

TABLE OF CONTENTS

DECLARATION	ii
DECLARATION BY LANGUAGE EDITOR	iii
ABSTRACT	iv
ACKNOWLEDGEMENTS	vi
DEDICATION	vii
GLOSSARY OF TERMS	viii
CHAPTER ONE: INTRODUCTION TO THE STUDY	1
1.1 Introduction	1
1.2 Background to the research problem	1
1.3 Literature review	3
1.3.1 The introduction of TVET and NC(V) to South Africa	3
1.3.2 Student perception of TVET	4
1.3.3 Factors influencing student decision making	5
1.3.4 Student retention theories and models	6
1.4 Research objective and question	8
1.5 Research design	9
1.6 Research population and sample	10
1.7 Data collection	11
1.8 Data analysis	12
1.9 Research quality	13
1.9.1 Ethical considerations	14
1.10 Significance of research	14
1.11 Chapter outline	15
1.12 Conclusion	16
CHAPTER TWO: LITERATURE REVIEW	17
2.1 Introduction	17
2.2 Introducing the NC(V) programme into South African TVET	17
2.3 Student perception of TVET	21
2.4 The challenge of low programme completion	23
2.4.1 Factors influencing low programme completion and student retention	23
2.4.2 The effect of low programme completion and student retention	26
2.5 Advent of student retention theories	27

2.5.1	Vincent Tinto’s Student Integration Model (SIM)	29
2.5.2	Criticism of Tinto theory	30
2.5.3	John Bean’s Student Attrition Model	31
2.5.4	Criticism of Bean’s theory.....	33
2.5.5	Contribution and purpose of Tinto and Bean to this study	35
2.6	South African student retention studies	36
2.7	Conclusion	39
CHAPTER THREE: RESEARCH DESIGN		41
3.1	Introduction.....	41
3.2	Research objective.....	41
3.3	Research design.....	42
3.4	Research paradigm.....	44
3.5	Research methodology.....	45
3.6	Research population and sample	46
3.7	Data collection.....	50
3.7.1	Attitude or Rating-scale	51
3.7.2	Self-completion questionnaire	53
3.7.3	Instrument administration	54
3.8	Data analysis.....	56
3.9	Research quality	58
3.9.1	Trustworthiness.....	60
3.9.2	Credibility	60
3.9.3	Validity	61
3.9.4	Reliability.....	61
3.9.5	Participant consent.....	63
3.10	Ethical considerations.....	63
3.11	Conclusion	65
CHAPTER FOUR: DATA ANALYSIS AND PRESENTATION		67
4.1	Introduction.....	67
4.2	Data collection, capturing and analysis overview	67
4.3	Research findings.....	69
4.3.1	Quantitative findings.....	69
4.3.1.1	Biographical factors.....	69
4.3.1.2	Individual factors influencing programme completion.....	74

a.	TVET awareness prior to enrolment.....	74
b.	TVET acceptance and programme satisfaction.....	75
c.	Student support and development.....	76
d.	Student intention after NC(V) programme completion.....	77
4.3.1.3	Institutional factors influencing programme completion	78
a.	Teachers and academic support.....	78
b.	Financial assistance.....	79
c.	Programme orientation and campus environment	80
4.3.1.4	Social and environmental.....	81
a.	Social interaction with friends	82
b.	Social interaction with family and parents	83
4.3.1.5	Open-ended question	84
4.3.2	Qualitative findings	85
a.	Participants' like and dislike of college.....	86
b.	Reason for enrolment at TVET.....	87
c.	Reason for participants' friends dropping out.....	88
d.	Institutional factors influencing programme completion	89
e.	Role and influence of teachers.....	90
f.	Campus and off-campus support structures	91
g.	Friends and the achievement of academic goals	92
h.	Financial assistance.....	93
i.	Variables rated in order of importance	94
j.	NC(V) programme improvement.....	95
4.4	Summary of findings	96
4.5	Conclusion	99
CHAPTER FIVE: SUMMATIVE DISCUSSION AND RECOMMENDATIONS.....		101
5.1	Introduction.....	101
5.2	Reflective overview of research problem and design	101
5.3	Summative research findings	103
5.4	Recommendations for improved NC(V) programme completion	106
5.4.1	TVET stigma and perception	107
5.4.2	Student Support Services (SSS).....	108
5.4.3	Guidance and assessment.....	109
5.4.4	Standardised orientation.....	110
5.4.5	College culture	110

5.4.6	College resources.....	111
5.4.7	Implementing vocational skills prior, throughout and after the programme.....	111
5.4.8	Institution-Parent relations	113
5.4.9	Teaching quality and staff well-being	114
5.4.10	Understanding retention and student success.....	114
5.5	Study contribution.....	117
5.6	Conclusion	117
REFERENCES		119

LIST OF FIGURES

Figure 2.1: Internal and External Factors Influencing Student Persistence and Departure (IEFISPD) Model	38
Figure 3.1: Sample size, confidence level and interval – random sampling	48
Figure 4.1: Respondent's gender	69
Figure 4.2: Respondent's programme	69
Figure 4.3: Respondent's age	69
Figure 4.4: Respondent's enrolment year	69
Figure 4.5: Respondent's finance	70
Figure 5.1: Responsibilities of Student Support Services	106
Figure 5.2: Internal and External Factors Influencing Student Persistence and Departure (IEFISPD) Model	114

LIST OF TABLES

Table 3.1: Population 2017 and sample size	50
Table 4.1: Factor of influence and likelihood of programme completion	97

APPENDICES

Appendix A: Sample of the quantitative data collection instrument	122
Appendix B: Sample of the qualitative data collection instrument	126
Appendix C: Qualitative letter of consent	129
Appendix D: Cape Peninsula University of Technology ethics committee research approval	131
Appendix E: Department of Higher Education and Training (DHET) research permission	132
Appendix F: The selected TVET college and campus research approval	133
Appendix G: Quantitative rating-scale collated response – ‘individual’ category	134
Appendix H: Quantitative rating-scale collated response – ‘institutional’ category	135
Appendix I: Quantitative rating-scale collated response – ‘social and environmental’ category	137

CHAPTER ONE: INTRODUCTION TO THE STUDY

1.1 Introduction

In 2006, the Minister of Education, Grace Naledi Pandor, introduced the three-year National Certificate (Vocational) (NC(V)) curriculum to the South African education system (South Africa, 2006:4). The intake of first-year students at Level 2 occurred during 2007. The 11 full-time NC(V) programmes aimed to provide an opportunity to complete a post-school qualification aligned with Level 4 on the National Qualification Framework (NQF)¹. NC(V) Level 4 is equivalent to Grade 12 at traditional public schools in South Africa. However, since its inception, the NC(V) programmes have experienced low programme completion and high failure and drop-out rates (Papier, 2009:39). Despite the intention of TVET and the NC(V) programme to address national skills shortages, Sheppard and Sheppard (2012:63) describe TVET as inefficient regarding completion and retention rates.

Section 1.2 provides the background and context to the research problem, followed by a literature review of retention, attrition and departure studies in Section 1.3. The literature briefly looks at the introduction of TVET in South Africa and the problems experienced with the NC(V) programme. Section 1.3 includes aspects such as student perception of TVET and factors influencing low programme completion, before highlighting the retention models available and used for this study. Section 1.4 introduces the research objective and questions assisting with this enquiry. Section 1.5 highlights the study design, paradigm and methodology for acquiring data in response to the objective. The population and sample size are discussed in Section 1.6, followed by a discussion on the data collection and analysis methods in Section 1.7 and 1.8. Section 1.9 briefly introduces the concept of quality, inclusive of validity, reliability and examines the ethical considerations adhered to by this study. Chapter One concludes with the significance of this study in Section 1.10, before outlining the subsequent chapters in Section 1.11.

1.2 Background to the research problem

The announcement and roll-out of the NC(V) programme was intended to be a major achievement for the transformation of South African education (South Africa, 2006; South Africa, 2007). The NC(V) programme envisaged bridging the skills gap and promoting economic growth by meeting relevant labour market needs by developing the skills of TVET graduates (South Africa, 2006:12).

¹ A comprehensive system approved by the minister for the classification, registration, publication and articulation of quality-assured national qualifications (South Africa, 2008:6).

According to a report on the National Review of Academic and Professional Programmes in South Africa (CHE, 2010:41), the NC(V) programme was introduced to improve technical and cognitive skills as well as to enhance the economic relevance of TVET graduates. The report indicated that the NC(V) programme had not received collective industry support and did not meet programme delivery intentions.

The primary aim of TVET colleges is to provide greater opportunity and access, to promote post-school education, to train and impart skills, knowledge and attitudes required by the labour market, as well as imparting mid-level skills required for economic development in South Africa (South Africa, 2013:13). The state department responsible for TVET colleges, the Department of Higher Education and Training (DHET), envisaged TVET colleges as being the preferred institution of choice for young school leavers (South Africa, 2013:13). However, since its inception, the NC(V) programmes experienced low programme completion and high failure and drop-out rates (Papier, 2009:39).

Programme completion is not an insignificant problem in South Africa. According to the Council of Higher Education (CHE, 2016:77), students who are likely to drop out of higher education institutions countrywide, will do so during or at the end of their first year. A study conducted by Hodgson, May and Marks-Maran (2008, cited in Allen, 2012:13) indicated that social engagement and support were significant factors in retaining students during their first year. Concern about programme completion is experienced throughout the higher education sector. Students with varied backgrounds and academic abilities enrol in post-school education, resulting in different skills and persistence levels, which partially determine success (Laskey & Hetzel, 2011:31). Roberts and Styron (2010:2) argue that many who seek a college qualification often do not complete their programme. According to Bean and Eaton (2001:73), student voluntary participation in post-school education serves as an influential catalyst for their programme completion intention and retention. However, Thomas (2014:225) highlights the fact that institutions also have a responsibility towards improving students' intention to complete their programme. Acknowledging the voluntary participation of post-school education, Bean and Eaton (2001:73) provide a similar view to that of Thomas (2014:225) by stating that student retention is affected by policies and culture.

Students who depart early from college are less likely to enter the labour market successfully. Brunsden, Davies, Shevlin and Bracken (2000, cited in Allen, 2012:11) and the International Labour Organisation (ILO, 2014:73) argue that increased unemployment places pressure on society and government through financial relief dependence, no economic development and lower to no tax contribution. As many as 55% of young people actively

searching for employment have education levels below NQF Level 4 (Grade 12), presenting a challenge to finding employment (Statistics South Africa, 2015:1). According to Cloete (2009:3), job seekers with an NQF Level 4 qualification are 30% to 60% more likely to find formal employment compared to those who do not. According to Adamson and McAleavy (2000:535), Allen (2012:8) and Thomas (2011:43), the challenge of programme completion and retention negatively affect the financial stability, economic and employment well-being of the individual learner. Brunsden *et al.* (2000, cited in Allen, 2012:11) and Grebennikov and Shah (2012:224) share the view that low retention reduces the progress, confidence and self-belief of job applicants who only complete part of a qualification.

Student retention and their intention to complete their programmes are commonly studied (Tinto, 2006:1). Existing studies of student-related issues, such as performance, attrition, integration and retention in South African TVET, have been understood with the help of Vincent Tinto's theory and Student Integrated Model. Maharaj (2008) conducted research on retention and the effects of social interaction among mechanical engineering students in the N4 to N6² programmes. Research by Papier (2009) focuses on factors contributing to poor performance and drop-out in four NC(V) programmes. Ngcobo (2009) researched factors influencing college choice, programme completion or non-completion among engineering students in the N4 to N6 programme and research by Pather (2015) focused on pre-entry factors influencing first-year education students at a university of technology. Moodley and Singh (2015) researched student drop-out rates at universities and a study by Lawrence (2016) focused on attrition among NC(V) civil engineering students. However, Thomas (2014:225) argues that studies tend to focus on factors that influence student drop-out, poor performance or attrition, but not much focus has been afforded to factors that influence students' decision to complete their programme.

1.3 Literature review

1.3.1 The introduction of TVET and NC(V) to South Africa

The advent of democracy in South Africa following the first democratic election in 1994, resulted in the prioritisation of reform in education, with regard to legislation, policy, access, curriculum development and modes of delivery (South Africa, 2008a:1). Educational structures are continuously being made more accessible to previously disadvantaged groups who had limited access or were denied access to education in South Africa in the past

² Collectively, N4, N5 and N6 is a South African TVET College National and Technical Education Diploma or programme known as NATED or Report 191, eligible for post-NQF Level 4 students. Each Level (N4 to N6) has four subjects and a 6-month duration. Each subject includes a national examination at the end of each level. After completing the 18-month theoretical component, students are required to prove 2000 hours of related practical experience. An application is made to DHET before qualifying for the National-NATED Diploma.

(South Africa, 2008a:38). The South African education and training system underwent a significant change in 2002 after 152 technical colleges were merged to form 50 multi-campus institutions. These institutions, previously named Further Education and Training (FET) colleges, were later renamed Technical and Vocational Education and Training (TVET) colleges (South Africa, 2013:12). It was argued that both processes of integration and renaming were to align the South African vocational education system with international developments and standards (Odendaal, 2014). The NC(V) Level 2 to Level 4 programme was introduced in 2006 at TVET colleges with the purpose of achieving the state's goal to make post-school education more accessible through vocational qualifications (South Africa, 2008a:243). According to Cloete (2009:11), the National Plan for TVET identified unemployed, out-of-school youth and individuals who had less than an NQF Level 4 qualification as the potential candidates.

Since its inception in 2007, the NC(V) programme has experienced low programme completion and high failure rates (Papier, 2009:39) as well as poor retention and throughput rates. Fryer (2014:27) reported that NC(V) students had a throughput rate of 39% in 2012. This indicated that for every 100 students enrolled in the NC(V) programme, only 40 students completed their programme. Papier (2009:26) indicated that the following factors, amongst others, influenced the poor performance of participants in her study:

- Social integration or having to adapt to the college environment;
- Making new friends;
- Programme workload based on number of subjects and class period length;
- Lecturer inability to transfer information clearly; and
- Lecturers who were unprepared.

Papier (2009:7) notes that the report findings on poor performance could help to prepare colleges for the new intake of Level 2 students in 2010 and assist with improved programme completion and retention.

1.3.2 Student perception of TVET

Many who embark on a college qualification often do not complete the programme based on their decision to remain or leave college or a programme early. There are a variety of reasons for this situation (Roberts & Styron, 2010:2). Hillmert and Jacob (2003) and Billet (2014), both cited in Harris (2014:50), indicate that individual decision-making, discretion and weighing up of options form part of every student's educational process, as well as persistence with completion, or prolonging labour market entry. The effect of individuals not

completing their programme contributes to the lingering TVET stigma and perception of low quality when compared with mainstream education (Harris, 2014:37).

Puckett, Davidson and Lee (2012:1) argue that TVET is perceived in many countries as being inferior when compared to general academic education obtained through traditional universities or schools. This perception creates what Puckett *et al.* (2012:1) describe as a 'negative-feedback loop', despite TVET having the potential to respond to both skills shortage and unemployment. Lewis and Lewis (1985:167, cited in Harris, 2014:37) support this description, stating that the international perception of TVET is that it is a second-class option. The Needham and Papier (2011:36) study in South Africa uncovered a difference in perception of vocational training between secondary school learners and TVET college students. Some secondary school learners were unaware of TVET, while others saw it as 'second-choice education, resulting in low paying jobs with no career prospect' (Needham & Papier, 2011:36). TVET college participants in Needham and Papier's (2011) study had a positive attitude towards TVET, taking note of their actual exposure to the programme and career-path progression. The positive attitude was attributed to the practical component of the NC(V) programmes, which assisted with understanding the theoretical components.

Contrary to the view of secondary school learners of TVET being a 'second-choice education, resulting in low paying jobs with no career prospect', South African TVET students perceived their labour market entry and job prospects as being easier and greater due to specific vocational practical work-place learning and experience (Needham & Papier, 2011:36). Jamaican participants in a study conducted by Aynsley and Crossouard (2010:138, cited in Harris, 2014:50) shared this beneficial view of gaining practical experience as a direct labour market advantage, rather than pursuing a purely academic education. Jamaican participants also indicated a greater economic gain from practical training as opposed to a higher education qualification (Stockfelt, 2013, cited in Harris, 2014:45). Participants in Harris' (2014:45) study of TVET students in Barbados similarly understood that university did not guarantee good employment or employment at all.

1.3.3 Factors influencing student decision-making

Research, produced over the last two decades, internationally as well as in South Africa, has regarded factors that influence student decision-making as being similar. Findings listed below, amongst others, emerged from the largest sample group study on persistence and drop-out in the United Kingdom more than two decades ago, which are easily comparable with Papier's (2009) study. The '9000 voices' study by Martinez and Munday (1998) indicated

that the following factors had influenced the students' decision-making process towards the likelihood of early college departure:

- not placed in the most appropriate programme and therefore less satisfied;
- applied to late;
- could not make friends easily;
- less satisfied with the teaching quality; and
- less satisfied with their programme timetable.

In Ngcobo's (2009:66) study of Report 191 engineering studies (mechanical, electrical and civil), students concluded that certain students had left their college and programme early because of personal factors, either as a consequence of their actions or that of their parent. Some participants had become parents themselves, while others had failed a level and were kept out of college by their parents. A recent study by Lawrence (2016:93) of NC(V) Civil Engineering students in South Africa, established the following reasons for their early programme departure:

- Delayed external examination results;
- Theoretical overload in programme structure;
- College and programme expectations not met; and
- Socio-economic conditions and influences.

Accumulatively the factors influencing student performance, programme completion intention, retention or departure represent external-internal and student-institutional factors, which can, according to Jensen (2011:2), be assembled in three categories, namely Individual, Institutional and External.

1.3.4 Student retention theories and models

The study of attrition and the concern of student retention changed in the 1970s from a purely psychological stance to a more broadened understanding and relationship between individuals and their environment, particularly the learning environment and student completion intention (Tinto, 2006:3). Retention studies started with William Spady (1971) adopting a proposition of Emile Durkheim (1961) who concluded that individuals lacking the values of a social system and who were not supported, committed suicide (Bean & Eaton, 2001:74). Spady identified a correlation between suicide and dropping out of education, as in both instances, a social system was absent.

Vincent Tinto (1975) introduced the concept of academic and social integration, which had emerged from Spady's use of Durkheim's proposition. Later, this concept was revised by Tinto (1993; 1997) who suggested that the extent of the relationship between student and institutional commitment might influence drop-out intention and is a forecast of student persistence (Schreiber, Luescher-Mamashela & Moja, 2014:6). Tinto's (1987) retention theory advises against solely identifying individuals as factors for success. Institutions should take equal responsibility by not putting the onus solely on students to succeed (Laskey & Hetzel, 2011:34).

However, Tinto's theory and Student Integration Model (SIM) were criticised, mainly due to Tinto's model not accommodating non-traditional³ students such as community college students, who do not have the time or opportunity for social integration (Tierney, 2000:1). Similarly, Karp, Hughes and O'Gara (2008:1) have criticised Tinto's theory in relation to students attending community colleges, for example in the United States of America, as they are perceived as not having time to participate or integrate. Bean and Metzner's (1985) model advocating that non-traditional students have less social interaction and integration as opposed to traditional full-time students, also supports the criticism of Tierney (2000) and Karp *et al.* (2008). Despite its noted shortcomings, Tinto's SIM remains in use for the analysis of student success. Tinto's SIM has predominantly been applied to retention studies in South Africa with the correct educational institution's environment, to better understand the phenomenon of student success.

The acknowledgement of the criticism of Tinto's SIM has led to the analysis and use of John Bean's (1981) Student Attrition Model (SAM) that focuses more on external support of student persistence or the decision to withdraw, with less prominence placed on social integration influences. External support includes family, friends and even finance, amongst others, which was also viewed similarly by Metzner's model (1985) for non-traditional students who have less social interaction with others and the institution (Adamson & McAleavy, 2000:537). Bean argues that student departure is equivalent to labour turnover and attributes behavioural intention as a forecaster of persistence and retention. Bean's SAM model acknowledges the influence of social interactions and factors beyond the educational institution that play a vital role in influencing students' decision-making processes.

Guarding against single-model limitations and critique, this study analysed and combined alternative theories and models, namely those of Vincent Tinto and John Bean, to better understand and address the research problem. Tinto and Bean provide similar arguments, namely that student persistence is the result of interaction between personal and institutional

³ Part-time students not influenced by traditional full-time college culture, environment or integration (Bean & Metzner, 1985).

factors, and that the intent to persist stems from a successful fit between student-institution, integration-experience, and internal-external support and motivations (Cabrera, Castaneda, Nora & Hengstler, 1992). The combined contribution of Tinto and Bean minimises the critique of singular-model relevance and increases the understanding of internal and external factors that influence student persistence and retention.

According to Adamson and McAleavy's (2000:536), research on student retention evidence generally related to numerous personal and/or institutional-related factors, inclusive of socio-economic status, academic support, occupation of parents and underlying motivation for college entry. Existing South African studies, namely those of Papier (2009), Maharaj (2008), Pather (2015) and Lawrence (2016), mainly reference Tinto's model to understand student decision-making along the basis of social and academic integration. However, by incorporating Tinto's SIM and Bean's SAM model, this study was able to analyse and present a broader array of factors that influence student programme completion intention, gaining a greater understanding and insight into the research problem.

1.4 Research objective and question

According to Kumar (2014:262), the research objective refers to the fundamental drive or focus of a study. Welman and Kruger (1999:19) state that a research objective can be descriptive, which involves defining the nature of the object of the study. Alternatively, a research objective can be explanatory. When using the explanatory approach to determining research objectives, it involves explaining concepts or the relationship between concepts.

This study's main objective was to determine the internal and external factors that influenced programme completion among the 2017 NC(V) Business Studies Level 4 students. The study subscribed to the explanatory approach, as classified by Welman and Kruger (1999:19), to determine the research objective.

Addressing the main study objective, the following research question, along with sub-questions, were established to assist with the analysis:

What individual, institutional and social factors influenced the programme completion of NC(V) Business Studies Level 4 students?

- a. What was the retention rate, over the three-year period 2015 to 2017, of students enrolled in the NC(V) Business Studies programme?

- b. What specific internal (individual and institutional) factors influenced or supported programme completion and student retention?
- c. What specific external (environmental and social) factors influenced or supported programme completion and student retention?
- d. What are the prevalent internal and external factors a TVET college can control or influence?

By using an explanatory approach to determine the main research objective, this study was able to directly address the research problem, as well as investigate the relationship among the factors that influenced completion of the programme.

1.5 Research design

Welman and Kruger (1999:46), Bhattacharjee (2012:35) and Kumar (2014:122) argue that a research design, firstly, indicates the manner in which desired knowledge is acquired; secondly, which instruments are used to acquire the knowledge; and lastly, how the research participants are determined. According to Ebrahim (2013:72), research of a high quality must meet the vital criterion of credibility, namely validity and reliability. Validity ensures that correct and appropriate techniques have been used and reliability ensures repeatability and accuracy when applied to an alternative study or population sample (Neuman, 2006:196; Kumar, 2014:7).

According to Guba and Lincoln (1994:105), the way in which reality is constructed, namely 'how things really are' or 'how things really work', refers to research ontology. Research epistemology refers to data that constitute acceptable knowledge (Vanson, 2014). After defining the ontology and epistemology, the research design is classified under an associated research paradigm⁴, namely positivist, interpretive or critical research.

This study's design embraced a subjective ontology and epistemology, positioned within the critical research paradigm. Research aligned to the critical paradigm first provides an understanding of a phenomenon and then seeks to change a situation by creating a consciousness toward individual freedom and emancipation (Cohen *et al.*, 2007:26).

A cross-sectional mixed methods approach allowed this study a broader perspective from which to support its findings. According to Kumar (2014:19), findings can be collected and expressed either quantitatively or qualitatively. Numbers or quantities represent quantitative

⁴ 'A philosophical and theoretical framework of a scientific school or discipline within which theories, laws, and generalizations and the experiments performed in support of them are formulated' (Merriam Webster Dictionary, 2007).

findings objectively, whereas participant characteristics or qualities represent qualitative findings subjectively. The mixed methods approach reduces any limitations found in the use of a single methodology.

The strengths of both quantitative and qualitative methodologies were used to address this study's research problem. This study used an explanatory sequential contribution of findings, which initially prioritises quantitative inputs followed up with qualitative input. Initially, this study collected and analysed quantitative data, which were used to strengthen the development of the qualitative data collection instrument.

1.6 Research population and sample

The quality of research is not only measured against its methodology and methods of data collection, but also the appropriate research population and sample inclusive of techniques being used to determine where and from whom the data will be gathered (Morrison, 1993:112, cited in Cohen *et al.*, 2007:100). Welman and Kruger (1999:54) and Kumar (2014:234) state that population samples are derived from using probability and non-probability sampling techniques. Kumar (2014:246) argues that calculating the research sample size depends on the purpose of the findings and level of accuracy. According to Kumar (2014:247) and Cohen *et al.* (2007:100), research reliability is increased with a larger sample size, regardless of there being no definitive or correct sample size, as it depends on the purpose of the study as well as the nature of population. According to Cohen *et al.* (2007:103), the sample size must be considered when applying probability sampling to a quantitative study as well as the confidence level and interval. Confidence levels indicate the surety of responses within a stipulated variance or interval.

This study applies both probability and non-probability sampling techniques to gather the research population. A research population is noted as $N=$ and the sample size noted as $n=$ (Welman & Kruger, 1999:47). The research population $N=63$ comprises the registered 2017 NC(V) Level 4 students enrolled in two Business Studies NC(V) programmes, namely Office Administration (OA) and Finance, Economics and Accounting (FEA). Selecting the TVET college campus in the Western Cape, South Africa and the Business Studies department to be investigated, was based on practicality and researcher accessibility to secondary data and research participants. Secondary data provided during October 2017 by the investigated TVET college indicated a total enrolment of 63 students in the two Business Studies NC(V) programmes at the time of the research, OA and FEA with 46 and 16 enrolments respectively. The sample for the quantitative component of this study was obtained through random sampling. The random sampling technique allows the population an equal

opportunity to be included in the research sample. Welman and Kruger (1999:52) and Kumar (2014:236) argue that random probability sampling is the most attractive of quantitative methods, allowing a greater and equal chance for the population to be included in the sample.

To improve the random sample reliability, this study applied a 99% confidence level to identify a sample size $n=62$ of which 46 respondents consented to participate on the day of research, 39 from the OA programme and seven from the FEA programme. The sample for the qualitative component of this study was obtained through purposive and convenience sampling techniques, focusing on units of investigation based on researcher judgment of respondent knowledge and ease of access to respondent. Purposive sampling was selected as the researcher personally selected the sample to be included, based on the judgment of their particular knowledge and contribution to this study's enquiry. This study identified a sample of $n=6$ participants through non-probability purposive sampling of which three consented to participate on the day of research. To improve the reliability of the non-probability sampling technique, the study maintained an objective and honest approach when selecting the units of investigation.

1.7 Data collection

Cohen *et al.* (2007:208) argue that despite a particular methodology being more suitable for a large-scale study or small-scale study, data gathering generally includes one or more of the following instruments:

- Structured or semi-structure interviews;
- Self-completion or postal questionnaires;
- Telephone interviews;
- Surveys; and/or
- Attitude/rating-scales.

Cohen *et al.* (2007:181) argue that there is no designated instruction for using a particular data collection instrument, but that it should rather be 'fit for purpose'. Data collection involves the construction of a study's limitations or variables, as well as defining the sources and protocol for gathering information (Creswell, 2014:239), employing a variety of techniques (Pather, 2015:97).

This study selected two of the data collection instruments presented above by Cohen *et al.* (2007:208) to address the research objective and question. This study's mixed methods

approach assigned one data collection instrument to each methodology, namely quantitative and qualitative. The quantitative instrument selected was the attitude or rating-scale and the qualitative instrument selected was the self-completion questionnaire. The quantitative attitude or rating-scale instrument sequentially contributed to the use of the qualitative self-completion questionnaire.

The content used for the data collection instruments was guided by the combined use of two pioneering student retention theories and models, namely Tinto's SIM and Bean's SAM. The quantitative instrument was divided into the three categories as discussed by Jensen (2011), namely Individual, Institutional and External. The three categories were aligned to the variables of enquiry presented by Tinto and Bean, namely student integration, academic achievement and external support structures. Variables of enquiry were further guided by findings of earlier studies, including Papier (2009) and Martinez and Munday (1998).

Prior to administering the quantitative and qualitative data collection instruments, this study conducted a pre-test or pilot phase, administered to respondents similar to the population samples. The pre-test or pilot phase allows for potential misunderstanding or clarification of questions to be identified and rectified (Thomas, 2003:68; Kumar, 2014:191). Feedback from the pre-test group was assessed and incorporated in the instrument before administering the revised data-collection instruments to the research sample group.

1.8 Data analysis

The primary aim of data analysis is to effectively utilise the data gathered and establish answers in response to the research objective. Kumar (2014:316) argues that data can be analysed manually (paper-based or computer-aided), based on a reasonably small number of respondents and not many variables to analyse. According to Kumar (2014), the method of analysis depends on the way in which findings are to be communicated.

This study manually analysed the quantitative rating-scale data using computer-aided spreadsheet software, namely Microsoft Excel. Categories and statements were entered in Microsoft Excel in the same order as that in which the instruments were completed by respondents. Responses to the rating-scale surveys were entered according to the number of responses per statement, per rated scale 1-4; namely, strongly agree, agree, disagree and strongly disagree. The collated responses were expressed as a percentage per statement, per rated scale.

The qualitative data collection instrument was a computer-based, self-completion questionnaire. Content analysis was used to note content patterns, consistencies and general themes, by sifting participant data and making sense of their understanding and expressions. To ensure the quality, accuracy and objectivity of the exploratory questionnaire data, the collated and analysed findings were redirected to the participants to determine if the interpretation of the study could be regarded as a reasonable account of participant experience and explanation (Kumar, 2014:318). Qualitative data were used to enhance and provide greater meaning to quantitative numeric data.

1.9 Research quality

According to Ebrahim (2013:72), research of a high quality must meet the vital criterion of credibility, namely validity and reliability. In relation to reliability and validity, the concept of trustworthiness and credibility are commonly discussed in the social sciences (Kvale & Brinkman, 2009:241). According to Kvale and Brinkman (2009:245), trustworthiness establishes whether findings can be reproduced by other researchers at different times, as well as the strength and transferability of knowledge. According to Marshall and Rossman (2006:201, cited in Lawrence, 2016:55), credibility establishes whether research was conducted in a manner that ensured the topic (subject or theme) was suitably identified and recorded. Saunders, Lewis and Thornhill. (2007:149) and Gibbs (2007, cited in Creswell, 2014:251) state that reliability relates to the level of consistency of findings achieved through data collection or analysis techniques. An additional measure or criterion of research quality is participants consenting to take part in the research. According to Cohen *et al.* (2007:52), participant consent safeguards the right to self-rule, by making the participant somewhat responsible for any issues arising from the research.

This study ensured trustworthiness in the quantitative and qualitative components. The participants and researcher were well known to each other, the latter having taught them in Level 2 and Level 3. Participants were made aware of the study's purpose and the reason for their selection verbally. Each participant confirmed verbal awareness with a formally signed consent form. To increase familiarity, trust and clarity amongst participants, the researcher remained objectively present during the data collection process.

To reduce the threat to validity, this study selected appropriate data collection instruments for the quantitative and qualitative component. The data collection instruments were constructed around findings and categories expressed in existing studies on student retention and persistence, for example Jensen (2011), who categorised factors under Individual, Institutional and External. Prior to administering the quantitative and qualitative data-

collection instruments, participants were informed of their selection, the purpose of the study, their contribution, and, more importantly, their voluntary and confidential participation in the study. Instruments were personally administered, overseen and collected by the researcher. Completed hard-copy quantitative and qualitative data-collection instruments were stored after being electronically analysed. To ensure accuracy, objectivity and reliability of the exploratory questionnaire data, interpreted findings were redirected to the participants to determine whether the study's interpretation was regarded as a reasonable account of their experience and explanation.

1.9.1 Ethical considerations

Cohen *et al.* (2007:58) advocate that social and behavioural researchers must consider the effect of their study on participants and act ethically. Ethics is defined by Cavan (1977:810, cited in Cohen, *et al.*, 2007:58) as 'a matter of principled sensitivity to the rights of others, and that while truth is good, respect for human dignity is better'.

Observing and complying with ethical standards and consideration, specifically in educational research, this study sought and received research permission and ethical clearance from:

- The Cape Peninsula University of Technology ethics committee (Appendix D);
- The Department of Higher Education and Training (Appendix E);
- The selected TVET College and campus (Appendix F); and
- Participants in the study by way of informed consent (Appendix C).

The research complied with the ethical code as prescribed by the above-mentioned institutions and explained in the consent form to participants prior to conducting the research. Participants in the study were made aware of the study purpose, voluntary nature of participation and the confidentiality of their identity verbally before signing the letter of consent. No personal information was divulged and anonymity for all participants was guaranteed. Participants were not harmed or threatened in any way.

1.10 Significance of research

This study provides a current student perspective with a broader understanding of internal and external factors that influence student retention and NC(V) programme completion. Understanding student perspectives, intentions and their decision-making processes to persist and complete, provides a foundation for potentially improving student retention and programme completion, through planned action. As a result, greater progression to higher

education is promoted, as well as potentially more successful labour-market entry. Research findings provide the investigated TVET college with a window through which to view a range of variables and areas of improvement, based on student perspectives, addressing factors within direct TVET college control.

This study differs from existing South African studies as it:

- Alternatively investigates internal and external factors that influence NC(V) programme completion;
- Combines two student retention constructs, namely Tinto and Bean, to holistically understand student decision-making; and
- Administers both quantitative and qualitative data collection instruments to uncover a greater student perspective and understanding.

Research findings could potentially assist TVET college policy makers with amending or creating policy, programme planning and implementation towards improving retention and programme completion within the NC(V) programme. Findings could also encourage future research to explore the identified factors over which TVET colleges have control further.

1.11 Chapter outline

Chapter One provided a synopsis of the research topic. A brief description of the research design, addressing the investigated problem, was also presented. The chapter familiarised the study with the South African educational landscape with specific reference to TVET colleges and the NC(V) programme.

Chapter Two provides a review of literature related to the development of student retention and the study thereof. The chapter presents the contributions that existing studies have made towards understanding student retention and persistence based on the constructs used.

Chapter Three presents the research design, methodology and methods used in the study. The chapter presents the study population and the techniques used to identify the study sample for both quantitative and qualitative study components. The types of methods used for data collection and analysis are also discussed.

Chapter Four makes provision for the analysed data, interpretation of results and presentation of findings. The chapter includes discussions on correlations emerging from quantitative and qualitative findings.

Chapter Five concludes with a summative analysis of the study and its findings, before making recommendations towards the potential improvement of student retention and completion of the NC(V) programme at the identified TVET college in the Western Cape, South Africa.

1.12 Conclusion

In addition to the chapter outline provided in Section 1.11 above, Chapter One provided an understanding of the problem within education, specifically the NC(V) programme, and the negative effect on the individual, the institution and the economy at large, when failing to address student retention and programme completion. Chapter One indicated the research design, methodology and methods employed to address the research problem and objective.

The chapter included the South African as well as international concern about the challenge of student retention and programme completion. A brief analysis of retention constructs was presented to allow an understanding of the history and development of retention studies, accumulative results and enquiry efforts. To establish a greater understanding of retention related to student perception and influences, Chapter Two will provide a comprehensive review of literature, expanding on what was briefly introduced in Chapter One.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

Chapter One introduced the structure of this study. The introduction provided the background to the research problem within the TVET college sector and NC(V) programme. The research approach, data collection and analysis methods used to achieve the research objective were briefly outlined. In Chapter One, the study's quality regarding validity, reliability and trustworthiness was discussed, encompassing the approved ethical considerations adhered to by this study.

Chapter Two provides a comprehensive review of literature regarding the introduction of TVET and NC(V) in South Africa, the perception of students of TVET and the advent of theories and models used to guide studies on retention. Section 2.2 provides the context on the formation of TVET colleges in South Africa. This section indicates the problem faced by the NC(V) programme, namely low programme completion and retention rates. To provide a substantial TVET context, the perception of students of TVET colleges in South Africa and internationally are discussed in Section 2.3. Section 2.4 presents the challenge of low programme completion and student retention rates. This section includes the factors influencing early programme departure and the effects thereof. The advent of student retention theories are explained in Section 2.5, with specific reference to the contributory works of Vincent Tinto's Student Integration Model (SIM) and John Bean's Student Attrition Model (SAM). Section 2.5 includes the critique of each model as well as its relevance in current studies. The two models are analysed, presenting their purpose and guidance to this study. Section 2.6 presents findings of South African studies that have applied retention study theories. Chapter Two concludes with a summative discussion of how the combined works of Vincent Tinto and John Bean are applied to this study.

2.2 Introducing the NC(V) programme into South African TVET

In 2006, the Minister of Education, Grace Naledi Pandor approved and introduced 11 NC(V) programmes with its first intake of Level 2 students in 2007 (South Africa, 2006:4). The roll out of the NC(V) programmes was considered a major achievement for the transformation of South African education. The NC(V) Level 2 to Level 4 programme was intended to meet the state's aim of making post-school education more accessible through vocational qualifications (South Africa, 2008a:243).

The responsibility of delivering vocational programmes, with its experiential learning, vocational education and artisan qualifications, was placed in the TVET sector (South Africa, 2015:11). The role of the TVET colleges, in what DHET calls the Post-School Education and Training (PSET) sector, is as follows (South Africa, 2013:13):

- To provide greater opportunity, access and promotion of post-school education;
- To train and impart skills, knowledge and attitudes required by the labour market; and
- To provide, what DHET describes as mid-level skills required for economic development.

The TVET college role noted above was to be achieved through the successful completion of the NC(V) programmes. Completion of an NC(V) programme was envisaged as bridging the skills gap by imparting or improving skill development of TVET graduates to meet relevant labour market needs, thereby promoting economic growth (South Africa, 2006:12).

According to Cloete (2009:11), the National Plan for TVET has identified unemployed, out-of-school youth and individuals who have less than an NQF Level 4 qualification as the potential candidates. The vast enrolment pool identified by the National Plan for TVET presents multiple challenges for the sector. Age variation is a major challenge to the NC(V) programme, as it influences the initial reason for enrolment and decision to persist (Fryer, 2014:23). The minimum entry requirement for the NC(V) programme at South African TVET colleges is a Grade 9 school qualification. The youngest acceptable age is 16 years, which Statistics South Africa (2015:2) regards as being part of the 'youth' category. The acceptance of a varied age gap between 16 to 35 years, makes the NC(V) programme inclusive of both youths and adults in one classroom setting, often at the same programme level.

According to a report by Papier (2009:24), participants indicated their reasons for enrolment at TVET college as follows:

- to get a good job;
- to improve standards of living;
- to fulfil life and career dreams;
- to reach future success; or
- to work on career goals.

However, one third of the participants indicated being enrolled in the NC(V) programme was because they:

- did not want to be in a public school anymore;

- did not have the correct subjects/money to go to university;
- were bored at the public school;
- did not choose this programme and NC(V) was chosen for them;
- did not have money to further their studies and NC(V) was offering bursaries; or
- did not have the course they wanted – to become a doctor and architect.

According to Papier (2009:20), academic staff indicated that NC(V) students were younger than what Papier describes as traditional students enrolled in other TVET programmes. Papier (2009:7) argues that marketing efforts targeting Grade 9 school learners attracted poorly performing learners who viewed college as an easier option compared to the traditional public schooling system in South Africa. The age and maturity level present varied factors that influence students' decision-making such as programme completion intention, persistence levels and educational goals. According to Fryer (2014:23), the younger and immature students entering the college environment cope and adapt to the college environment differently compared to older and more mature students.

In the current South African TVET structure, NC(V) students follow vocational programmes at the same age as their traditional public school counterparts who are involved in rigorous and structured learning environments, namely Grade 10 to Grade 12. According to Keup (2007:13), college students who face challenges such as meeting various classroom demands and self-motivation to attend class, especially younger students, require support structures to improve or influence their academic performance. Support structures can range from career guidance to assistance in selecting the correct programme, corrective behaviour intervention and general life orientation development regarding responsibility and accountability.

In addition to age and maturity, factors such as historical background, socio-economic conditions, institutional and curriculum factors also contribute to unsuccessful completion of the NC(V) programme. Papier (2009:26) indicates that the following factors influenced poor performance of participants in the study:

- Social integration, such as having to adapt to the college environment;
- Making new friends;
- Programme workload based on number of subjects and class period length;
- Lecturer inability to transfer information clearly;
- Lecturers who are unprepared;
- Lengthy commute time to and from college;
- Costly transport costs;

- College being boring and lack of recreational facilities;
- No food to eat during break time; and
- Socio-economic problems such as substance abuse, gang involvement and peer pressure.

In a more recent study, Fryer (2014:27) reported that NC(V) students had a throughput rate of 39% in 2012. This indicated that for every 100 students enrolled in the NC(V) programme, only 40 students completed their programme. Papier (2009:14), similarly, noted that of the 3102 students who had written the NC(V) national examinations during 2008, only 20% had been certified in Level 2. Of the 140 Level 3 electrical infrastructure construction students enrolled in 2008, 124 had written the national examination and only nine had passed all seven subjects (Papier, 2009:18). Since its inception in 2007, the NC(V) programme had experienced low programme completion and high failure rates together with poor retention and throughput rates (Papier, 2009:39). The broadly noted factors and reasons provided by Papier (2009:5) for this poor academic performance were categorised by:

- Programme factors related to cognitive demand and excessive workload;
- Learner factors related to poor programme fit, learning barriers, socio-economic conditions and course expectations not being met; and
- College factors related to poor class resources, limited access to the Internet, lack of recreational facilities and inappropriate student recruitment practices.

Papier (2009:7) notes that the NC(V) Support to Education and Skills Development (SESD) report findings on poor performance was published to prepare colleges for the new intake of Level 2 students in 2010 and assist towards improved programme completion and retention. Despite the intention of TVET and the NC(V) programme to address national skills shortages, Sheppard and Sheppard (2012:63) describe TVET as inefficient regarding completion and retention rates. College student participants in Papier's (2009:7) report acknowledged the high quality of the NC(V) programmes' curricula, despite poor performance outcomes. This 'acknowledgement' indicates the presence of factors outside of the NC(V) programme, that influence programme completion decisions. On average, the NC(V) programme experienced a pass rate of 39% in 2012, compared to 42% in 2011, indicating a decline in progression for various reasons (Fryer, 2014:23).

Secondary data from this investigated TVET college records indicate a retention and progression rate of 52% from 2015 (Level 2) to 2016 (Level 3) and 88% progression rate from 2016 (Level 3) to 2017 (Level 4). From the 214 enrolments in Level 2 during 2015 only

99 persisted towards programme completion in 2017, indicating a 46% retention rate from Level 2 in 2015, to the final year Level 4 in 2017.

An initial factor, providing context to the type of student or potential entrant to a TVET college, is the perception of students of the TVET sector.

2.3 Student perception of TVET

Harris (2014:37) argues that TVET faces a stigma and lingering perception of poor quality when compared to the traditional public education system. Puckett *et al.* (2012:1) support this view, indicating that TVET is perceived in many countries as being inferior when compared to general academic education obtained through traditional universities or schools. Harris' (2014:39) study of TVET in Barbados argues that, while secondary school participants did not view vocational students as inferior and disregarded the association of university with superior intellectual status, they were not convinced of the potential of attending a TVET college, considering the societal perception of their intellectual status as a vocational scholar and graduate.

A study of further education (FE) in Northern England conducted by Swift and Fisher (2012:207), indicated a similar, albeit less direct, negative view. Swift and Fisher (2012:207) noted what they called a 'high level of student uncertainty' regarding FE vocational education and career prospects provided by an FE qualification, compared to a traditional academic education and its career prospects. Similarly, for Australian school learner's, Alloway, Dalley, Patterson, Walker and Lenoy, (2004, cited in Needham & Papier, 2011:37) argue that vocational education is perceived as being 'for those who can't' or for those who seek an easier educational alternative.

Within the South African context, the NC(V) SESD research conducted by Papier (2009:23) reported that poor performing learners attending traditional public school were encouraged to enrol at a TVET college after Grade 9. According to Needham and Papier (2011:37), this 'encouragement' results in vocational education being viewed as a second-chance programme for students who could not make it at traditional public school. According to Needham and Papier (2011:37), Students enter South African TVET colleges to:

- Pursue a vocational NC(V) NQF Level 4 certificate, equivalent to the National Senior Certificate or NSC (matriculation or Grade 12) at traditional public schools;
- Continue their post NQF Level 4 (NCV or NSC) studies at TVET (either full-time, part-time or through distance learning); or

- Progress from the TVET college, after NQF Level 4, to higher education institutions such as universities and universities of technology, guided by these respective higher education institutions' entry requirements.

The study by Needham and Papier (2011:36) in South Africa noted that a difference in perception of TVET and vocational training exists between secondary school learners and TVET college students. Some secondary school learners were unaware of TVET, while others saw it as 'second-choice education, resulting in low paying jobs with no career prospect'. Secondary school learners thought that the TVET curriculum positioned graduates in a specific vocation, while secondary school academic studies offered a wider range of future career prospects. Certain participants admitted that TVET was not their 'institution of first choice', but that they would rather study than be at home, regardless of enrolling in a programme that is not aligned to their career goals (Needham & Papier, 2011:37).

TVET college students, on the other hand, displayed a positive response based on their actual exposure to the programmes and career-path progression. The positive response was attributed to the NC(V) programmes' practical component which assisted with understanding theoretical components (Needham & Papier, 2011:36). Due to the TVET college curriculum being more direct and specific to a vocation, students felt more attracted to enrol (Needham & Papier, 2011:36). Students felt that the practical exposure and cognitive application gave them a better choice of continuing with, specialising in or abandoning a vocation. For some participants, a TVET college was their first choice of study institution, even to those who qualified for university. Their acceptance of TVET as their choice of post-school education was due to the programmes offering a more practical curriculum. TVET college participants in the Needham and Papier (2011:36) study viewed TVET and vocational education as a complementary foundation to higher education, and not a competing educational sector to traditional post-school institutions, namely traditional public schools and universities.

Participants in Keup's (2007:13) study of college students in Los Angeles, America, indicated personal growth and development as part of their college experience, apart from the interpersonal relationships. The theme emerging from Keup's (2007:16) findings was that freedom and independence were more frequent than discussion of academic attainment. Keup (2007:17) argues that college allows young students space and time for personal development. According to Keup (2007:21), there is a link between experiences of independence at college and the realisation of self-discipline and responsibility required for the completion of college when compared to traditional public school.

The analysis of student perception indicates a perceptual difference between TVET college students and their traditional secondary school counterparts. The analysis also indicates the contextual difference between South Africa and international students, albeit similar. Analysis of student perception of TVET provides an understanding of students' initial demotivation and motivation for entry, intention of pursuing a vocational education and likelihood of completion, avoiding the challenges emerging from low programme completion.

2.4 The challenge of low programme completion

2.4.1 Factors influencing low programme completion and student retention

According to Bean and Eaton (2001:73), voluntary participation in post-school education serves as an influential catalyst to programme completion intention and student retention. Many who start a college qualification do not persist until completion, based on factors influencing their decision to remain or leave college or a programme (Roberts & Styron, 2010:2). Hillmert and Jacob (2003) and Billet (2014), both cited in Harris (2014:50), argue that individual decision-making, discretion and weighing up of options form part of every student's education process, persistence towards programme completion or prolonged labour market entry.

The summarised findings listed below emerged from the largest sample group study on persistence and drop out in the United Kingdom more than two decades ago. The '9000 voices' study by Martinez and Munday (1998) indicated the following factors that influenced student decision-making towards their likelihood of early college departure:

- were not placed in the most appropriate programme and therefore less satisfied;
- applied too late;
- could not make friends easily;
- could not settle in easily at the beginning of their programme;
- were less satisfied with the teaching quality;
- were less satisfied with their programme timetable;
- were less satisfied with help, either to get a job or progress to university;
- certain factors influenced males students differently compared to female students;
- experienced difficult financial circumstances (older students) or family circumstances (younger students); and
- had their fees waived or reduced.

A study by Yorke (1999, cited in Ngcobo, 2009:26) indicated that younger students were more likely to leave than older students and that financial reasons were more common in older students not completing their programme. Yorke argues that gender plays a significant role in how a factor influences a student's decision for departure. Fryer (2014:23) supports Yorke's view on age, by stating that younger and immature students entering the college environment cope and adapt to the college environment differently compared to older and more mature students. Dodgson and Bolam's (2002, cited in Ngcobo, 2009:26) study, in support of Yorke's view on gender difference, found that women left college based on dissatisfaction of the social environment and men left college based on financial challenges and programme dissatisfaction.

A decade later, Yorke, Ozgha and Sukhnandan (cited in Ngcobo, 2009:25), indicated that a variety of individual, institutional and educational sector factors were responsible for full-time university student drop-out, including:

- Incompatible student-programme or student-institution;
- Lack of preparation for the higher education (HE) experience;
- Lack of commitment to the programme;
- Financial hardship; and
- Poor academic progress.

Maharaj's (2008:64) study of three cohorts of Report 191 N4 to N6 engineering students in South Africa indicated what he describes as 'disconcerting figures' when measuring retention and programme completion rates. On average, based on the three enrolment cohorts his study investigated, there was a 33% progression and 0% programme completion rate. Maharaj's (2008:5) research indicated an improved enrolment statistics growth in the TVET Report 191 programme, but his concern was the persistence level and retention of these enrolments. Maharaj (2008:27) attributed the 33% progression and retention and the 0% completion findings mainly to an absence of classroom social interaction and outside-of-classroom interaction, beyond the formal interaction between lecturer-student.

Papier's (2009:28) report argued that socio-economic conditions of South African NC(V) students resulted in low college integration, poor performance and low retention. Respondents highlighted socio-economic factors, such as transport cost, no food during recess, community issues, alcohol and drug abuse, gang involvement and peer pressure as contributory to a difficult college experience, resulting in their poor performance and low retention. Participants in the study no longer attended college, added the following reasons for their early departure (Papier, 2009:37):

- Behavioural misconduct;
- Not meeting attendance policy requirements;
- Course difficulty and expectation;
- Outstanding tuition fees (financial constraint and loss of employment); and
- Undesirable student accommodation.

Ngcobo's (2009:66) study of students of Report 191 engineering studies (Mechanical, Electrical and Civil) concluded that certain students had departed from their college and programme early as a result of other obligations or as a consequence of their actions or that of their parent(s). The following four responses were noted in Ngcobo's (2009:66) study: two had left college due to becoming parents and had gone to seek employment to support their baby. The third respondent had failed a level and was kept at home by the parents. The fourth respondent had left full-time classes to seek employment, but indicated that he would attend evening classes.

Ngcobo's (2009:67) study also investigated why certain students managed to complete their programme. Findings indicated that certain students had completed their programme because of social integration and relationships developed with others during their studies (with peers and educators), while others had remained, obeying their parents. Participants sought to complete their programme regardless of institution-type perception, specifically noting the shorter duration alternative when comparing TVET to traditional higher education at university. Ngcobo (2009:67) argues that personal, social and academic influential factors which emerge within an educational setting, irrespective of the decision to attend TVET, was intentional or through chance. Listed in order of highest participant response, additional reasons identified by Ngcobo (2009:72) for participants completing their programme, include improving their results, achieving a personal goal, satisfaction with teaching and learning quality and support received from family.

A recent study by Lawrence (2016:93) of NC(V) Civil Engineering students in South Africa, concluded the following reasons for their early programme departure:

- Delayed external examination results;
- Theoretical overload in programme structure;
- College and programme expectations not met; and
- Socio-economic conditions and influences.

Maharaj (2008:13) states that education institutions have an equal responsibility towards improving student persistence or retention and should not place the onus of success solely on the student. Most institutions actively engage with the learners they recruit in an attempt to retain them better, through increased awareness and information sessions on academic and programme expectations (Cook & Rushton, 2009:12).

The aforementioned factors influencing student performance, programme-completion intention, retention or departure represent external-internal and student-institutional factors, which can be assembled into three categories. According to Jensen (2011:2), there are factors which can be categorised as Individual, Institutional and External: 'Individual' factors include academic performance, perceptions and satisfaction; 'Institutional' factors include academic engagement; and 'External' factors include social aspects with staff and family support.

Findings presented by research of nearly two decades ago prove to be similar if not the same regarding factors that influence student decision-making, internationally as well as in South Africa. Students with varied backgrounds and academic abilities access and enrol in post-school institutions, resulting in different skills and persistence levels, which partially determine their success (Laskey & Hetzel, 2011:31). Student success, persistence and retention are also a shared responsibility of educational institutions. Together, the educational institution and student have a shared responsibility to ensure success, integration and programme completion, circumventing the negative effect of not completing a programme.

2.4.2 The effect of low programme completion and student retention

According to Adamson and McAleavy (2000:535), Thomas (2011:43) and Allen (2012:8), the challenge of low programme completion and retention negatively impacts upon the success and financial stability of educational institutions, as well as the personal economic and employment well-being of the individual student. This negative impact extends to lowered economic contribution by partially or unqualified citizens, resulting in a greater strain on government finance to assist unemployed members of society. Brunsden *et al.* (2000, cited in Allen, 2012:11) and the International Labour Organization (ILO, 2014:73) argue that society and government face numerous challenges that result from low levels of programme completion and retention. Brunsden *et al.* (2000, cited in Allen, 2012:11) argue that early departure and non-programme completion lowers the progress, confidence and self-belief of job applicants with part qualifications that are below minimum job requirements, namely NQF

Level 4. Grebennikov and Shah (2012:224) support the view of lowered confidence and employment prospect.

The Labour Market Dynamics in South Africa's annual report (Statistics South Africa, 2014-15) indicate the following facts that are detrimental to the South African economy in relation to students and qualifications:

- The unemployment trend in South Africa is most severe amongst black Africans, especially those with less than NQF Level 4 (also referred to as matric).
- Unemployment rates for persons with a qualification less than matric is close to three times that of persons with a tertiary qualification; the unemployment rate for this group increased by the largest percentage (3,3 percentage points) over the period 2008 to 2014.
- In 2014, a person without a job but with a tertiary-level education was nearly twice as likely to find employment on a quarterly basis compared to those without a job and less than a matric.
- In 2014 and 2015, long-term unemployed persons with less than an NQF Level 4 qualification accounted for 59.3% of the unemployed, while only 7% accounted for long-term unemployed persons with a tertiary qualification.
- In 2015, youth with less than an NQF Level 4 qualification accounted for 54.8% of all unemployed youth.
- In 2015, young women (15 to 34 years) in the labour force were more fully educated than young men possessing part-qualifications.
- In 2015, 66.8% of discouraged young work seekers had less than an NQF Level 4 qualification.
- Regardless of the education profile of young people, which had improved over the period 2008 to 2014, one in every two unemployed youth had an educational qualification below NQF Level 4.

Overcoming the challenge of student retention and encouraging programme completion intention is therefore vital to the education sector, specifically TVET and its students, and the economy at large. The TVET sector enrolls students with varied academic and social backgrounds and ages, which presents numerous challenges and factors that influence and guide students' decisions to complete or not complete their programme. The concern and study of programme completion, student retention and attrition is not a recent phenomenon.

2.5 Advent of student-retention theories

Before the 1970s, the study of student retention-related issues was largely limited to psychological factors. During the 1970s, the retention-related issues extended beyond psychological factors to better understand the relationship between individuals and their learning environment (Tinto, 2008:3).

Theories supporting retention studies started with William Spady who adopted a proposition by Emile Durkheim (Bean & Eaton, 2001:74). Emile Durkheim (1961, cited in Bean & Eaton, 2001:74), a well-known French philosopher and sociologist, concluded that individuals lacking values of a social system and who do not feel supported, commit suicide. William Spady (1971, cited in Bean & Eaton, 2001:74), a sociologist and pioneer in Outcomes Based Education (OBE), then adopted this proposition by identifying a correlation between suicide and dropping out of education, as, in both instances, a social system is being exited.

Consistent with Spady's theory of social systems and departure, was Rootman's Adult Socialisation Model (1972, cited in Bean, 1981:6). Findings from Rootman's study of the United States' Coast Guard Academy freshmen⁵ indicated that a student's voluntary withdrawal is due to the absence of an 'adult socialisation' process. Rootman assigned interpersonal fit and personal-role fit as the two operating variables to understanding student attrition. According to Bean (1981:6), there is a similarity between Rootman's two operating variables and Spady's social integration variable derived from Durkheim.

In contrast to Spady's correlation, which focused solely on the individual student, Alexander Astin (1975:30) critiqued Spady's focus calling it the 'traditional approach' to attrition and failure. Astin described the traditional approach as locating retention and persistence within student ability only. Astin (1975) argued that student persistence and drop-out was complex and was influenced by numerous factors. Astin's Theory of Student Involvement looked at the development of students through their involvement towards achieving the desired outcome of educational institutions. Three elements considered in Astin's model are, firstly, student input, such as demographics and background; secondly, student experiences in their environment during college; and thirdly, student outcomes, including knowledge, beliefs, values and perceptions at the time of graduation. Together with the three elements, Austin presented five basic assumptions of student involvement: firstly, investment of psychosocial and physical energy; secondly, the amount of energy used; thirdly, quantitative or qualitative involvement; fourthly, extent of involvement; and, lastly, student academic performance. However, since the introduction of student retention theories, the analysis of social factors and integration of students at higher education is dominated by the work of Vincent Tinto.

⁵ A first-year student at university or high school. <https://www.merriam-webster.com/dictionary/freshman>

2.5.1 Vincent Tinto's Student Integration Model (SIM)

Vincent Tinto (1975) introduced the theory of academic and social integration emerging from Spady's use of Durkheim's proposition regarding suicide and exiting a social structure. Tinto (1993; 1997) argues that a relationship exists between the student and educational institution. The 'relationship' influences programme completion intention, which could serve as a predictor of student persistence (Schreiber *et al.*, 2014:6). Tinto's retention theory (1987) advises against solely identifying individuals as influencing factors. Tinto furthermore discourages institutions from avoiding the responsibility of student success and placing the onus of success solely on students (Laskey & Hetzel, 2011:34).

Tinto's (1993) Student Integration Model (SIM), developed from his theory, acknowledges the unique and individual characteristics students enrol with, the unique structure of educational institutions and the dual responsibility of each towards retention and programme completion. The SIM does not assign the sole responsibility of failure to individual or institution, nor does it promote the traditional view of a student's poor performance. The fundamental construct is that when students enrol in an academic structure, they simultaneously enter a social structure with peers and students at the college and in their programme. Tinto's theory argues that the integration of the two structures influences students' commitment and motivates their retention or departure. Tinto's SIM takes into account variables unique to the institution, student and social context, and how best to identify, align and integrate them. The origin of conflicting areas between the student and institution, should be identified and addressed to improve the interaction and integration of students.

Tinto's (1993) SIM provides a framework to position the internal dynamics, interaction and importance of academic as well as institutional social integration towards understanding student retention and persistence. The model further assists with the organization of data, as it describes and categorises aspects such as pre-entry, goals and commitments, institutional experience, integration and outcome. Factors potentially considered to increase programme persistence, such as student engagement and involvement, are also included in Tinto's model (Papier, 2009:10). According to Guiffrida (2006:452), advocating Tinto's work, the increased commitment towards programme completion can be attributed to increased social and academic integration. Paramount to Tinto's (1993) SIM, is the degree of integration explained in three stages (McCubbin, 2003:2), namely:

The first stage, which Tinto calls *Separation*, requires individuals to disconnect from various existing aspects such as family, community and place of residence (Tinto, 1993:94). Having to adapt to a new surrounding with unfamiliar people may cause apprehension, resulting in

the likelihood of early departure. According to Tinto (1993:96), the ability to exit a familiar setting may be a prerequisite for persistence in another setting. Separation towards persistence needs to be influenced, supported and encouraged by parents (Tinto, 1993:96). Tinto argues that separation is more challenging for individuals who hail from disadvantaged backgrounds and whose family or parents never attended college.

The second stage, which Tinto calls *Transition*, refers to the period during which there is a period of separation from previous behaviours in order to prepare for the adoption of new norms and required behavioural outcomes (Tinto, 1993:97). Due to the novelty of the college environment, the transition stage depends a lot on pre and initial college-entry influences towards transition; for example, orientation programmes. Transition is a crucial stage, as it sets the scene for influencing factors and student response to the environment to either persist or depart, usually within the first year. This stage is facilitated by a desire to 'fit in', based on individual experience with college culture. Regardless of most students being able to handle transition on their own, there are other students who withdraw early, predominantly from the stress associated with transition.

The third and last stage, which Tinto calls *Incorporation*, involves individuals incorporating themselves into college culture with the help of external support such as peers, friends and family, in the absence of traditional college rituals and ceremonies most often not offered by institutions. Tinto (1993:99) acknowledges that not all students are able to integrate and would eventually depart. After moving through stage one and two early in the integration process, students still have to incorporate themselves into college (Tinto, 1993:98). Certain institutions provide mechanisms, such as ceremonies or formal rituals to facilitate student incorporation (Tinto, 1993), as not all students are able to self-integrate into college communities.

2.5.2 Criticism of Tinto theory

Tinto's (1993) SIM has not been without criticism. Karp *et al.* (2008:1) criticises Tinto's theory in relation to students attending community colleges in the United States of America for example, as they are perceived not to have had time to participate or integrate. This argument stems from the perception that community college students have less time and opportunities to integrate formally. According to Karp *et al.* (2008:3), students commuting to community colleges have fewer social integration opportunities, making social integration less appealing.

According to another critique concerning Tinto's SIM relating to academic and social rituals, Tierney (2000:1) advocates that existing relationships between students, teachers and

parents should remain and how these interactions are approached would facilitate students' successful completion of their programme or early departure. Tierney (2000:8) argues that students should not leave their own culture and try 'fitting in' to what he describes as an 'alien' culture, but rather exist in their own culture. Bean and Metzner's (1985) model, advocates that non-traditional students have less social interaction and integration as opposed to traditional full-time students, which supports the critique by Tierney (2000).

Despite its noted shortcomings, Tinto's SIM remains in use for the analysis of student success. Tinto's SIM predominantly applies to retention studies in South Africa under the correct educational institution environments, better understanding the phenomenon of student success. Tinto (1993) equates common experiences by students at community colleges to that of traditional students, which validates the relevance and application of the SIM to TVET students in South Africa. Tinto's SIM provides a solid foundation and understanding of studies on poor performance, attrition and early departure, as well as student retention.

Existing studies of student-related issues, such as performance, attrition, integration and retention in South African TVET, have made use of Tinto's theoretical model (Maharaj, 2008; Papier, 2009; Ngcobo, 2009; Pather, 2015; Moodley and Singh, 2015 and Lawrence, 2016). The findings of these South African TVET studies are detailed later in this chapter.

In addition to validating the relevance of Tinto's SIM to this study and to guard against model limitation, an alternative theory and model, namely that of John Bean was analysed.

2.5.3 John Bean's Student Attrition Model (SAM)

According to and cited by Aljohani (2016:3), the theoretical works of Price (1977) and Price and Mueller (1981), derived from studies on workplace employee turnover, led to an alternative theoretical foundation to understand student attrition. John Bean's (1980) Student Attrition Model (SAM) was the first to adopt the industrial concept and correlation between employee turnover and student attrition. Bean advocates that a similarity exists between students and employees and that their reasons for leaving are similar too (Aljohani, 2016:7).

Initially, in 1978, Bean applied Price's 1977 model to the process of student attrition, which was later changed (Bean, 1980; 1981:11). The Turnover in Work Organisations model developed by Price, has six independent variables expected to increase job satisfaction. The variables are remuneration, workplace friends, decision-making, work repetition, knowledge of work role and fair treatment. The descriptive nature of Price's model enables a new set of

variables to be linked to existing variables in attrition studies (Bean, 1981:11). Bean (1980) extensively evaluates and expands the model, deriving variables such as, but not limited to, parents' education, close friends, advisory assistance, informal contact with educational staff members and participation in extramural curricula (Bean, 1981:13). Bean (1980) includes four personal factors directly influencing commitment and departure, namely goal commitment, major and occupational certainty and confidence. Six environmental variables are also included, namely 'opportunity to transfer, opportunity to get a job, family approval of the institution, family responsibilities, likelihood of marrying, and difficulty of financing one's education' (Bean, 1981:13).

The success of Bean's (1980) SAM stems from the identification of four variable categories, namely background, organisation, environment and attitude (Bean, 1981:1). The variables can be adapted to meet the particular institution's needs to determine how the variables directly or indirectly affect the students' intent to remain or leave. According to Burrus, Elliott, Brenneman, Markle, Carney, Moore, Betancourt, Jackson, Robbins, Kyllonen and Roberts (2013:7), Bean's SAM advocates the external factors affecting persistence of non-traditional students. Bean's model has supported studies of non-traditional students including adult learners (Bean & Metzner, 1985), historically black college and university students (Himelhoch, Nichols, Ball, and Black, 1997), distance learners (Rovai, 2003) and community college students (Sandiford & Jackson, 2003), all cited in Burrus *et al* (2013:8).

John Bean's (1981) SAM focuses on external support factors that influence student persistence or withdrawal decision, placing less prominence on social integration when compared to Tinto's SIM. External support factors include family, friends and finance, amongst others, as the main factors influencing students' persistence decision (Adamson & McAleavy, 2000:537). Bean and Metzner's model (1985) argue that non-traditional students have less social interaction and integration as opposed to a traditional full-time student, thus supporting the focus on external factors playing a prominent role.

Fundamentally, Bean's SAM argues beyond the educational institution's learning and social environmental factors to understand student persistence or attrition. Bean's model emerges from business process models of labour turnover and interaction of employee perception and behaviour (Cabrera *et al.*, 1992:145), whereas Tinto's SIM emerges from a social construct based on Spady's use of Durkheim's suicide proposition. As with organisational dynamics, labour turnover is attributed to a poor personal-fit between employee and organisation, being different in values, beliefs or norms. With the same lens, Bean's (1980) SAM focuses on student retention as individual intention and their external personal-related factors (family and friends) as influencing their decision to stay or depart. These external influences

manifest themselves in student perception, experience and commitment to the institution and their education goals. Bean argues that student departure is equivalent to labour turnover and attributes behavioural intention as forecasters of persistence and retention. Bean's model acknowledges the influence of social interactions and factors beyond the educational institution that plays a vital role in influencing the student decision-making process. Bean states that student belief and perception play a key role in their decision to leave or stay (Koen, 2007:67).

2.5.4 Criticism of Bean's theory

DeRemer (2002:41), albeit acknowledging its importance to higher education, mainly critiques Bean's (1980) and Bean and Metzner's (1985) model by arguing that the models do not accommodate adult students specifically as part of the broadly categorised non-traditional students. DeRemer (2002:173) states that 'insecurities and fears' do not feature in Bean's (1980) background variables as do 'family background, individual attributes and prior school experience'. DeRemer (2002:173) argues that the variables of insecurity and fear may be emerging from the student and not the actual background characteristics. Lastly, DeRemer (2002:187) critiques an environmental variable concerning employment in Bean's (1980) SAM, arguing that the balance between the role or duty of the employee-student relationship have not been considered.

Another critiqued feature of Bean's (1980) model is that the study of persistence is longitudinal (Wortman & Napoli, 1996, cited in Wylie, 2005:3). According to Wylie (2005:3), the association between institution and student is assumed to be a long-term, developing and changing student character, to persist or leave, while interacting with the institution. Wylie (2005) suggests that should the model be applied as established, it creates a research limitation when investigating student attrition.

Despite its noted shortcomings, Bean's SAM remains an applied foundation for the analysis and understanding of non-traditional students. Although criticised by DeRemer (2002:224), he acknowledges that his adapted Adult Student Attrition Process (ASADP) model includes many common variables of Bean and Metzner's (1985) model.

A study on factors associated with the persistence of students receiving learning support in a two-year college by Cunningham (2010:41), numerous theories and models of which Bean (1981) and Bean and Metzner (1985) feature prominently, were analysed. According to Cunningham (2010:135), Bean and Metzner's (1985) model are relevant to the research

student population, with specific reference to the theory's concepts of 'academics, environment, biographical and demographic, and variables influencing intent to persist'.

Khuong's (2014) research focuses on the evaluation of a conceptual model of student retention at a public urban commuter university. According to Khuong (2014:18), Bean's SAM addresses the student departure concern from multiple views, namely sociological, academic and social, work and family, economic, organisational and psychological.

Burrus *et al.* (2013) conducted research, reporting a comprehensive model of college persistence and goal attainment. According to Burrus *et al.* (2013:7), the strength of Bean's (1980) model is in the prominence placed on background factors and interactions influencing the satisfaction of institution, commitment towards completion and persistence.

Not much literature is available on the application of Bean's Student Attrition Model in South African studies. South African studies investigated predominantly subscribe to Tinto's (1993) SIM as a foundation and model to understand student-related issues and programme completion. However, South African TVET students can relate to influences of background factors towards their decision of programme completion. The reasoning is evident from the findings presented by existing South African higher education studies briefly mentioned above and detailed later in this chapter.

This study acknowledges the critique of the analysed theories and models, namely Tinto and Bean. Based on the criticism of its assumed irrelevance to non-traditional students, Karp *et al.* (2008) argues that Tinto's model continues to be influential in understanding and explaining student decision-making processes, retention and departure. Tinto's (1993) SIM may encompass the internal and integration factors, but Bean's (1980) SAM provides an alternative, yet equally important foundation from which to position a wider range of external factors in understanding student retention and persistence. Bean's model applies to the traditional full-time student, not having full-time opportunities for integration.

Despite the criticism, we still find the application of both Tinto and Bean in current South African and international studies. Combining the two models account for a holistic understanding of key factors influencing students entering a college up to the completion intention (Kuh, Kinzie, Buckley, Bridges, & Hayek, 2006, cited in Burrus *et al.*, 2013:10). According to a study by Cabrera, *et al.* (1992, cited in Aljohani, 2016:11), a better understanding of student attrition is provided when combining Tinto and Bean's model. Cabrera *et al.*'s. (1992, cited in Aljohani, 2016:11) study findings further confirm that external

variables play a more complex part in the understanding of student retention than anticipated by Tinto, which supports the relevance and purpose of Bean's theory.

In summary Astin's (1975:30) approach employs a number of dropout predictors that focus on student ability as reasons for success. In contrast, Tinto's retention theory (1987), adopted from Spady's use of Durkheim's suicide proposition, argues against solely identifying an individual's character as causal factor to student failure. This stance on student failure, deters one from placing the onus of success exclusively on the student (Laskey & Hetzel, 2011:34). In contrast to Tinto's SIM, John Bean's model (1981), adopted from Price's (1977) Turnover in Work Organisations model, focuses more on external support factors influencing student decision-making towards persistence or withdrawal, and places less prominence on social integration influences within the educational institution. Bean's SAM is supported and adapted by Bean and Metzner's (1985) model regarding factors that influence non-traditional students. Combining Tinto and Bean's model provides a holistic and better understanding of student-related issues.

2.5.5 Contribution and purpose of Tinto and Bean to this study

Tinto and Bean provide an alternatively clear and strong foundation for understanding student retention and attrition. Tinto and Bean's model emerges from different and unique theoretical foundations, namely suicide and employee turnover. However, both emphasise the importance of background factors and student experience. Tinto and Bean's model contribute the following important differences for the purpose of this study:

- Tinto's model provides the social and academic integration foundation, emerging from a social perspective and Bean's model provides the external factor influences and personal-fit foundation, emerging from an industrial or employee perspective.
- Tinto's model emphasises internal dynamics and influences and Bean's model emphasises external dynamics and influences.
- Tinto's model focuses on internal factors shared between institution and student, such as orientation programmes and socialising with peers, and the integration thereof; and Bean's model focuses on external factors, such as family, friends and finance, and the influence it has on the perception of and beliefs of the student in the institution, and the personal-fit between institution and student.
- Tinto's model provides, not exclusively, an understanding of the traditional full-time enrolled student and Bean's model provides, not exclusively, an understanding of the non-traditional part-time enrolled student.

Although with different approaches, Tinto and Bean provide similar arguments, understanding and concrete frameworks, indicating that student persistence is the result of interaction and integration of personal, social and institutional factors, and that the intent to persist stems from the successful fit between student-institution, integration-experience, and internal-external support and motivations (Cabrera *et al.*, 1992, cited in Aljohani, 2016).

The combined contribution of Tinto and Bean minimises critique of single-model relevance and increases the understanding of internal and external factors that influence student persistence and retention. Alignment between personal, social and academic and external communities' influence provides a central point for a South African research context, as many students come from families in which they are the first generation to enter post-school education (Schreiber *et al.*, 2014:9). Studies within a South African context reveal that social factors such as socio-economic conditions, finances, family and friends play a vital role in the decision-making process and perception of an institution. Identifying the social and academic factors, as well as the influence of external factors on students' perception of the institution, provides a greater window from which to view policy and TVET college practice reform.

Accumulatively, student retention research present evidence related to numerous personal and/or education institution factors, inclusive of socio-economic status, academic support, parental occupation and underlying motivation for college entry (Adamson & McAleavy, 2000:536). Student retention and persistence studies in higher education in South Africa predominantly apply Tinto SIM, although findings indicate the model's relativity to the context and background of participants. By integrating Tinto's and Bean's models, this study can understand internal and external factors that influence programme-completion intention. The broadened understanding should enable institutions to address the concern of institutional responsibility and control over improving student persistence and retention.

2.6 South African student-retention studies

Student retention and programme completion is of great importance to education and are commonly studied areas (Tinto, 2006:1). Existing studies of student retention and early departure in South African TVET colleges that use Tinto as the theoretical model of understanding, have been researched by Maharaj (2007), Ngcobo (2009), Papier (2009), Moodley and Singh (2015), Pather (2015) and Lawrence (2016) as mentioned earlier.

In addition to voluntary departure, Koen (2007:10) identifies the category of 'forced exclusion'. Forced exclusion takes place through institutional committees that identify students for exclusion, based on reasons such as financial viability and academic

performance. Koen's model (2007:25), in addition to Tinto's SIM, includes factors such as student-student, student-academic, student-institution experiences and relations, inclusive of identification and culture within the academic setting. Koen (2007) states that interaction, to support accountability between institution and student, needs to be measured through stronger institutional policies.

The application of Tinto's SIM at a university of technology in the Western Cape, South Africa, argues the uniqueness of context and student regarding the influence of social factors (Pather, 2015:256). Tinto's model expresses the social and academic integration as being concurrent. However, Pather's (2015) findings reveal that first-year students view academic and social factors as successive. Their integration and interaction with the university are influenced by their socio-economic placement and financial position. Their integration is hierarchical and prioritised, starting with financial security, then academic concerns, and lastly, social integration and interaction. The social interaction on campus by certain participants is influenced by their personal circumstance and family commitment. An interesting finding regarding social and academic integration is the strategic social interaction participants form with peers in order to achieve their academic goal rather than social need.

A study by Moodley and Singh (2015) investigates the challenges encountered by students who have dropped out of universities in South Africa. Incorrect career choice, inadequate academic support and insufficient funding are identified as predominant factors that influence their decision to depart before programme completion. Despite only referencing Tinto's model, these findings of external variables are best understood and validated by Bean's model.

Tinto's SIM was explained earlier by means of three stages, namely Separation, Transition and Integration. The Separation stage was noted as being more challenging for students from disadvantaged backgrounds and with parents who had never achieved further education. Findings by Lawrence (2016) indicate persistence is shown by students from disadvantaged backgrounds who are encouraged by societal and family pride in achieving further education where their parents have not. Lawrence's (2016) study references Tinto, but his findings challenge the explanation of Tinto's SIM at the first stage of Separation, indicating the relevance of a unique context.

Findings from South African studies, albeit greatly understood and explained by Tinto's model, indicate the relativity and uniqueness of a South African context. Studies in a South African context require the understanding and application of a model encompassing internal, external and social factors. The abovementioned findings are based predominantly on Tinto's

model. However, there are indications of variables found in Bean's SAM and his reliance on external factors are seen as being influential. The White Paper on Post-School Education and Training (South Africa, 2013:13) envisages greater opportunity, access, funding, promotion and student choice within the TVET sector. However, findings of student retention studies in South Africa are evident that a student retention and programme completion problem still exists, specifically within the TVET College sector and NC(V) programme.

This study concurs with Cook and Rushton (2009:3) that there are greater interdependent influential factors governed by both institution and student, influencing decision-making processes to remain in or abandon a study programme. An analysis of student perception of TVET colleges, internationally and in South Africa, indicates that socio-economic conditions, historical background and unique study context create a different purpose, outlook, approach and perception of TVET colleges.

An enquiry into TVET college student persistence and programme completion in South Africa can be achieved by investigating the internal and external factors of influence. This study has been guided by the combined work of Bean's (1981) SAM and Tinto's (1993) SIM. Tinto's model will assist with the investigation of the internal dynamics influencing social and academic integration and Bean's model will assist with the investigation into the external dynamics influencing students' perception and attitude toward the TVET College. Understanding both internal and external factors provides a holistic approach to student-related issues. The combined theories of Tinto and Bean have been adapted for the purpose of this study and are illustrated in Figure 2.1 below.

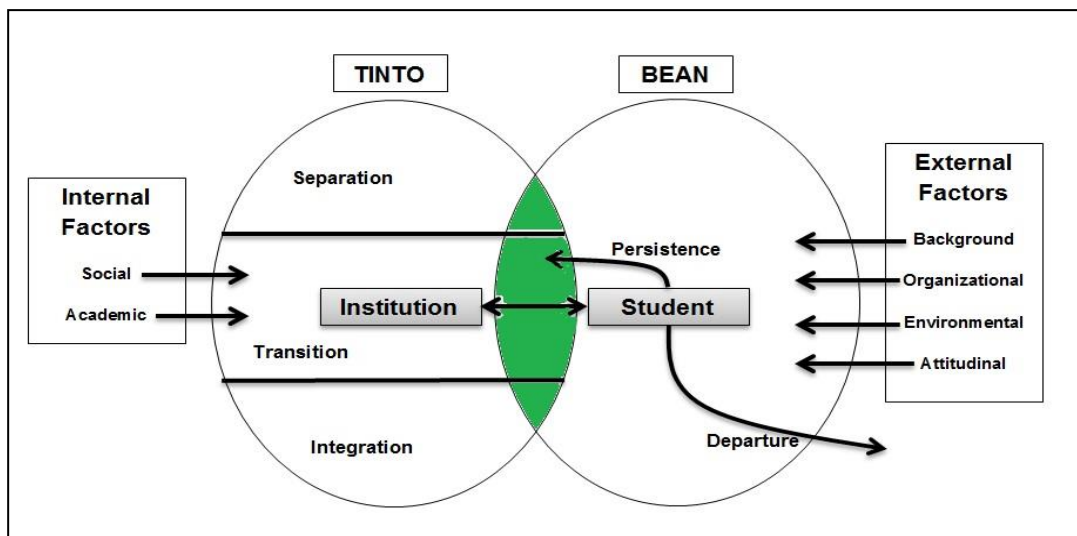


Figure 2.1: Internal and External Factors Influencing Student Persistence and Departure (IEFISPD) Model (Gaffoor, 2018)

Broadly illustrated in Figure 2.1 above, the internal factors or variables that form part of the enquiry include friends at college, student support services, orientation programmes, academic staff, teaching quality and style, financial assistance and programme advice. The external factors or variables that will form part of the enquiry include intention after qualification, employment prospect, family, community, career guidance, reason for enrolment at TVET, support structures and importance of friends outside of college. These factors will be categorised according to Individual, Institutional and External factors as prescribed by Jensen (2011).

With a student-centred approach, investigating and understanding the external factors of influence, institutions can assist students through Tinto's three stages of integration, namely separation, transition and integration. The IEFISPD model depicts the shared responsibility of student and institution, as well as the internal and external influence towards persistence and programme completion.

Thomas (2014:225) argues that studies have investigated factors that influence student drop-out, poor performance or attrition, but not much has been investigated specifically based on the factors that influence programme completion and retention. Acknowledging the importance of factors that influence TVET college student attrition, poor performance or early departure, this study undertakes an alternative yet equally vital enquiry regarding factors that influence student persistence and programme completion specifically within the NC(V) programme.

2.7 Conclusion

Chapter Two provided a greater understanding of TVET in South Africa. This was followed by a discussion of the problems facing the NC(V) programme at TVET colleges with regard to retention and programme completion. The effect of student retention was discussed before analysing the factors influencing low retention. By analysing the factors influencing low retention as found in the literature, this study was assisted in investigating similar variables, guiding the construction of data collection instruments, to be detailed in Chapter Three. The advent of retention theories and models, specifically the contributory works of Vincent Tinto and John Bean, were analysed. The purpose of a combined model, namely those of Tinto and Bean, was indicated and explained how it would assist this study's investigation. Chapter Two also looked at the application of student retention theories in South African educational studies, indicating the contextual relativity and unique findings.

Chapter Three provides detail of the research design used to address the research problem, providing insight into the methodology and methods of enquiry. The research aim and

objective were presented in relation to the research problem and research question. The techniques used to obtain the population and sample group were discussed, before focusing on the data collection and analysis methods. Chapter Three will look at the quality of the methods applied as well as how the ethical considerations were adhered to before the investigation commenced.

CHAPTER THREE: RESEARCH DESIGN

3.1 Introduction

Chapters One and Two provided the context and understanding of technical and vocational education and training (TVET) in South Africa and the problem of programme completion and retention within the National Certificate (Vocational) [NC(V)] programmes since their inception in 2007. An overview of student perception in South Africa and internationally, indicated that a negative perception exists of TVET colleges, their programmes and career prospects. In Chapter Two an analysis of the factors influencing low programme completion provided a broader understanding of the negative effect non-completion has on the educational institution, individual students and the economy at large. The discussion of student retention theories and models, namely Vincent Tinto and John Bean, provided a better understanding of the origin, progression and application of retention study models. The findings of South African studies applying retention study models indicated a unique South African context regarding factors that influence student decision-making towards completing their studies. The contribution and purpose of Tinto and Bean to this study were presented.

Chapter Three presents the research design, methodology and methods used to formulate this study to address the research problem, which is the low throughput and completion rate of the NC(V) programme. Section 3.2 provides a discussion of the research objective and question, *what factors influence NC(V) programme completion?*, guiding the enquiry before addressing the research design in Section 3.3. Sections 3.4 to 3.6 provide the detail of the research design regarding the research paradigm, methodology and methods used to support this study and the objective. The appropriate data collection instruments selected to gather participant data are described and analysed in Section 3.7, followed by Section 3.8 which indicates how the gathered data was analysed. Section 3.9 discusses the quality assurance undertaken by this study to ensure compliance. Ethical considerations adhered to by this study are detailed in Section 3.10, before Chapter Three concludes.

3.2 Research objective

According to Kumar (2014:262), the research objective refers to the fundamental drive or focus of a study. The research objective is achieved through a question or questions of enquiry, known as a research question followed by sub-questions. Welman and Kruger (1999:19) state that the research objective can be descriptive, which involves defining the nature of the study object. Alternatively, the research objective can be explanatory. When using the explanatory approach to determining research objectives, it involves explaining

concepts or the relationship between concepts. Research objectives can be expressed as predictive, when findings are used as forecasters.

This study's main objective was to determine the internal and external factors that influenced programme completion by the 2017 NC(V) Business Studies Level 4 students. The study subscribed to the explanatory approach to determine the research objective, as classified by Welman and Kruger (1999:19). By using the explanatory approach, this study was able to investigate and explain the study's focus, namely students completing their programme, in relation to the factors that influenced their programme completion.

Addressing the main study objective, the following research question, along with sub-questions to assist the analysis, was established:

What individual, institutional and social factors influenced the programme completion of NC(V) Business Studies Level 4 students?

- a. What was the retention rate, over the three-year period, 2015 to 2017, of students enrolled in the NC(V) OA and FEA Business Studies programmes?
- b. What specific internal (individual and institutional) factors influenced or supported programme completion and student retention?
- c. What specific external (environmental and social) factors influenced or supported programme completion and student retention?
- d. What are the prevalent internal and external factors a TVET college can control or influence?

By using an explanatory approach to determine the main research objective, this study directly addressed the research problem experienced at a TVET college in the NC(V) programme, as well as identifying the factors that influence and contribute towards the student's programme completion intention.

3.3 Research design

Welman and Kruger (1999:46), Bhattacharjee (2012:35) and Kumar (2014:122) state that a research design indicates the manner in which desired knowledge is acquired, which instruments are used to acquire the knowledge and how the research participants are determined. Kumar (2014) argues that a research design firstly identifies and develops procedures to be undertaken during the study and, secondly, emphasises quality in each procedure used, ensuring the study's validity, objectivity and accuracy. According to Guba

and Lincoln (1994:108), the identification and development of procedures emerge from an underlying assumption; firstly, how the knowledge of reality is formed (objectively or subjectively), known as the ontology and epistemology; and secondly, which methodology and method is used to acquire the knowledge. According to Guba and Lincoln (1994:105), the way in which reality is constructed, namely 'how things really are' or 'how things really work' refers to research ontology. Research epistemology refers to data that constitute acceptable knowledge (Vanson, 2014).

After defining the ontology and epistemology, the research design is classified under an associated research paradigm, namely positivist, interpretive or critical research. The researcher then employs data collection methods in accordance with the paradigm. According to Kumar (2014:19), data can be collected either through quantitative or qualitative methods. However, combining quantitative and qualitative methods, known as a mixed methods research methodology, provides a broader perspective and confirmation of findings. The appropriate research population and sample, inclusive of methods being used to determine where and from whom the data will be gathered, also form part of the research quality (Morrison, 1993:112, cited in Cohen, *et al.*, 2007:100). A single view of the researched population and sample at a particular point in time is referred to as a cross-sectional study (Cohen *et al.*, 2007:213).

The overall aim of social research is to identify and clarify aspects of the research topic, but the specific aim of explanatory research is to identify causation between variables (Henning, 2004:81). According to Morgan (2014:67), explanatory sequential contribution initially prioritises quantitative inputs, followed up with qualitative input (noted as QUANT→qual.). Thereafter, results of the qualitative data are converged to determine correlation to supplement the quantitative data.

This study's design embraced a subjective ontology and epistemology, positioned within the critical research paradigm. A cross-sectional mixed methods approach allowed this study a broader perspective on which to support its findings. The use of a mixed methods approach was further motivated by an explanatory sequential contribution of collected data and convergence of analysed data. Quantitative and qualitative data collection methods were used to address the research objective. The study population and sample were gathered, using probability and non-probability sampling methods to meet both quantitative and qualitative research outcomes.

Analysis of quantitative data converged with the development of the qualitative data collection instrument. Quantitative data were collated and manually analysed using

computer-aided software, namely Microsoft Excel. After analysing the qualitative data through content analysis, correlations were identified with quantitative data findings in either support of or deviance from the findings, to provide a better understanding of the research topic. The research implementation, construction of data collection instruments and gathering of population and sample, all adhered to strict ethical and quality assurance measures. The individual sections encompassed within this study's research design are detailed in the subsequent sections.

3.4 Research paradigm

When identifying and developing procedures, Guba and Lincoln (1994:108) argue that an underlying assumption regarding the design of social research is answered through the following interdependent research questions:

- How is the knowledge of reality formed? The researcher either makes sense of knowledge through assumption (subjectively) or scientifically (objectively) and this positions the study within a paradigm. This refers to the ontology and epistemology of the study.
- Which methodology and method(s) will be used to acquire the knowledge? The appropriate methodology (approach) and method (instrument or tools) refer to the manner in which knowledge is acquired, stemming from the ontology and epistemology of the study.

Providing answers to the study's ontology, epistemology, methodology and method, results in the classification of associated research paradigms, namely positivist, interpretive or critical research. According to Cohen, Manion and Morrison (2007:26), the positivist paradigm advocates objectivity and measurability, whereas the interpretivist paradigm understands the world from the participant's viewpoint. However, the critical research paradigm advocates that positivist and interpretive paradigms partially account for social behaviour by abandoning political and ideological perspectives. Research aligned to the critical paradigm firstly provides an understanding of a phenomenon and then seeks to change a situation by creating a consciousness toward individual freedom and emancipation (Cohen *et al.*, 2007:26).

According to Babbie and Mouton (2011:34), the core concept of critical research is the unique intention of transforming or changing the current human condition or action by investigating limiting factors or conditions through self-reflection and decision-making, toward

liberation and emancipation. Critical research acknowledges that action is caused by social conditions over which there is often no control, and that the action is performed without knowledge or choice (Fay 1975, cited in Babbie & Mouton, 2011:35). Henning (2004:23) advocates that the intention of critical research is to promote critical awareness and break-down structures that limit progression and equality.

Aligned to the critical research paradigm, this study concurs with Fay (1975, cited in Babbie & Mouton, 2011:35) stating that action is influenced and caused by social conditions. By investigating a broad array of factors influencing programme completion, this study removes the causal assumption that failure and success is one-sided, residing either with student ability and competence or only with the educational institution. By adopting a critical research paradigm, this study intends promoting critical awareness and addresses structures limiting progression. The investigation could potentially contribute toward potential social change, providing a platform from which TVET college and policy makers can potentially effect improved NC(V) programme completion.

3.5 Research methodology

Kaplan (1973, cited in Cohen, *et al.*, 2007:47) distinguishes between methodology and method. According to Kaplan (1973, cited in Cohen, *et al.*, 2007:47), methodology assists the understanding of the broader process and not the outcome of enquiry, whereas method refers to the instrument and procedure of collecting data.

According to Kumar (2014:19), findings can be collected and expressed either quantitatively or qualitatively. Numbers or quantities represent quantitative findings objectively, whereas participant characteristics or qualities represent qualitative findings subjectively. However, combining quantitative and qualitative expressions, known as a mixed methods approach, provides a broader perspective and confirmation or support of findings. A mixed methods approach or methodology implies that research would employ more than one method found in one or both of the other approaches (Kumar, 2014:19). The mixed methods approach would also reduce any limitations found in the use of a single methodology, namely quantitative or qualitative.

According to Creswell and Clark (2011:xix, cited in Kumar, 2014:19), the mixed methods approach has existed over the last two decades, but has only peaked research approach interest in the past five to ten years. Molina, Azorin and Cameron (2010, cited in Pather, 2015:98) highlight the growing popularity of a mixed methods research methodology across all fields or disciplines. Cohen *et al.* (2007:461) argue that although quantitative data focus

on larger sample groups, the qualitative data are inclined to be more detailed and richer. Tashakkori and Teddlie (1998, cited in Pather 2015:97) support the view that the strength of both quantitative and qualitative methods is that they provide a greater understanding of the research problem.

The mixed methods approach does not come without challenge and risk. Driscoll, Appiah-Yeboah, Salib, and Rupert (2007, cited in Pather, 2015:98) state that data collection across qualitative and quantitative methodologies can be time-consuming and expensive and may result in the researcher weakening the sample size or interview duration. Acknowledging the challenge presented by Driscoll *et al.* (2007, cited in Pather, 2015:98), Creswell and Clark (2011, cited in Kumar, 2014) state that these challenges are not too great to overcome. By adopting a mixed methods approach, the following strengths are acquired:

- Counter-balancing any limitations from an isolated qualitative or quantitative study;
- Providing multiple ways to address the research problem;
- Providing support to numerical data with interpretive data;
- Providing a greater understanding of the research problem; and
- Providing an in-depth account of the research question.

A mixed methods approach has the rationale of not emphasising a specific methodology, namely quantitative or qualitative, but rather understanding the research problem in totality (Creswell, 2014:39).

This study applied a mixed methods approach. The strength of both quantitative and qualitative methodologies were used to address the research problem. Combining the two provided this study with a broader understanding, convergence and support of findings. Initially, this study would collect and analyse quantitative data. The quantitative data would be used to strengthen the development of the qualitative data-collection instrument. This study used an explanatory sequential contribution of findings. Qualitative findings would be used to understand, support and clarify quantitative data, presenting it in a meaningful manner.

3.6 Research population and sample

The quality of research is not only measured against its methodology and methods of data collection, but also the appropriate research population and sample inclusive of techniques being used to determine where and from whom the data will be gathered (Morrison, 1993:112, cited in Cohen, *et al.*, 2007:100). Cohen *et al.* (2007:213) state that a single view

of the researched population at a particular point in time is achieved with a cross-sectional study. According to Cohen *et al.* (2007:213), the strength of a cross-sectional study is its quick and cost-effective manner of administration as well as the stronger likelihood of participation. Kumar (2014:134) indicates that a cross-sectional study is commonly used in the social sciences.

According to Welman & Kruger (1999:54), factors such as time, access and expense, limit researchers from accessing an entire study population and therefore rely on a subset, known as the sample of the population. The sample is confidently regarded as representative of the entire population (Welman & Kruger, 1999:54). Welman and Kruger (1999:54) and Kumar (2014:234) state that population samples are derived from using probability and non-probability sampling techniques. Kumar (2014:228) argues that quantitative and qualitative sampling is governed by opposing beliefs. Quantitative sampling attempts to select in a manner that is impartial and representative of the population, whereas qualitative sampling selects a sample based on factors such as ease of access and judgment of the participants' knowledge of the research topic. Quantitative research sampling seeks to produce inferences, while qualitative research sampling seeks to gain a participant perspective and knowledge (Kumar, 2014:228). Welman and Kruger (1999:47-63) indicate different probability and non-probability sampling techniques from which the following are relevant to this study:

- Probability Simple Random Sampling implies that the population has an equal chance of being included in the sample. Kumar (2014:236) identifies the fishbowl draw, computer-aided programme or table of random numbers, as the three most common methods to select a random sample.
- Non-probability Purposive Sampling implies that the sample is deliberately gathered based on the researchers' experience, ingenuity and/or previous research.

Kumar (2014:246) argues that calculating the research sample size depends on the purpose of the findings and level of accuracy. According to Kumar (2014:247) and Cohen *et al.* (2007:100), research reliability is increased with a larger sample size, regardless of any definitive or correct sample size, as it depends on the purpose of the study as well as the nature of population. However, Cohen *et al.* (2007:100) argue that a quantitative sample size of 30 cases is held to be the minimum reliable number of cases. Therefore, this study's quantitative reliability is strengthened with an $n=62$ sample.

According to Cohen *et al.* (2007:103), not only must the sample size be considered when applying probability sampling to a quantitative study, but the confidence level and interval as well. Confidence levels indicate the surety of responses within a stipulated variance or interval. Figure 3.1 below illustrates how reliability and quality improves with confidence levels and intervals for random sampling used in quantitative methods. Gorard (2003:60, cited in Cohen *et al.*, 2007:100) argues that aspects such as participant non-response and attrition should be considered when obtaining the sample size and advises a contingency to overestimation, unless there is a guarantee of access and response achieved by researcher presence.

Population	Confidence level 90 per cent			Confidence level 95 per cent			Confidence level 99 per cent		
	Confidence	Confidence	Confidence	Confidence	Confidence	Confidence	Confidence	Confidence	Confidence
30	27	28	29	28	29	29	29	29	30
50	42	45	47	44	46	48	46	48	49
75	59	64	68	63	67	70	67	70	72
100	73	81	88	79	86	91	87	91	95
120	83	94	104	91	100	108	102	108	113
150	97	111	125	108	120	132	122	131	139
200	115	136	158	132	150	168	154	168	180
250	130	157	188	151	176	203	182	201	220
300	143	176	215	168	200	234	207	233	258
350	153	192	239	183	221	264	229	262	294
400	162	206	262	196	240	291	250	289	329
450	170	219	282	207	257	317	268	314	362
500	176	230	301	217	273	340	285	337	393
600	187	249	335	234	300	384	315	380	453
650	192	257	350	241	312	404	328	400	481

Figure 3.1: Sample size, confidence level and interval – random sampling (Cohen *et al.*, 2007:103).

Emerging from this study's mixed methods approach, both probability and non-probability sampling techniques were applied. A research population is noted as $N=$ and sample size noted as $n=$ (Welman & Kruger, 1999:47). The research population $N=63$ were registered NC(V) Level 4 students enrolled in two Business Studies NC(V) programmes, namely Office Administration and Finance, Economics and Accounting, during 2017. The selection of the investigated TVET college campus in the Western Cape, South Africa and the Business Studies department, was based on practicality and researcher accessibility to secondary data and research participants. Secondary data provided during October 2017 by the investigated TVET college indicated a total enrolment of 63 students in the two Business Studies NC(V) programmes at the time of research.

The quantitative study component sample was obtained through random sampling. The random sampling technique allows the population an equal opportunity to be included in the research sample. Welman and Kruger (1999:52) and Kumar (2014:236) argue that random probability sampling is the most attractive in quantitative methods allowing a greater and

equal chance for the population being included in the sample. This study applied a 99% confidence level to improve the sample reliability, addressing the concern by Gorard (2003, cited in Cohen *et al.*, 2007), with an increased sample size. The concern by Gorard (2003, cited in Cohen *et al.*, 2007) regarding participant non-response will be addressed by the administration of the data collection instruments, detailed later in the chapter.

The highlighted area in Figure 3.1 above indicates where this study's population is situated, namely $N=63$. By applying a 99% confidence level, this study derived a sample size $n=62$ for its quantitative research component, from which 46 respondents consented to participate. From the intended and identified quantitative sample $n=62$, ten potential participants were absent on the day of the meeting and only 46 of the 52 were in attendance consented to participate.

The sample for the qualitative component of this study was obtained through purposive and convenience sampling techniques focusing on units of investigation based on researcher judgment of respondents' knowledge and ease of access to respondents. Purposive sampling was selected as the researcher would personally select the sample to be included, based on judgment of the participants' particular knowledge and contribution to this study's enquiry. This study identified a sample of $n=6$ participants, from the same group, through non-probability purposive sampling. Three participants were selected from each NC(V) programme, of which three consented to participate. The three consenting participants were enrolled in the OA programme.

To improve the reliability of the non-probability sampling technique, the study maintained an objective and honest approach in selecting the units of investigation. The judgment in selecting the participants was based on the researcher having taught the students in 2015 for Level 2 and 2016 for Level 3, building morale and a bond over time. This bond positively facilitated the willingness to participate with full understanding of the voluntary nature of the research and purpose of participation. Selecting a sample group through a non-probability technique, using personal judgment and ease of access to a specific individual or group, is accompanied by the knowledge that the participants and data are not representative of the population, but rather of itself (Cohen *et al.*, 2007:461). This study observed this view of individual representation. However, the analysed findings would assist in understanding an individual perspective which converged from a broader perspective found in the initial quantitative study component's numerical data.

In summary, applying a cross-sectional mixed methods approach provides this study with both quantified numerical data as well as qualitative interpretive data to support and further

understand the numerical data, in a quick and cost effective administrative manner. Applying a random probability sampling technique, together with a 99% confidence level, a quantitative sample of $n=62$ was identified of which 46 consented to participate. Applying a purposive non-probability sampling technique, together with an honest judgment of gathering the units of analysis, a qualitative sample of $n=6$ was identified, three from each programme, of which three, enrolled in OA, consented to participate. The study population, sample sizes and consenting participants per programme are illustrated in Table 3.1 below.

Business Studies NC(V) Programmes at selected campus	NC(V) Level 4 population	Quantitative Sample (99% confidence level)	Qualitative sample	Quantitative consenting participants	Qualitative consenting participants
Office Administration	47	46	3	39	3
Finance, Economics and Accounting	16	16	3	7	0
	N=63	n=62	n=6	46	3

Table 3.1: Population 2017 and sample size (Secondary data, investigated TVET College records, on 31 October 2017).

3.7 Data collection

The selection of a data collection instrument generally follows an earlier decision in the research methodology undertaken (Cohen *et al.*, 2007:83). Cohen *et al.*, (2007:208) argue that irrespective of a methodology being intended for a large-scale or small-scale study, data gathering generally includes one or more instruments of which the following are relevant to this study:

- Self-completion questionnaires;
- Attitude/rating-scales.

Data collection involves the construction of the study's confines or variables, as well as defining the sources and protocol for gathering information (Creswell, 2014:239), employing a variety of techniques (Pather, 2015:97). Cohen *et al.* (2007:181) argue that there is no designated instruction for a particular data collection instrument to be used, but should rather be 'fit for purpose'. A greater research outcome is possible through a mixed methods

research methodology as opposed to findings exclusively gathered by qualitative or quantitative techniques. Personal interviews may be argued to be a commonly used data-collection method for qualitative studies. According to Kvale (1996, cited in Cohen, *et al.*, 2007:349), an *interview* is ‘an exchange of views between two or more people on a topic of mutual interest...’. According to Cohen *et al.* (2007:158), disadvantages of an interview such as a low return rate, subjective and ambiguous interpretation, literacy issues and understanding, pace of interview and content refinement, were considered and are addressed later in this chapter. Therefore, the interview method was not used to allow greater objectivity with a respondent-centred rationale.

This study selected two of the data collection instruments, presented above by Cohen *et al.* (2007:208), to address the research objective and question, namely rating-scale and questionnaire. They were selected because they are ‘fit for purpose’ (Cohen *et al.*, 2007:81). This study’s mixed methods approach selected one data-collection instrument for each methodology. The quantitative instrument selected was the attitude or rating-scale and the qualitative instrument selected was the self-completion questionnaire. Emerging from the explanatory sequential contribution of data, the quantitative attitude or rating-scale instrument sequentially contributed to the use of the qualitative self-completion questionnaire. Each instrument type is detailed in this section and a sample of each is provided as Appendix A and Appendix B.

Instrument quality is essential to successful analysis and valid outcomes (Bradley, Peabody, Aker & Knutson, 2015:1). The impact of the validity and reliability of the instruments, according to Belson (1986, cited in Cohen *et al.*, 2007:158), are two-fold; firstly, there must be an accurate, honest and correct completion of the instrument; and, secondly, the failure to return instruments must be taken into account. The concern of validity and reliability applicable to this study’s data collection instruments are discussed later in this chapter.

3.7.1 Attitude or Rating-scale

The attitude or rating-scale instrument for the quantitative survey, was selected with the following advantages (Morrison, 1993:38, cited in Cohen *et al.*, 2007:206):

- Gathers an isolated view, therefore it is economical and efficient;
- Represents a large target population;
- Provides descriptive, inferential and exploratory information;
- Gathers standardised information;
- Supports or refutes a hypothesis; and

- Relies on large-scale data gathering from a wide population.

According to Cohen *et al.* (2007:205), this quantitative instrument is able to explore current conditions for comparison and test numerous variables, population or programmes, with the aim of describing general features. The economical and efficient advantage suits this cross-sectional study. Cohen *et al.* (2007:321) affirm that there are various modes of question, statements and responses, inclusive of rating-scales and open-ended questions.

A rating-scale can test a wide variety of variables, objectively using a standardised procedure for questions or statements and answers or responses. Results can generally be applied to a wide range of people and settings, thereby improving their validity (Morgan, 2014:51). Avoiding highly structured closed questions requiring a yes/no response, this study adopted a rating-scale (Cohen *et al.*, 2007:322). This study specifically selected a Likert scale, developed by Rensis Likert in 1932, which allows for a range of responses to standardised questions or statements (Cohen *et al.*, 2007:325). Aligned to the categories presented by Jensen (2011) discussed in Chapter Two, this study designed the rating-scale instrument in accordance with the three categories of Individual, Institutional, and External, inclusive of biographical information indicating age, gender and ethnicity.

In order to increase the measurement of reliability and validity, Bradley *et al.* (2015:1) specifically note the words or statements used in a Likert scale and the use of a 'neutral' response option. The use of a 'neutral' response option is considered comfortable for the respondent. However, it is at the expense of the research and data collection quality, thereby misrepresenting data to establish meaningful measures (Bradley *et al.*, 2015:16). Bradley *et al.* (2015) argue against the use of a 'neutral' response option at the expense of research quality. In this study, the instrument variables are measured by means of a four-point Likert scale ranging from Strongly Disagree (1), Disagree (2), Agree (3) and Strongly Agree (4), in an effort to avoid a midpoint scale anchor response, namely 'neutral'. The absence of the 'neutral' response option encourages respondents to engage, thereby assisting more reliable data interpretations. To accommodate the exclusion of the 'neutral' response, the instrument encompassed simplified direct statements, minimising confusion or ambiguity. The statement construction, per category, was guided by existing studies on student retention and persistence, including the research of Papier (2009) and Martinez and Munday (1998).

The study's rating-scale instrument included one controlled open-ended question at the end to invite an honest generalisation among participants. An open-ended question, according to Cohen *et al.* (2007:329), attracts a personal reference in addition to a predetermined statement and response range. Cohen *et al.* (2007) argue that responses to open-ended

questions uncover valuable information missed in the rated statements or questions and extend a greater responsibility for the data provided by respondents. Although an open-ended question was included in the rating-scale, Thomas (2003:44) pointed out that a limitation of quantitative instruments is its inability to describe qualitative features to show the unique way the target variable fits individuals within the collective. Addressing this inability and limitation, the quantitative study component converged with the qualitative study component, using an exploratory self-completion questionnaire.

3.7.2 Self-completion questionnaire

To provide the qualitative sample with a valid, reliable and appropriate instrument, the study used a self-completion questionnaire, comprising open-ended general questions leading up to open-ended focused questions. The analysed quantitative data assisted with the development of the qualitative instrument. Factors rated by respondents with a high influence (either Agree or Disagree) were focused on in the qualitative data collection instrument. The convergence of quantitative data analysis with the qualitative instrument development provided a probe of in-depth knowledge to support the related numerical data.

Reliability was improved by avoiding possible subjective contamination through personal interview influence or researcher bias when exchanging ideas and conversation. Self-completion questionnaires also remove the pressure of respondents to answer a topic of a sensitive nature or allow for question processing and gathering of thoughts at the respondents' pace. Therefore, a self-completion questionnaire allowed greater ease of response, easier analysis of data and a more reliable and structured response to questions. Selecting a self-completion questionnaire for this study's qualitative component, yielded the following advantages, concurring with Cohen *et al.* (2007:158):

- More reliable;
- More objective;
- Freedom of thought;
- No pressure or haste;
- Focused content analysis;
- Allowance for additional thoughts to previous questions; and
- Great likelihood of participant response;
- Cost effective.
- Can be completed over time; and
- Reduced researcher influence or bias.

The self-completion questionnaire aimed to:

- Obtain a detailed student perspective of the broad and specific variables that influenced their programme completion and retention;
- Expand, converge and supplement the findings of the quantitative research component;
- Generate and cover topics to gather in-depth data in compliance with the research objective; and
- Ensure that all variables were covered and responded to adequately if omitted in the quantitative component.

Due to the exploratory nature of the self-completion questionnaire, the instrument included converging-questions (Thomas, 2003:63), also referred to as a funnel strategy, to avoid a pitfall encountered with open-ended questions, namely irrelevant information. This approach combines both open and closed-structured questions. Commencing with broad questions to understand and generate respondent thoughts on the topic, the questions become more focused on the categories and variables previously tested and analysed in the quantitative instrument and additional variables generalised from the open-ended question included in the quantitative instrument.

According to Cohen *et al.* (2007), open-ended general questions discourage response limitations by enabling a free account of the respondent's views. A closed-ended, focused question focuses the attention and response on a specific range or variable, in order to generate response frequencies for analysis. The reliability improves as comparisons are made in the same sample, across different groups (Oppenheim, 1992:115, cited in Cohen *et al.*, 2007:321).

3.7.3 Instrument administration

Cohen *et al.* (2007:344) distinguish between two types of self-administered instruments: instruments completed in the researcher's presence and instruments completed in the absence of the researcher, for example, completed at home. Cohen *et al.* (2007:344) indicates that the presence of the researcher assists with any uncertainty or clarity needed, as well as improves the reliability of accurate completion, full response and return rate.

Prior to administering data collection instruments, a pilot phase was conducted with respondents similar to the population samples. The pilot sample consisted of five Level 4 students registered on the NC(V) OA and FEA programmes during 2016. The pilot instruments were administered in the same way as given to the research samples, detailed

later in this section. The pilot phase allowed for potential misunderstanding or clarification of questions to be identified and rectified (Thomas, 2003:68; Kumar, 2014:191). This study's quantitative and qualitative instruments both underwent a pilot testing phase. The pilot phase intended to identify questions/statements that needed clarity or more simply stated to avoid ambiguity in both the rating-scale and interview. Feedback received from the pilot sample was incorporated when rectifying the instruments before being given to the quantitative and qualitative research sample group.

The quantitative instrument (Annexure A) was administered to the research sample in the following manner:

- The identified sample group $n=62$ were gathered at one venue during an interval, known as break or recess, to avoid disrupting class time.
- The researcher explained the study purpose, participant selection and voluntary nature of participation.
- The researcher ensured that consent forms were understood before being signed by 46 students, in the sample group, hence $n=46$, who agreed to participate.
- The researcher administered a hard-copy format of the rating-scale instrument.
- The researcher explained the rating-scale instrument and how it should be completed.
- The researcher maintained a presence in the venue to assist with any misunderstood statements.
- Upon completion, the researcher ensured accurate completion by checking the correctness of the instrument.
- Students who had not completed the instrument, were instructed to complete it during the day for collection by the researcher before leaving for home.

The exploratory self-completion questionnaire (Annexure B) was administered to the research sample in the following manner:

- The sample group $n=6$, based on researcher judgment and knowledge, was identified.
- The researcher convened a pre-administration meeting to explain, sign and collect consent forms. Three of the identified six agreed to participate.
- The researcher and participants agreed upon a date and time to conduct the self-completion questionnaire.
- The researcher convened with participants in one location (a computer laboratory on the TVET college premises) at the agreed date and time.
- The researcher administered the self-completion questionnaire electronically in a Word processing format.

- The researcher explained the study purpose and voluntary nature of their participation.
- The researcher provided light refreshments before commencing. This was done as a kind gesture but, more importantly, to set the participants at ease.
- The researcher allowed access to the electronic instrument and explained how it should be completed.
- The researcher allowed respondents freedom of space, but informed them to ask for any assistance with question clarification or uncertainty.
- Participants were arranged in a specific seating order, to encourage greater focus.
- Participants were given a time-frame in which to complete.
- Upon completion, the researcher checked the accuracy of completion and ensured all questions were answered, and encouraged the ones that had not completed.
- Instruments were saved electronically and printed for analysis.
- Participants were thanked before concluding the session.

Selecting a computer-based self-completion questionnaire yielded the following advantages:

- Freedom of thought;
- No transcription;
- Allowance for additional thoughts to previous questions;
- Responses directly keyed in;
- Greater administrative control; and
- To avoid illegible handwriting.

The computer-based self-completion questionnaire allowed participants greater privacy and freedom to respond. This approach created a sense of respondent autonomy and control. Assistance from the researcher was readily available to clarify any questions or confusion. Potential bias was removed and reliability and validity improved due to the objective administration of the instruments and researcher interaction. Avoiding face-to-face interaction and subjective communication could potentially remove researcher influence or bias.

3.8 Data analysis

Selecting an appropriate process of analysing data collected occurs after concluding the measurement of variables in the data-gathering stage (Welman & Kruger, 1999:201). The analysis of quantitative data is as important as that of qualitative data, provided it is 'fit for purpose' (Cohen *et al.*, 2007:501). The primary aim of data analysis is to effectively utilise the data gathered and establish answers in response to the research objective.

According to Cohen *et al.* (2007:501), quantitative data analysis can serve small-scale research, albeit often related to large-scale research. Kumar (2014:294) argues that the focus of quantitative data analysis is how to analyse acquired data in response to each question or statement asked of respondents. The first step is to ensure that the data is what Kumar (2014:296) describes as 'clean'. Cleaning or editing occurs when research instruments are analysed for any possible errors, such as incomplete responses and misclassification or rating. Analysing numerical data can be done using software such as Statistical Package for Social Sciences (SPSS, Minitab, Excel) (Cohen *et al.*, 2007:501). Kumar (2014:316) argues that data can be analysed manually (paper-based or computer-aided), based on a reasonably small number of respondents and not many variables to analyse. According to Kumar (2014), the method of analysis depends on the way in which findings are to be communicated. Kumar (2014), however, notes time consumption as one limitation to manual analysis.

Kumar (2014:317) broadly identifies three ways in which qualitative data can be analysed – to create a narrative to describe a situation, to identify themes emerging from in-depth responses, or, in addition to the first two, to quantify frequencies of occurrence, meaning the main pattern, to provide its prevalence. Qualitative data analysis essentially involves noting content patterns, consistencies and general themes, by sifting participant data and making sense of their understanding and expressions (Cohen *et al.*, 2007:461). A common procedure used is content analysis, by which 'many words of texts are classified into much fewer categories' (Weber, 1990:15, cited in Cohen *et al.*, 2007:475). According to Cohen (*et al.*, 2007:475) content analysis has the following advantages:

- It focuses on language and linguistics and therefore meaning of data received.
- Data collection is systematic and rules for analysis are 'explicit, transparent and public'.
- Data is available in a 'permanent form' and, as a result, verifiable and replicable.

Cohen *et al.* (2007:487) state that the processing of text or words is laborious and advises the use of a computer-aided package. Data analysis in a mixed methods approach usually combines different analysis methods subject to how data was collected and how it is to be communicated (Kumar, 2014:327).

This study manually analysed the quantitative rating-scale data using a computer-aided spreadsheet software, namely Microsoft Excel. The cleaning or editing process was established at the time of collecting the instrument. This immediate editing ensured the correct completion of the instrument in the presence of the respondent. Categories and statements were entered in Microsoft Excel in the same order as the instruments completed

by respondents. Responses to the rating-scale surveys were entered according to the number of responses per statement and per rated scale 1 to 4, namely strongly agree, agree, disagree and strongly disagree. The collated responses per statement, per rated scale, were expressed as a percentage. This study collated and analysed the respondents' generalised opinion from the one open-ended question by identifying a common theme. Findings from the open-ended question assisted the structure of focused questions used for the qualitative research component. Responses received from the open-ended question better formulated the focus of the qualitative instrument questions.

The qualitative data collection instrument was a computer-based self-completion questionnaire. The computer-based mode of delivery avoided what Cohen *et al.* (2007) describe as a laborious and time-consuming task of transcribing or processing of text. Participant responses were entered under each respective question. After collation, this study used content analysis to note content patterns, consistencies and general themes, by sifting participant data and making sense of their understanding and expressions. To ensure quality, accuracy and objectivity of the exploratory questionnaire data, once findings were collated and analysed, the findings were redirected to the participants to determine if the study's interpretation was regarded as a reasonable account of their experience and explanation (Kumar, 2014:318).

After participants confirmed that the analysed qualitative data were a true account of their experience and explanation, findings were used to:

- Support numeric data;
- Better understand numeric data;
- Correlate identical variables identified and gathered from quantitative and qualitative responses; and
- Provide in-depth meaning or knowledge to the generalised numeric data.

Converging the quantitative and qualitative instrument structure and analysis in this manner, allowed this study to expand its understanding and gather a clear individual opinion to correlate and support the generalised population sample opinion regarding the research topic.

3.9 Research quality

According to Ebrahim (2013:72), a high quality of research must meet the vital criteria of credibility, namely validity and reliability. Neuman (2006:196) and Kumar (2014:7) state that

validity ensures that correct and appropriate techniques were employed to find a solution to a query and reliability ensures repeatability and accuracy when applied to an alternative study or population sample. In relation to reliability and validity, the concept of trustworthiness, the strength and the transferability of knowledge and credibility are commonly discussed in the social sciences (Kvale & Brinkman, 2009:241).

According to Denzin and Lincoln (2011:66), accuracy is an imperative social sciences' principle. Misrepresented data are both non-scientific and unethical. Lincoln and Guba (1985) advocate and consider trustworthiness and credibility (truth, replicability, applicability, neutrality and reality) to be the ideal framework for evaluating qualitative research (Kvale & Brinkman, 2009:244). According to Kvale and Brinkman (2009:245), trustworthiness is related to whether findings can be reproduced by other researchers at different times. According to Marshall and Rossman (2006:201, cited in Lawrence, 2016:55), credibility demonstrates that research was conducted in a manner that ensured the topic, subject or theme was suitably identified and recorded.

According to Saunders *et al.* (2007:149), validity is concerned with the true representation of findings in accordance with the data collection method. Although 100% research validity is difficult according to Cohen *et al.* (2007:133), quantitative validity improves with appropriate data collection instruments, statistical implements and careful sampling. The complete avoidance of qualitative validity threats is never possible. However, the effects can be reduced, which, according to Winter (2000, cited in Cohen *et al.*, 2007:133), can be achieved through aspects such as honesty, participants approached and researcher objectivity. Cohen *et al.* (2007:144) state that these considerations aim to minimise the threat to validity.

Saunders *et al.* (2007:149) and Gibbs (2007, cited in Creswell, 2014:251) state that reliability relates to the level of consistency of findings achieved through data collection or analysis techniques. Although Robsin (2003, cited in Saunders *et al.*, 2007:149) advocates the following four threats to reliability - participant error, participant bias, observer error and observer bias - Easterby-Smith, Thorpe and Lowe (2002:53, cited in Saunders *et al.*, 2007:149) state that reliability can be tested by answering the following:

- Will the measures yield the same results on other occasions?
- Will similar observations be reached by other observers?
- Is there transparency in how sense was made from the raw data?

Reliability positions itself in both quantitative and qualitative research components, serving a different but equally important purpose. In quantitative research, reliability is synonymous

with dependability, consistency and replicability over time, instruments and respondents (Cohen, 2007:146). According to Bogdan and Biklen (1992:48, cited in Cohen *et al.*, 2007:149), the fit or extent of accuracy and comprehensive coverage of recorded data and actual occurrence, can be regarded as reliability in qualitative research.

Another measure or criterion of research quality is participants consenting to taking part in the research. According to Cohen *et al.* (2007:52), consent safeguards the right to self-rule, by making the participant somewhat responsible for any issues arising from the research. Before administering any instrument to the population sample, Cohen *et al.* (2007:339) indicate the need and purpose of covering letters, hereafter referred to as participation consent forms. The criteria of quality applicable to this study, encompassing trustworthiness, credibility, validity and reliability, are analysed in the following sub-sections, including participant consent.

3.9.1 Trustworthiness

This study ensured trustworthiness in the quantitative and qualitative components. The participants and researcher were well known to each other, the researcher having taught them in Level 2 and Level 3. Participants were verbally informed of the study's purpose and the reason for their selection. Participants confirmed their verbal awareness with a formally signed consent form. To increase familiarity and trust with the participants, the researcher remained present during the data-collection process.

The qualitative instrument contained general and focused questions based on the responses analysed from the quantitative study, making it unique and trustworthy to this study. The same research process, instrument type and administration can be reproduced at different TVET colleges by other researchers and gain similar results. The instrument construction, as mentioned earlier, followed literature-based guidelines, namely the categories and variables identified by existing studies. The theory and models used for this study's research design and data collection instrument development are trustworthy, used by existing retention studies in South Africa and internationally.

3.9.2 Credibility

This study followed a sound research design to address the research objective. Careful consideration and research was conducted prior to selecting the research methodology and methods of enquiry. The credibility of this study regarding the following sections was detailed earlier in this chapter, namely:

- Research design;
- Research paradigm;
- Research methodology;
- Research population and sample;
- Data collection instruments; and
- Data analysis.

Completed hard-copy quantitative and qualitative data collection instruments were stored after being electronically collated and analysed. To ensure the credibility of the respondents' opinion for the qualitative component findings, after collating, analysing and interpreting, the findings were redirected to the participants to determine if the study's interpretation could be regarded as a reasonable account of their experience and explanation.

3.9.3 Validity

Validity was a prerequisite for this study's quantitative and qualitative research components. To reduce the threat of validity, this study selected appropriate data collection instruments for the quantitative and qualitative component. Variables used to construct the instruments were guided by existing studies on retention as well as retention study models, namely Tinto and Bean. The research population was accurately aligned to the subjects experiencing the researched problem. The sample group was well known to the researcher, increasing the honesty of participant response. During the quantitative and qualitative data collection process, the researcher maintained an objective stance, allowing responses to be that of the participant. In this manner, findings were a true representation of respondents in accordance with the enquiry or data-collection method.

3.9.4 Reliability

To minimise the threat to reliability, argued by Robsin (2003, cited in Saunders *et al.* 2007:149), namely participant error, participant bias, observer error and observer bias, this study:

- Gathered participants based on objectively identified sampling techniques within both quantitative and qualitative study components;
- Ensured the research sample was representative of the research population;

- Identified appropriate instruments of enquiry based on the finding outcome this study sought to achieve, namely large-scale numeric data and isolated in-depth personal respondent accounts to support the numeric data;
- Explained the data collection instrument to participants before commencing; and
- Maintained an objective presence, namely the researcher, during the data collection process for the sole purpose of assisting with any question or statement uncertainty.

Addressing the concern of measuring reliability, raised by Easterby-Smith *et al.* (2002:53, cited in Saunders *et al.*, 2007:149), this study ensured its reliability with the following responses:

- Will the measures yield the same results on other occasions? Yes, if applied to the same sample group. However, a different time and sample group could influence a change in variable influence. Therefore, the perspectives of one particular sample group during a specific time, in a cross-sectional study, may not accurately be the same as another sample group at a different time.
- Will similar observations be reached by other observers? Yes, research topic themes were carefully analysed through content analysis, ensuring that the data collected were representative of the participants' account and experience.
- Is there transparency in how sense was made of the raw data? Yes, participant response instruments were stored in hard copy form. Analysed data were assembled and stored using computer-aided programmes. To ensure greater accuracy, objectivity and reliability of the exploratory questionnaire data, interpreted findings were reverted to the participants to determine if the interpretation had been regarded as a reasonable account of their experience and explanation.

In summary, as quality cannot be totally guaranteed but somewhat accounted for, the degree of validity and reliability in this study was strengthened by:

- Applying converging quantitative and qualitative methods of enquiry;
- Applying probability and non-probability sampling techniques;
- Including participants representative of the population;
- Selecting a sample size in accordance with the population;
- Applying a confidence level of 99% when selecting the sample size;
- Selecting appropriate quantitative and qualitative data-collection instruments;
- Carefully referencing literature to assist with instrument construction;
- Administering and utilising the strength of both quantitative and qualitative data-collection methods;

- Utilising a method of instrument administration with objective researcher presence;
- Using appropriate quantitative and qualitative data-analysis techniques; and
- Maintaining researcher objectivity as far as possible when collecting, analysing and presenting data.

3.9.5 Participant consent

Before administering the quantitative and qualitative data collection instruments to the research sample, participants were approached and informed of the following: their selection, the purpose of the study, their contribution and, more importantly, their voluntary and confidential participation in the study. Qualitative and quantitative instruments ensured the compliance of a participation consent form before administering the instruments. The qualitative instrument included the consent section as a disclaimer at the bottom and the qualitative consent form was a comprehensive document signed by the participants prior to the administration of the self-completion questionnaire. A sample of the participation consent form for the qualitative research component is provided in Appendix C. All research participants were above the South African legal person age of 18 years, therefore not requiring the consent or permission of a parent or guardian.

The participation consent forms explicitly explained aspects such as:

- Nature of the study;
- Procedures undertaken to gather data;
- Possible risk and potential benefit;
- Participant identity protection and confidentiality; and
- Voluntary nature and withdrawal option.

Encompassed within research quality, ethical considerations also play a vital role, especially within educational research. Research ethics in education is a fundamental concern when planning, designing, implementing and reporting research involving human participants, especially participants under legal consent age.

3.10 Ethical considerations

Cohen *et al.* (2007:58) advocate that social and behavioural research must be conducted ethically, considering the effect of the study on participants. Ethics is defined by Cavan (1977:810, cited in Cohen *et al.*, 2007:58) as ‘a matter of principled sensitivity to the rights of others, and that while truth is good, respect for human dignity is better’.

Apart from planning a research proposal, determining a research population and sample size, identifying and developing research instruments and methods of analysis, a study needs to recognise, seek and comply with ethical issues that may come forth (Creswell, 2014:132). In essence, researchers must not only protect the integrity of the study but also the participants who contribute to the study. Creswell (2014:132) argues that ethical consideration and issues require attention - attention placed before commencing with the study, as well as during the study when gathering, analysing and presenting data.

Pillay (2014:195) shares Creswell's (2014:132) view and emphasises that protection of participants, specifically children in educational research, is important. According to a study conducted by Schenk and Williamson (2005, cited in Pillay, 2014:195), there are five themes highlighting principles to be considered for ethically compliant research:

- Complying with basic ethical principles;
- Safeguarding participation;
- Seeking legal and professional regulations that promote ethically acceptable research;
- Considering cultural and gender considerations; and
- Considering vulnerable children, such as orphans, refugees and children without guardians.

Cohen *et al.* (2007:58) identify the following aspects outlining ethical consideration:

- Access to the envisaged research institution;
- Acceptance by the individuals whose permission is required before commencing with the research;
- Informed consent obtained by participants and significant others forming part of the study process;
- Voluntary participation, where participants are not forced but encouraged with the option of declining;
- Ensuring and informing participants of the protection of their identity through privacy, anonymity and confidentiality; and
- Ensuring the reliability and validity of data collection, analysis, presentation and reporting.

In terms of observing and complying with ethical standards and consideration, specifically in educational research, this study sought and received research permission and ethical clearance from:

- The Cape Peninsula University of Technology ethics committee (Appendix D);
- The Department of Higher Education and Training (DHET) (Appendix E);
- The selected TVET college and campus (Appendix F); and
- Participants in the study by way of informed consent (Appendix C).

This study complied with the ethical code and conditions as prescribed by the above-mentioned institutions and informed consent was obtained from participants prior to conducting data gathering in both quantitative and qualitative research components. In compliance with the researched TVET college, a copy of the research findings will be made available to the TVET college management and quality assurance body. Aware of this compliance, participants in this study were made aware of the study's purpose, voluntary nature of participation and the confidentiality of their identity before commencing with the qualitative and quantitative components. No personal information was divulged and anonymity for all participants was guaranteed and respected. Participants were not harmed or threatened in any way.

3.11 Conclusion

Chapter Three detailed the research design, motivating the critical research paradigm. A mixed methods approach, employing both quantitative and qualitative methods of enquiry was used. The study used probability and non-probability sampling techniques to gather the research population and study sample. The cross-sectional mixed methods approach led to the discussion of the appropriate use of a rating-scale and self-completion questionnaire as data-collection instruments. Chapter Three explained how data emerging from the quantitative and qualitative research components assisted each other through data convergence before being analysed. Data analysis was assisted with the use of computer-aided software and content analysis. The concept of quality was explained, encompassing trustworthiness, creditability, reliability and validity as well as their application to this study. Chapter Three concluded with the ethical considerations governing the construction and action of the study. Acknowledging the ethical issues that arise within educational research, ethical conduct was observed by obtaining permission from legal and institutional bodies as well as informed consent by participants.

Chapter Four will revisit the research objectives and research questions. Analysed data from both quantitative and qualitative study components will be presented. The research objective will be aligned to the analysed data and interpretation of quantitative and qualitative results gathered by the methods discussed in Chapter Three. Chapter Four aligns the research

findings in relation to the reviewed literature in Chapter Two, and presents the possible correlations and inferences analysed.

CHAPTER FOUR: DATA ANALYSIS, PRESENTATION AND DISCUSSION

4.1 Introduction

Chapter Three presented the research design. Positioned within a critical research paradigm, a cross-sectional mixed methods approach was used to address the research problem experienced in the NC(V) programme. The research population and sample were identified using probability and non-probability sampling techniques. Using a 99% confidence level, the study findings ensured that they were representative of the population. Quantitative and qualitative data collection instruments gathered converging information from study participants. Computer-aided software, namely Microsoft Word and Excel, was used to collate data before applying content analysis. Research processes and instrument development ensured high levels of quality, focusing on trustworthiness, credibility, validity and reliability. The study complied with strict ethical considerations and obtained the necessary permission prior to conducting the research.

Chapter Four reflects on the quantitative and qualitative data collected. Findings from the quantitative and qualitative data analysis processes, identified in Chapter Three, are presented in this chapter. Section 4.2 provides an overview of the data collection, capturing and analysis process. Section 4.3 presents the analysed quantitative findings, which were collated, correlated and expressed as a percentage of participant response. Biographical data are firstly analysed before presenting findings from the rating-scale statements. Section 4.3 also collectively analyses and presents responses to the qualitative study component. A common theme is identified in responses using content analysis. Qualitative data support and clarify the numerical data collected during the quantitative study component. Section 4.4 provides a summary of the findings, before concluding with Section 4.5.

4.2 Data collection, capturing and analysis overview

The research population and sample emanated from one campus at the identified TVET college. The study focused on two Business Studies NC(V) programmes, namely Office Administration and Finance, Economics and Accounting. The research population consisted of registered 2017 NC(V) Level 4 students. The research population $N=63$ and sample $n=62$ yielded 49 consenting participants in total over the quantitative and qualitative components; 46 participated in the quantitative component, 39 from the OA programme and 7 from the FEA programme. Three participated in the qualitative component, all consenting from the OA programme. Participants were informed of their voluntary participation and right not to take

part in the study. Participants were also informed of the confidentiality and anonymity of data and their identity.

From the intended and identified quantitative sample $n=62$, ten potential participants were absent on the day of the meeting and only 46 of the 52 were in attendance consented to participate. Participants signed a letter of consent, acknowledging their voluntary participation and knowledge of the nature of this study. The hard copy rating-scale instrument was issued and collected on the same day. The researcher, who maintained a visible presence during the completion of the instrument, clarified any uncertainties. Once returned, instruments were checked for accurate completion. Data were transferred and collated using a computer-aided spreadsheet software application, namely Microsoft Excel. The number of responses per statement per rating were manually analysed. Responses to the one open-ended question were combined before applying content analysis to identify themes in the responses.

From the quantitative sample, six participants were identified for the qualitative study component, using purposive and convenience non-probability sampling techniques. The six participants were informed of their selection and three consented to participate. After the initial communication, the three participants and researcher met at a central location, where the purpose of the study and participant contribution was explained, before participants signed a letter of consent. A suitable date and time were then agreed to. The self-completion questionnaire was administered electronically.

Participants were seated away from each other to allow a confidential and focused space. The electronically administered questionnaire as opposed to the traditional face-to-face interview was used to save time through simultaneous participation and increased objectivity. Strategic seating provided participants with time to think, to process and respond to questions without any interference from other participants or researcher. Participants were allowed to clarify uncertainty in questions with the researcher. Once completed, participants printed their questionnaire, which the researcher verified for accurate completion. All responses were collated using a computer-aided Word Processing programme, before applying content analysis to sift through themes evident in participants' responses. To ensure a high standard of qualitative data, findings were redirected to participants to ensure that their analysed findings were an accurate representation of their responses.

The quantitative data collection instrument tested internal factors or variables inclusive of friends at college, student support services, orientation programmes, time of registration, academic staff, teaching quality and style, financial assistance and programme advice. The

external factors or variables tested were inclusive of intention after qualification, employment prospects, family and parent interaction, community support, career guidance, reason for enrolment at the TVET college, support structures and importance of friends outside of the college environment.

The tested factors were categorised according to Individual, Institutional and External factors as prescribed by Jensen (2011). The open-ended question in the quantitative instrument allowed participants an honest opportunity to express any other factors or clarify tested factors that had influenced their programme completion. Variables tested in the converging qualitative instrument focused on responses analysed in the quantitative study. The qualitative instrument consisted of general questions, such as reason for TVET enrolment, and college likes and dislikes, which stimulated the thoughts of the participants regarding the research topic. The instrument then moved to focused questions regarding friends, teachers and social interactions, with the intention of clarifying and enhancing the numerical data.

4.3 Research findings

4.3.1 Quantitative findings

The quantitative data and findings gathered are presented under the following rating-scale categories:

- Biographical factors.
- Individual factors.
- Institutional factors.
- Social and environmental factors.
- Open-ended question.

4.3.1.1 Biographical factors

The biographical factors analysed were gender, age, year of enrolment and financial aid. Across the two NC(V) programmes, 96% of participants were female. The gender variation is depicted in Figure 4.1 below. The retention of females during 2017 was especially higher in the Office Administration (OA) programme with an 85% female enrolment, when compared to the Finance, Economics and Accounting (FEA) programme. Figure 4.2 below illustrates the student enrolment per programme.

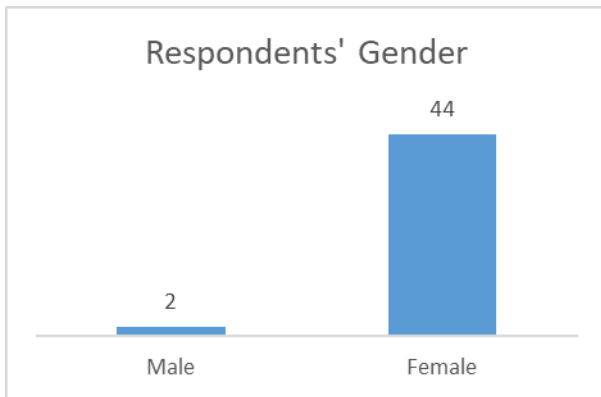


Figure 4.1: Respondents' gender

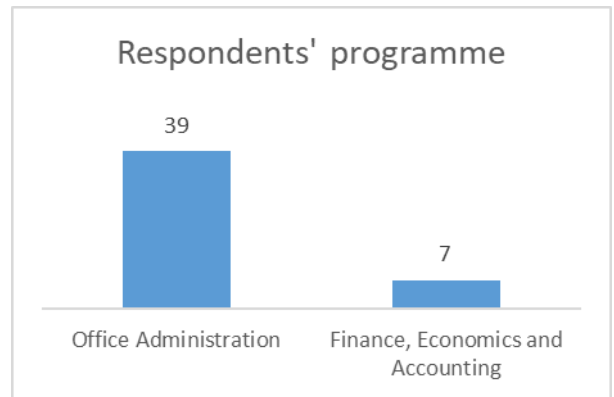


Figure 4.2: Respondents per programme

Participants' age categories shown in Figure 4.3 below indicate that 65% of participants are located in the age category 21 to 25, 29% are located in the 26 to 35 age category and only 6% of participants are located in the 18 to 20 age category. Findings indicated that 85% of participants progressed naturally over the 3-year programme duration after enrolling in 2015 in Level 2 as shown in Figure 4.4 below.

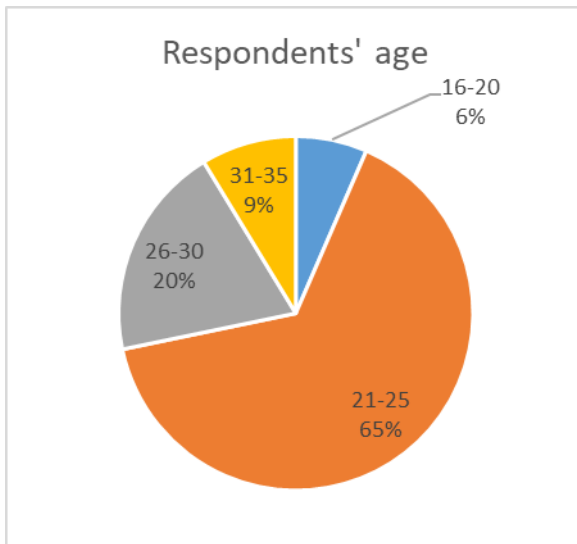


Figure 4.3: Respondents' age category

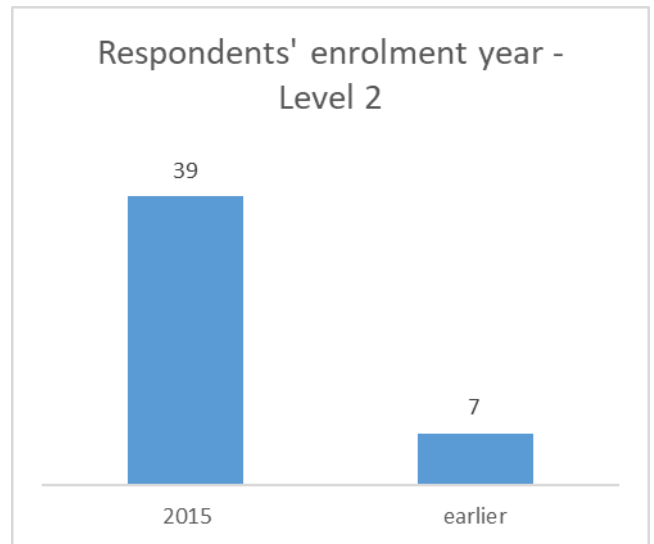


Figure 4.4: Respondents' enrolment year

Figure 4.5 below indicates that 80% of participants were recipients of state bursaries, which are regulated by the National Student Financial Aid Scheme (NSFAS) and administered by the TVET college. Bursary applications are processed according to academic but, more so,

socio-economic merit, taking into account employed persons per household, dependants and household annual income. Essentially, the TVET NSFAS bursary is aimed at financing students to provide greater access to post-school education for previously disadvantaged groups, with the attraction of NC(V).

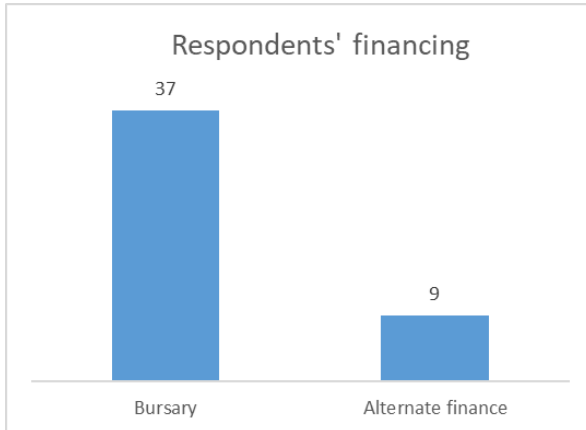


Figure 4.5: Respondents' financing

In summary, age groups indicated that the older group of students accounted for a higher percentage of completed participants, namely 94%, when compared to the younger age group accounting for only 6% of completed participants. The age group for traditional public school students at this NQF Level, namely Level 4, is generally 17 to 19 years old. Analysing this age category, 16 to 20 years at the investigated TVET college presented only 6% of participants who had completed their NC(V) programme. It can be concluded that programme completion is more prevalent among older students. Fryer (2014:23) argues that younger and more immature students adapt and cope differently when compared to older, more mature students. According to Keup (2007:13), younger students faced with college demands such as meeting various classroom demands and self-motivation to attend class, require additional support structures to improve or influence their academic performance and programme completion. According to Papier (2009:24), the NC(V) programme is faced with a challenge regarding age variation, as age influences initial reason for enrolment.

This study's findings regarding the reason for participants' enrolment at TVET colleges presented the following predominant reasons, amongst others:

- having failed Grade 12 (NQF Level 4 at a traditional public school);
- not able to rewrite Grade 12 failed subjects anymore;
- non-judgment of age and educational level; and
- acceptance into a common age group at a certain educational level.

The mature age of the participants can be attributed to findings based on their reason for attending a TVET college. The predominant reason indicates participants' failed attempt to achieve their NQF Level 4 qualification (Grade 12) at traditional public schools. After failed attempts, participants enrolled at the TVET college which placed them back at Level 2 (Grade 10), irrespective of traditional public school grades passed. The reasons for TVET enrolment provided an understanding of the varied age group that exists in the study population. Only 6% of the participants who had persisted to completion, were aged 18 to 20, meaning they had enrolled after completing Grade 9. This implies that marketing efforts targeting younger students, namely 16 years old with a Grade 9, is a forecaster for students who are at a higher risk of early departure, requiring what Keup (2007:13) describes as additional support structures.

A broadly noted reason suggested by Papier (2009:5) for poor academic performance was socio-economic conditions. Education structures are continually made more accessible to previously disadvantaged groups who had restricted access to or were denied education in South Africa in the past (South Africa, 2008:38). A key attraction or encouragement to enrol for the NC(V) programme to students from previously disadvantaged backgrounds is the NSFAS bursary opportunity with a possible travel allowance. The bursary has a greater initial focus on socio-economic conditions and entry to post-school education. The continued awarding of the student's bursary is then linked to student performance and, more so, to their attendance. It can be concluded that the bursary award stipulation based on attendance and academic performance influenced 85% of participants to naturally progress to Level 4 in 2017 since enrolling in 2015. Papier (2009:24) indicated that bursaries offered for the NC(V) programme was a motivation for enrolment. The factor of finance and its meaningful influence is discussed further in this chapter.

Biographical data regarding gender indicated that the NC(V) Business Studies programme's completion and retention were more prevalent among females than males. Secondary data related to the investigated cohort of 2015 to 2017 indicated a greater attraction and enrolment of females in the two Business Studies NC(V) programmes, especially the Office Administration programme. Yorke (1999) indicates that gender plays a vital role in how factors influence students' decision-making. A study conducted by Dodgson and Bolam (2002, cited in Ngcobo, 2009:26) found that females left college before completing their programme due to social environment dissatisfaction while males left college before completing their programme due to programme dissatisfaction. Gender can therefore be regarded as a forecaster and that the investigated NC(V) Business Studies programme-gender fit is more suited to females as opposed to males.

Papier (2009:5) notes poor student-programme fit, inappropriate student recruitment practices, amongst other factors, as influencing students' poor performance or early departure. This study advocates that student-programme fit is inclusive of gender, age and reason for enrolment. Martinez and Munday's (1998) study indicate that students not placed in the most appropriate programme were less satisfied, influencing their decision-making with regard to the likelihood of early college departure.

Based on the researcher's personal observations since 2013, all NC(V) programmes at the investigated college, including Business Studies, require entrants to complete a numeracy and literacy aptitude test known as a PACE⁶ test. The results of the PACE test are accompanied with a brief career guidance conversation with the student support officer. The career guidance discussion is not, however, guided by a standardised assessment or an NC(V) readiness or attitudinal assessment. Although students indicate their programme preference on the application form, namely Office Administration (OA) or Finance, Economics and Accounting (FEA) for various reasons (not focused on in this study), their programme allocation is eventually motivated by the PACE test results. For example, students' who indicate FEA on their application form, but obtaining a low numeracy score in the PACE test, is encouraged to rather select OA as a programme option. The reason for this is that the numeracy demand is too high for the FEA curriculum compared to the student's numeracy competence as indicated by the PACE test. This study argues that such reasoning does not serve as substantial motivation to suggest an alternative programme, as it does not establish appropriate student-programme fit of the alternative programme suggested.

Needham and Papier's (2011:37) study of poor performance and early departure, indicates that certain participants admitted that TVET was not their 'institution of first choice', but they would rather be studying than be at home, regardless of the programme not being aligned to their career goals. In conjunction with the PACE test, an appropriate NC(V) programme-specific attitudinal test should be conducted to determine a student's perception of NC(V) and the selected programme, being a forecaster of the likelihood of early departure. The attitudinal test should establish the student's perception of the NC(V) curriculum and acceptance of the delivery method, namely that it is a three-year full-time programme with seven subjects per level. The tests should also be conducted in conjunction with TVET college-specific vocational career path guidance stemming from the appropriate NC(V) programme suggested to the student. The results of a PACE test, programme attitudinal test and career path test, would provide a much higher certainty of student motivation for enrolment in a programme and their likelihood of early departure. This comprehensive pre-

⁶ A career centre founded in 1991 recognised in South Africa and internationally. The centre provides accredited career guidance training. The centre also offers career-related products and services for purchase by institutions, including educational products. <http://www.pacecareers.com/>.

admission evaluation would also allow the TVET college to identify student profiles as to the likelihood of programme completion.

After analysing and presenting the biographical category findings, the following section will analyse the rating-scale responses per category, namely individual, institutional, external. The analysis will determine which internal and external factors influenced participants' NC(V) programme completion. Participants were asked to rate various statements with either: strongly agree, agree, disagree or strongly disagree. Responses were collated, grouped and presented as a percentage.

4.3.1.2 Individual factors influencing programme completion

The 'individual' category presented statements related to the student/participant, encompassing variables such as transport, future studies, employment and career guidance, amongst others. Findings were expressed as a percentage of total responses, available as Annexure G, per statement per rating. Statements were developed and presented in a manner that appeared repetitive, however, they were done with the rationale of confirming, negating or correlating related statements in the same or alternative category. The following findings emerged after analysing the 24 statements covered under the 'individual' category.

a. TVET awareness prior to enrolment

Statements 9, 10 and 14 related to student knowledge of TVET and their vocation prior to enrolment.

Seventy percent agreed to statement 9 and 14, that is, having prior knowledge of TVET and what they would be studying, based on receiving good career guidance. Statement 10 found that 65% had enrolled during 2014 before their three-year programme commenced in 2015. It can be concluded that the early enrolment correlates with their sound prior knowledge of TVET and their vocation of interest. Enrolling prior to programme commencement can be linked to the mature age biographical variable and participants' reason for enrolment, mentioned earlier. Statement 24 indicated 89% of respondents had not passed Grade 12 at traditional public secondary school. Forty eight percent agreed with statement 15 about not being able to manage at traditional public secondary school. Statements 15 and 24 correlate with 94% of study participants being in the age category 21 to 30. This indicates that the older, more mature participants, having been at traditional public school after Grade 9, were more likely to complete their programme and were motivated by their intention after completing their NC(V) programme.

The most frequent reason provided by participants for TVET enrolment was their failed attempt at Grade 12 at traditional public schools. However, not all TVET enrolments have or need to have failed attempts at Grade 12, as the NC(V) programme accepts young learners immediately at age 16 with a Grade 9 qualification. Papier (2009:23) reported that poorly performing learners attending traditional public school were encouraged to enrol at TVET colleges after Grade 9. According to Needham and Papier (2011:37), this negative form of encouragement resulted in vocational education being viewed as second-chance programmes for students who could not make it at traditional public school. One of the factors responsible for full-time university student drop-out was an incompatible student-programme or student-institution fit (Yorke, Ozgha & Sukhnandan, cited in Ngcobo, 2009:25). This study argues that such thoughtless TVET awareness and negative encouragement promotes an initial negative reason for student enrolment and their perception of TVET.

The investigated TVET college, together with traditional public schools, should identify learners who envisage enrolling at TVET after Grade 9. Poorly performing students should be identified early during Grade 9. After identifying poorly performing learners, the reason for poor performance should be determined and whether TVET is indeed the alternative after Grade 9. If TVET is the correct institution after Grade 9, the appropriate programme or vocation that best suits the student should be established. This collaborative identification guides the learner with a clear prior knowledge of TVET, and reasons for enrolment, and assists TVET colleges to identify student risk profiles for programme completion. It can be concluded that such collaboration would assist TVET colleges to identify the reason for the enrolment of younger students as well as assist younger learners with the transition to TVET with additional support structures.

b. TVET acceptance and programme satisfaction

Statements 12 and 16 tested whether TVET was always an option and how participants experienced the NC(V) programme they had enrolled for.

Findings indicated that 57% disagreed that TVET was the institution they wanted to attend. However, 94% agreed that they were satisfied with the NC(V) programme they had enrolled in. The findings of statement 12 and 16 are aligned to the literature reviewed in Chapter Two regarding students' perception of TVET and their experience once enrolled. According to Needham and Papier (2011:37), certain participants agreed that TVET was not their 'institution of first choice', but that they would rather study than be at home, regardless of

being enrolled in a programme that was not aligned to their career goals. However, the students enrolled at a TVET college, had a positive perception after being exposed to and involved with the NC(V) programme (Needham & Papier, 2011:36). Needham and Papier's (2011) findings indicate that, regardless of a negative reason for enrolment and TVET not being the participants' first choice of institution, TVET guidance, student exposure to and understanding of the NC(V) programme, influenced their decision to persist until graduation and complete.

This study concludes that identifying the initial reason for enrolment at a TVET college determines their likelihood of programme completion. Students who enter or enrol with an unclear reason should be guided with additional support with regard to TVET and career paths within their vocation or programme. The additional support and guidance create career and academic goals to clarify their initial unclear reason for enrolment.

c. Student support and development

Statements 6, 20 and 23 collectively related to the individuals' soft skills and career goal ambition.

Eighty five percent of participants agreed with statement 20 that the identification of their developed soft skills, such as being organised and having good study habits, had influenced their programme completion. Ninety two percent positively agreed with statement 6, which assessed their determination and self-motivation for programme completion. Closely related to determination and self-motivation, was statement 23, which assessed participants' achievement of a career goal. Ninety six percent agreed that their programme completion intention had been influenced by the achievement and drive towards their career goals. According to Keup (2007:13), college students who face challenges such as meeting various classroom demands and self-motivation to attend class, especially younger students, require support structures to improve or influence their academic performance.

Support structures can range from career guidance to assistance in selecting the correct programme to corrective behaviour interventions and general life orientation development regarding responsibility and accountability. It can be concluded that all student enrolments should first complete TVET-specific career guidance and programme readiness tests, as mentioned earlier. Greater emphasis should be placed on younger students requiring corrective behaviour interventions to first have an understanding of what they have enrolled for and the programme expectations instilled, as well as having a career path after graduation. This type of support should continuously be followed up on to ensure that high-

risk students are taking responsibility and are being accountable for their studies, based on their established career and academic goals. Student development and continuous support should focus on aspects related to soft skills training to allow students to link their soft skills to academic and career goals.

d. Student intention after NC(V) programme completion

Statement 1 and 2 determined what participants' intentions were after completing their NC(V) programme.

Seventy eight percent of participants agreed that they needed to complete their programme in order to further their studies in higher education. Progressing to a university or university of technology and not remaining in TVET was confirmed with statement 2 as 59% of participants disagreed with furthering their studies within the TVET sector after completing their current programme. Acknowledging that entry to university or a university of technology was not guaranteed due to individual institutions' entry requirements, students' intentions were motivated by progression to these institutions none-the-less. This indicates that the TVET college NC(V) programme was an alternative path to achieving an NQF Level 4 qualification and not at a traditional public secondary school, to progress to higher institutions of learning.

Despite the 78% of participants intending to further their studies at other higher education institutions after programme completion, 91% of respondents agreed with statement four, stating that their intention after completing their programme had been motivated by the idea of prospective employment within their vocation. This study argues that the prospect of employment to earn money is a greater motivation than further study progression. It can therefore be concluded that a dual-factor influence exists for completing their programme, one being dominant over the other. Completing the NC(V) programme would allow possible entry into other higher education institutions, but, more importantly, it would allow entry to the labour market. Tested within the 'social and environmental' category under statement 15, 91% of participants positively acknowledged requiring their qualification to apply for employment after graduation. Statement 26, covered under the 'institutional' category found that 83% of participants agreed that TVET college assistance in finding employment after graduation had influenced their decision to complete their programme.

According to Needham and Papier (2011:36), South African TVET students perceived their labour market entry and job prospects as easier and greater due to specific vocational practical work-place learning and experience, contrary to the view held by secondary school

learners of TVET being a 'second-choice education, resulting in low paying jobs with no career prospect'.

According to this study, the intention of the NC(V) programme to develop skilled students that are job ready for the labour market aligns with the students' intention of finding employment after programme completion. However, this study argues that the student intention and programme intention are not clearly aligned when early departure is at its peak, namely at Level 2. Collectively identifying student motivation for enrolling at TVET colleges as well as their intention after programme completion, namely employment or further studies, are key aspects that need to be cultivated and supported from the time of enrolment to the time of completion. TVET colleges should establish academic and career goals at the time of student enrolment and develop the achievement of these goals during the duration of their study period.

After analysing the factors contained within the 'individual' category, the following section presents findings analysed under the 'institution' category.

4.3.1.3 Institutional factors influencing programme completion

The 'institutional' category presented statements related to the investigated TVET college at which participants were enrolled. The institution category encompassed variables such as teachers, curriculum, academic support and general institutional experience, amongst others. Findings are expressed as a percentage of total responses, available as Annexure H, per statement, per rating. Statements were developed and presented in a manner that appeared repetitive. However, these were done under the rationale of confirming, negating or correlating related statements in the same or alternative category. The following findings emerged after analysing the 37 statements covered under the 'institutional' category.

a. Teachers and academic support

Statements 1 to 5 were related to the teachers, with regard to their supportive nature, interaction outside of the classroom, teaching style, lesson delivery and assistance with understanding the work.

Statements 1 and 5 both found a 94% agreed response to teachers being supportive and assisting students understand their work. The supportive student-teacher interaction can be seen as only existing within the classroom as 48% of participants agreed with statement 2, indicating that their teachers do not interact with them outside the classroom. Eighty five

percent agreed that teachers had a good teaching style and 95% positively agreed that lessons were fun and understandable. Martinez and Munday's (1998) study indicated that students who were less satisfied with the teaching quality influenced their decision-making process towards their likelihood of early college departure. Maharaj's (2008:27) study attributed the poor retention and completion findings mainly to an absence of social interaction within and outside the classroom, over and above the formal interaction between lecturer-student. Ngcobo's (2009:72) study identified satisfaction with teaching and learning quality, among others, as the reason for participants completing their programme.

From these findings, it can be concluded that the teachers, together with their communication style and lesson presentation, positively influenced the participants toward programme completion. The manner in which lessons were presented made the programme more acceptable for participants to continue. It can be concluded that the pedagogy and soft skills employed by teachers have a far-reaching influence in conjunction with the curriculum and programme content. This study argues that teacher support, performance and well-being is partially the responsibility of the institution and it is an internal factor of influence within TVET college control, discussed in detail later in this chapter.

b. Financial assistance

Statements 9, 21, 28 and 37 related to financial assistance and policies guiding the awarding of the NSFAS financial aid.

Biographical data indicated that 85% of participants received state financial aid and were aware that their attendance and programme completion influenced whether their financial aid would be awarded or not. Similarly, 70% of participants receiving a transport allowance, who agreed that their continued attendance influenced their monthly receipt of a transport allowance or stipend. Statement 12, covered under the 'social and environmental' category, confirms the need for financial aid, as 94% of respondents disagree with their parents being financially able to support their studies. Financial assistance was evidently a source of motivation toward programme completion.

However, this study argues that financial assistance is not a guarantee of programme completion, if a misalignment exists with the initial reason for enrolment, intention after programme completion and appropriate student-programme fit. Certain participants in Papier's research (2009:24), who had performed poorly and departed early, indicated that they had enrolled at a TVET college because the NC(V) programme was offering financial aid and they did not have money to further their studies. Participants further indicated that

TVET did not have the course they wanted (doctor and architect), and that NC(V) was 'chosen for them'. This indicates that the possibility of financial assistance is a greater motivator for TVET enrolment, regardless of an appropriate student-programme selection and fit.

The researcher's personal observation during the registration period since 2014 concurred that financial assistance precedes appropriate student-programme fit. Often students would approach alternative departments based on bursary availability and not programme fit or interest. This study argues that greater efforts and measures should be made by the state and TVET colleges to ensure correct student-institution and student-programme fit before considering financial assistance. Initially, financial aid is easily and readily available for NC(V) programmes, mainly on the merit of socio-economic conditions, and previous disadvantage, to make post-school education more accessible.

This study concludes that financial aid, which is often applied for and awarded at the expense of student-programme fit, can lead to the likelihood of early programme departure, if the reason for TVET enrolment, other than financial assistance, is not established. Although Adamson and McAleavy, (2000:537) indicate that external support factors including finance, amongst others, are a main factor influencing student persistence decision, Martinez and Munday (1998) found that one of the factors that influenced students' decision in the likelihood of early college departure was having their fees waived or reduced. This study concurs with Martinez and Munday (1998) by concluding that fully financed programmes remove a sense of responsibility and accountability for programme completion, if financial assistance is a greater motivator than the actual reason for TVET enrolment regarding academic and career goals.

This study argues that the reason for enrolment together with a comprehensive pre-admission evaluation (PACE, programme attitudinal and career path test) mentioned earlier, is a greater indicator and forecaster for the likelihood of programme completion, than the successful application for and awarding of financial aid.

c. Programme orientation and campus environment

Statement 22 indicated that 89% of respondents had attended their orientation programme after registering for their programme in 2015 for Level 2. Eighty five percent and 87% of participants agreed that they felt safe at the college and that the environment suited them, as indicated by statements 29 and 35 respectively.

Related to the college environment, statement 16, under the 'social and environmental' category, 76% of participants agreed that students on campus were friendly. Statements 15 and 34 indicated a 67% response for participants being aware of additional TVET college activities such as sport, facilitated by the Student Support Services (SSS). Although being aware of the SSS department and their offerings, statement 36 indicated that 62% of participants denied making use of any SSS. Respondents to Lawrence's (2016:89) study indicated not having enough exposure to extracurricular activities and being exposed to it would motivate students. This study argues that students are either not aware of all services offered, do not have enough time to utilise the services or SSS services are not always applicable to all students.

Most institutions actively engage with the students they recruit in an attempt to better retain them, through increased awareness and information session on academic and programme expectations (Cook & Rushton, 2009:12). Active and meaningful efforts by institutions to introduce students to college culture and environment, influence student perception to accept or reject the environment in which they are required to integrate themselves for the duration of their programme.

Apart from creating awareness around non-curricular activities, for example sport, academic and personal development initiatives should be promoted in order to support students, specifically during the transition phase when entering a TVET college environment. Although not the focus of this study, Fryer (2014:66) argues that students are only counselled by the SSS on socio-economic aspects and not academic or programme support. This study argues that the SSS should operate with teachers to identify, not only students with socio-economic needs, but also students with the likelihood of early departure due to poor performance or college integration. Supporting a student holistically, namely socio-economically, personally and academically, would instil a sense of growth and reform in their college integration, career path and academic goals.

After analysing the factors contained within the 'institutional' category, the following section presents findings analysed under the 'social and environmental' category.

4.3.1.4 Social and environmental

The social and environmental category presented statements related to the external factors influencing participants' programme completion. This category included variables such as family, friends, parents and social groups, amongst others. Findings are expressed as a percentage of total responses, available as Annexure I, per statement, per rating.

Statements were developed and presented in a manner that appeared repetitive. However, they were done with the rationale of confirming, negating or correlating related statements in the same or alternative category. The following findings emerged after analysing the 24 statements covered under the 'social and environmental' category.

a. Social interaction with friends

Statements 2, 10, 11, 13 and 21 tested the social interaction and relationship with friends on campus.

Fifty nine percent of participants disagreed with having many friends in class as well as on campus in other programmes. Sixty seven percent agreed with receiving support and 77% agreed with receiving motivation from their friends, and 77% of respondents agreed with looking forward to seeing their friends at campus. Another social interaction tested was the purpose of friends in academic achievement. Fifty four percent of participants agreed with statement 31 covered under the 'institutional' category, as being part of a study group. Seventy two percent of participants agreed with statement 8, preferring to study alone, despite being part of a study group and receiving support and motivation from friends. This was confirmed by statement 9 and 19 as 63% of respondents disagreed with studying with friends and 91% agreed with studying better alone. These findings correlate with statement 20 where 68% of participants agreed with having more time at home to focus on their studies.

According to Adamson and McAleavy (2000:537), friends are among the external factors that support or influence student persistence. However, this study concludes that the interaction and relationships with friends could imply a change in social dynamics, moving from a social to a supportive or academic need. According to a South African study by Pather (2015:256), participants had strategic social interactions with peers in order to achieve their academic goal rather than to meet a social need. This would result in needing fewer friends but having an enhanced, specific relationship or goal for social interaction with friends. This study concludes that the participants' social need for friends changed over the duration of the study. The change could emerge from former friends or relations no longer existing due to early departure or that the social interaction and relationship with friends had moved from a social need to a more goal-orientated need.

This study argues that the need for social interaction, support and motivation from friends emerges from educational institution requirements, namely classroom interaction and recess time built into a programme. However, a greater and strategic need that influences

programme completion is social interaction emerging from the individual students' academic goal achievement need.

b. Social interaction with family and parents

A respective 94% and 85% of respondents agreed with Statement 3 and 4 as having being motivated and influenced by parent and family support structures. Statement 5 received a 59% disagreement response to receiving support from their immediate community. Statement 6 indicated 85% of participants agreeing that their parents had influenced and supported their programme completion, despite 83% agreeing to statement 24 that their family and parents had not completed any post-school education themselves.

According to a South Africa study by Ngcobo (2009:72), participants had completed their programme due to support received from family. Bean's SAM included six environmental variables, one of which is family approval of the educational institution (Bean, 1981:13). However, statement 7 found that 82% of participants had agreed about choosing their own institution and study vocation path without any influence from their parents. This study concludes that an independent decision-making process occurs when selecting an institution or programme, but the support from parents and family towards that decision plays an equally vital role to influence programme completion.

Two of the three stages of Tinto's (1993:94) SIM, namely separation and incorporation discussed in Chapter Two, presents a perceived conflict in relation to this study's findings regarding parent or family influence. According to Tinto, separation requires individuals to disconnect from various existing aspects such as family, community and place of residence. Tinto argues that separation is more challenging for individuals who hail from disadvantaged backgrounds and whose family or parents never attended college (Tinto, 1993:96). According to Lawrence's (2016) study of NC(V) engineering students in South Africa, persistence was shown by students from disadvantaged backgrounds who were encouraged by societal and family pride in achieving further education where parents had not. Similarly, findings of this study concur as 83% of completing participants agreed that their family and parents had not completed any post-school education. In the absence of traditional college rituals and ceremonies, most often not offered by institutions, Tinto's stage of Incorporation requires individuals to incorporate themselves into the college culture with the help of external support from groups such as peers, friends and family.

A conflicting perception emerges from students being required to disconnect themselves from existing external structures during the separation stage, only to reconnect at a later

stage, namely incorporation, in the absence of traditional college rituals and ceremonies. This perceived conflict led to criticism from Tierney (2000). Tierney (2000:8) argues that students should not leave (separate or disconnect) their own culture and try 'fitting in' with college culture, but rather exist in their own culture. Tierney advocates that existing relationships, such as with students and parents, should remain and how educational institutions approach these interactions would facilitate student success, completion or early departure.

Eighty two per cent of participants agreed that choosing their own study programme would imply that an independent choice had been made at the time of enrolment. This study concludes that independent choice could emerge from sound advice, a lack/absence of parent involvement or the maturity of students able to make a decision independent of influence. However, the persistence and completion of programme decision is supported and influenced by a vital external factor, namely parents. It can be concluded that students from disadvantaged backgrounds, whose parents had not entered or completed post-school education, did not present a challenge or negative influence on participants' study programme selection or completion.

This study concurs in part with the critique presented by Tierney (2000:8), that a separation should not exist between student and parent, but rather that TVET colleges should establish an understanding of the existing relationship to enhance programme completion. This understanding extends a responsibility to educational institutions to engage with the external factors of influence, namely parent, family or community, in order to better promote programme completion. An understanding, cohesion and balance should be established between student, educational institution and external significant others, namely parents, that influence programme completion.

4.3.1.5 Open-ended question

After rating various statements and correlating variables, participants were asked one focused open-ended question as part of the quantitative instrument: 'List and explain your top five reasons for staying at college and completing your NC(V) programme'. This open-ended question was included to accommodate a personal reflection. The personal reflection was intended to clarify a collective response to particular statements in any of the three categories as well as provide an opportunity for participants to express any other variable possibly omitted in the quantitative instrument. Allowing a degree of subjectivity provided insight into the collective quantitative response of all 46 participants. After collating and

identifying a theme among responses from all 46 participants, the following frequent reasons emerged as encouraging and influencing participants' programme completion:

- Lecturers' encouragement, support and understanding;
- Need for a skilled qualification to enter the job market with a greater practical component;
- TVET college assistance with job placement;
- Stepping stone towards a higher academic goal (further studies);
- Dropping out due to unsuccessful bursary application, but enrolled the following year upon successful re-application;
- Encouragement from friends to continue;
- Need for employment to support children and family;
- Encouragement from parent or guardians and pride in completion;
- Fear of embarrassment of failure as a first graduate in the family;
- Making parents and community proud, change in family situation and being a role model;
- Interaction and socialisation with people outside of their own community;
- Bursary awarded in accordance with attendance policy;
- Preference for college environment and culture as opposed to traditional public secondary school; and
- Referral and support from past students who had graduated.

After analysing the quantitative data gathered from rating various statements and correlating related variables, a converging qualitative study component was developed, administered and analysed. The correlation of variables and frequent responses to the open-ended question mentioned above assisted in the focused development of qualitative questions, in order to provide an in-depth account to support numerical data. The following section details the responses gathered from the three participants included in the qualitative study component.

4.3.2 Qualitative findings

After analysing all rating-scale instruments, a qualitative sample was gathered through purposive sampling, identifying six participants with three consenting to take part in the qualitative component. Adhering to participant anonymity, each participant received a code. The three participants, referred to as A25, B6 and B24, met at an agreed date and time at a computer lab venue. Participants were aware of the researcher presence to clarify any questions. The computer-based self-completion instrument started with seven open or broad questions to generate thought around the topic, before dealing with 11 focussed or funnelled questions based on the analysed quantitative findings.

Sub-sections a to d collectively assessed the seven broad questions, testing variables related to college likes, college dislikes, reason for enrolment at TVET and reason for programme completion. Sub-sections e to j assessed the 11 funnelled questions specifically related to variables in direct TVET college control. Variables included, amongst others, teachers, support structures, family, friends and overall motivation.

a. Participants' likes and dislikes of the college

The first two questions enquired what participants enjoyed most and least about their college.

Participant A25 enjoyed the practical aspects of the programme linked to theoretical components, but disliked the limited time and access to computer resources to complete the practical tasks. Participant A25 said:

There are no dedicated computer labs, therefore I needed to 'bunk' (abscond from) certain classes to complete my assignments due to lack of resources at home.

Similarly, participant B6 enjoyed the practical components related to workplace exposure but enjoyed the student protests that disrupted class time and examinations the least.

Participant B24 said:

I enjoy the friendly and 'motherly' caring nature of teachers, but least enjoy certain teachers' unpredictable 'mood swings' and emotions which dampened my college experience.

The response of participant A25 correlates with rating-scale statement 30 under the 'institution' category, where 94% agreed about having access to resources at college, for example a library and computer. However, absconding from class time to gain access to the resources indicates destructive student behaviour. This study concludes that factors such as NC(V) curriculum and teachers presenting them should complement each other to holistically influence programme enjoyment and completion. Constructive access to college resources, such as computers, should be afforded to students by providing a dedicated computer lab space or structured class timetables to accommodate dedicated sessions to complete practical tasks requiring computer use.

Question eight enquired how participants perceived the college culture. All three participants indicated that the culture was not in conflict with their character. Participant B24 indicated:

The college culture was not an influence, as I know what my end academic goal is and how to achieve it.

b. Reason for enrolment at TVET

Questions three and four enquired why participants enrolled at TVET and not public secondary school and why they had completed their NC(V) programme.

Participant A25 was an older respondent who had performed poorly at traditional public school during 2005 and had departed before qualifying with an NQF Level 4. The early departure led to her seeking employment and working on a contract basis. Participant A25 indicated:

I require an NQF Level 4 qualification to obtain a permanent position, being my reason for enrolment.

This indicated that participant A25's reason for selecting her programme was linked to her work experience and her programme completion was linked to her employment progression requirement.

Participant B6 had enrolled at TVET due to the beneficial practical experience and industry-specific work-integrated learning that the labour market required. Participant B6 stated that:

The practical experience I gain is a competitive edge over students attending traditional public secondary school.

Participant B24 indicated:

I did not cope academically at traditional public secondary school and gave up after failing two subjects in Grade 12 (Level 4 final year). Enrolling at TVET provided me with an alternative route to progress to higher education without the judgment of age in relation to qualification.

All three participants indicated that their initial failure at traditional public school motivated their enrolment at a TVET college. Their motivation for completing their programme was the

perception of a higher employment prospect and improved labour market entry with an alternative NQF Level 4 qualification with practical experience. This indicates that a clear and direct reason for enrolment and completing their programme existed prior to enrolment. Participants' reason for enrolment correlates with the 94% age category being older and more mature than a student entering directly after Grade 9, which only accounted for 6% of this study's participants.

c. Reason for participants' friends dropping out

Question six enquired what participants thought the reason was for their friends not completing their programme.

Participant A25 indicated:

Some failed a subject or level and others had personal challenges at home that prevented them from studying full time.

Participant B6 stated that:

Many of my friends who left had financial issues and had challenges in receiving a bursary. They became tired of travelling to and from college with personal money or by walking to college and gave up, rather seeking employment.

Participant B24 indicated:

My friends were not motivated by what they were studying, thinking it was an easier option to achieve their NQF Level 4 qualification. When they encountered the quality and type of workload presented by the NC(V) programme they realised that their expectations were not aligned to reality.

Participant B6's response relates to the NSFAS financial aid. Certain successful bursary applicants are awarded a transport allowance regardless of their mode of transport. The allowance is based on a guideline related to distance from home to college. If the distance to college does not meet certain criteria, namely 10km, no travel allowance is provided. There are three main modes of transportation taken by students at the investigated TVET college, namely minibus (commonly known as a taxi), public or private, public bus and public train, each with varied commuter fees. Depending on the student's home location, alternative modes of transport are used, as there is often not one direct mode of transport from home to

college. The transport allowance is paid directly into the student's bank accounts on a monthly basis, creating a visible and tangible disparity between students who received the allowance depending on their respective transport mode and those who did not. This study argues that a disparity of this nature defeats the purpose and intention of providing a means of transportation to students from previously disadvantaged backgrounds as part of financial assistance.

This study argues that despite NSFAS financing tuition fees, the awarding of a transportation allowance, namely direct payment into a bank account, needs revision. A credit voucher system justified by mode of transport cost could rather be used. Alternatively, transportation can be regulated through a state or TVET college-provided transportation service. This study argues that financial gain through a transport allowance is a greater motivator than an actual qualification. This argument is supported by participant B6, indicating that her friends' early departure had been motivated by financial necessity rather than obtaining a qualification as they had chosen to seek employment and not an alternative college closer to home that would save on transport cost. Participant B24 indicated that her friends did not fit the programme nor were they NC(V)-curriculum ready. This finding correlates with earlier arguments of enrolments not adequately being screened and placed in an inappropriate programme based on a literacy and numeracy PACE test result. It also indicates that the initial reason for enrolment was not clear or committed, but rather based on a perception that NC(V) was an easier option to achieve their NQF Level 4 qualification.

d. Institutional factors influencing programme completion

Questions five and seven enquired if participants had contemplated early departure during their three-year programme period and what specific influences on campus had made them stay.

Participant A25 indicated:

There was a time I intended exiting my programme before completion due to family circumstances, but I know how difficult it is finding employment with a part-qualification and decided to complete my educational opportunity to change my personal and family circumstance. The specific factor of influence on campus was my bursary allocated to my studies in accordance to my attendance.

Participant B6 never intended exiting before completing her programme. Participant B6 indicated:

My programme completion was based on family motivation and me aspiring to family members who had completed their studies. The specific factor of influence on campus was the friendly academic staff and the manner in which they transferred information, making the programme more acceptable. The teaching style helped me understand the curriculum content in relation to real world context. My lecturers constantly reminded me what is expected of me, giving me the desire to stay. The campus environment and location is safe, making my decision easier to complete my studies.

Participant B24 stated that she also had not intended to exit before qualifying based on the academic goal of future studies. Participant B24 indicated that:

Having fewer friends meant less peer pressure to negatively influence my decision or academic goals. The department and campus location allows for quiet and focused study areas, and teachers are friendly and make us aware of the world out there and our expectations versus reality.

The predominant response gathered from the three participants was that teachers were influential internal factors in relation to their disposition, content delivery and assisting students to realise and align programme expectation to labour market reality.

After generating thought around the research topic, the self-completion questionnaire focused on 11 funnelled or focused questions based specifically on institutional factors identified with high ratings from the quantitative component. The rationale for only funnelling institutional-related factors was to provide recommendations regarding factors in the TVET college's direct control or influence.

e. Role and influence of teachers

The first question related to the role and influence of teachers to participant decision of programme completion. All three participants stated that the role of their educators had been positive. They agreed that certain teachers encouraged them, motivated them daily, listened and provided support, reminding them of the importance of education and the expectation of the labour market. Participant B6 indicated that:

Teachers told us they were glad to teach us and went the extra mile outside of curriculum and classroom requirements.

These responses clarified quantitative data that the role and influence of teachers were beyond the NC(V) curriculum and classroom requirements. This study concludes that participants' acceptance and completion of their programme was influenced and supported by dedicated teachers taking a genuine interest in students and their academic achievement.

f. Campus and off-campus support structures

Question two and three enquired about the support structures used by participants on and off campus which assisted their decision to complete their programme. Question four enquired where participants would generally seek academic or personal support, whether internal or external.

Participant A25 indicated:

I do not make use of any support structures available on campus. My friends in my community influence me positively. I generally seek support from my parish priest (religious community leader), who gives me sound encouragement and advice, reminding me to keep the faith through challenging times.

Participant B6 stated:

I only use academic support and extra classes for the subjects that offer them. My motivation off campus comes from my parents and healthy academic achievement competition with my sister, studying a different course at a different TVET college. I would generally seek assistance from one specific subject teacher who has always played an encouraging and supportive role since 2015 in Level 2 for myself and my friends.

Participant B24 indicated that:

College open days are a great reminder for existing students. Access to existing students helps remind us of what is expected out there specifically in our field of study, and job role requirements after graduation. For academic and personal support, I generally have specific teachers who have assisted me since enrolment in 2015 and continue to assist me. If they do not know, they will ensure to refer or assist me obtain an answer or get the needed support.

This study concludes that none of the respondents made use of the SSS to support their programme completion, but rather additional services offered by certain teachers and subjects. This implies either that the investigated TVET college's SSS department is not academically appealing to students or that teachers are not aligned with the SSS department to assist with academic support. This study argues that a greater combined effort be developed between SSS and teachers to provide holistic student support. SSS is not as present in classrooms nor involved with academic delivery as teachers are, nor are teachers the primary source of confidence regarding student socio-economic or personal issues, as is SSS. Therefore, a collaboration should be formed between teachers and the SSS department to fully understand and support students with personal support, career and academic goal achievement.

All respondents indicated that their family's support plays a huge role in their success. It can be concluded that parents and external support structures, namely significant others, should be actively engaged by TVET colleges and involved in student progress and college life. By creating a connection between students, their significant others and the institution, the investigated TVET college could actively form a solid foundation for an increased likelihood of programme support and completion.

The response obtained from participants about general support and influence received, correlates with question one, indicating the vital role teachers play as an internal factor of influence toward programme completion. This study argues that there is a much greater and initial influence from teachers than external support structures, such as parents.

g. Friends and the achievement of academic goals

The fifth question enquired if participants preferred to study alone or in a group, and why. All participants agreed with their preference of studying alone, as they felt they were more productive, more focused and could achieve their academic goals and results better.

Participants B24 indicated that:

I can interpret and understand the work better without the confusion and complication of study groups.

Testing this variable correlates with an earlier argument regarding the change in social dynamics with friends and specific relationships formed, moving from a social to an academically focused relationship.

Question six used a rating-scale to enquire how important friends were for motivating study. The rating-scale ranked 1 as LEAST and 10 as VERY IMPORTANT.

Participant A25 ranked friends as 10 indicating that:

I can always approach them to show me how to complete a task or explain it to me.

Participant B6 ranked friends as 1 indicating that:

They are a huge distraction in my life. Most times they are negative and not motivational towards my academic goals.

Participant B24 ranked friends as 3 indicating that:

They create distractions and not all of them contribute academically (group work), so it is frustrating to explain everything. They are of no benefit in class time either.

The response from questions five and six indicated that social interaction or the need for friends are not academically driven and only exist outside of classroom settings and non-academic activities. This study concludes that social interaction is dynamic and moves from a social need or requirement (classroom interaction) to an academically driven or motivated interaction. TVET colleges together with the SSS department should establish and develop students' academic and career goals in order to encourage a greater social interaction with friends based on the achievement of their academic goals.

h. Financial assistance

The seventh question enquired about the absence of monetary reinforcement, namely receiving a bursary based on attendance and performance. Participants were asked 'if your studies were free of charge, and attendance was not linked to financial assistance, what would your motivation be?'

Both participant A25 and B6 indicated that:

My motivation would be my personal ambition in life to succeed and achieving my career goals.

Participant B24 stated that working on a computer daily was her motivation, which could imply the practical nature of the programme requirement.

Testing this variable concludes that cultivating and developing academic and career goals should be encouraged more strongly than attendance linked to financial assistance. The cultivation and development of academic and career goals should be measured and monitored in a similar manner as financial assistance being based on attendance. By cultivating academic and career goals, students would have an intrinsic desire to achieve and complete their programme, supported by accountability for their studies and not only influenced by an external need for continued financial assistance.

i. Variables rated in order of importance

Question nine required participants to rank eight variables that influenced their programme completion, namely a bursary, teaching quality, friendly teachers, family support, friends, college support, job certainty and social interaction. Analysing all responses, this study selected the four highest-ranked elements that influenced participants' decision to stay and complete their programme, in order of importance. They were:

- Teaching quality.
- Friendly teachers.
- Social interaction.
- Friends.

Stemming from the response to question nine, question ten required participants to explain their reason for ranking their first variable and how that influenced them for the duration of their programme.

Participant A25 indicated:

Teaching quality helps one understand the work better. The work is transferred in a way I can relate and it is relevant to daily activities, as opposed to examples which are not relevant to us as youth.

Participant B6 indicated:

Teaching quality, as each lesson comes with a positive message, making it memorable and easier to understand, and assist you if you do not understand first time.

Participant B24 indicated:

Friendly teachers, because when someone is friendly you feel accepted and welcomed, and you will return for that friendliness. Friendly people come across as knowing their job and would assist you at any time and not get frustrated, and that made me return and enjoy my programme completion.

The response to question nine and ten correlates with the responses received for questions 1 and 4, indicating the role and vital influence teachers played in programme completion. These findings provide in-depth meaning and correspond with the numerical data gathered under the 'institutional' category with regard to the influence of teachers.

j. NC(V) programme improvement

To gain valuable student perspectives on TVET college or NC(V) programme improvement, question 11 enquired about what participants thought could improve college support structures to encourage programme completion.

Participant A25 indicated that nothing should change. This participant was very goal driven and focused, indicating a preference to studying in isolation and ranking the need for friends as least important. Participant A25 had been employed since 2005 after exiting traditional public secondary school, making her much older and more mature than her peers. Her reason for TVET enrolment in 2015 was to obtain an NQF Level 4 to get a permanent job. It can be concluded that achieving her end result was more important than social interaction, academic integration or considering any college structural improvement.

Participant B6 indicated:

The college should give structured additional classes to struggling students for specific subjects. It should also provide students with job experiences related to their field of study, namely job shadowing from Level 2 already and increase experience hours or exposure leading up to Level 4. This build-up would better equip students when the world of work arrives after graduation.

Participant B24 stated that:

Training seminars and events received at Level 4 should be included at Level 2 and Level 3 as well, for example the dress code, role play, job shadowing and mainly Work-Based Exposure (WBE). If you only do it at Level 4 it serves as 'once-off' which can be forgotten, but if introduced at Level 2 and reinforced through to Level 4 it increases familiarity and reduces pressure in Level 4. This gradual reinforcement would provide a good working practice of industry requirements, especially the soft skills.

Participant B6 and B24 provided similar thoughts on NC(V) programme implementation improvement. This study concludes that as much as external stakeholder input, namely state departments and labour market, is vital in developing the NC(V) curriculum, the input of students should also be considered. Student input provides a lens through which programme implementation improvements can be made to ensure programme enjoyment and completion.

4.4 Summary of findings

Data collected from the quantitative and qualitative research components assisted this study to better understand and explore the research topic. Quantitative findings presented numerical data gathered from 46 participants. The quantitative data collection instrument provided statements or variables that tested the level of influence toward students' programme completion. The instrument also included the collection of biographical data. Participants were instructed to rate statements according to strongly agree / agree / disagree / strongly disagree. The statements were listed under three categories, namely individual, institutional and external.

Biographical data indicated that 94% of participants were aged 21 to 30, 96% were female and 85% had progressed naturally over three years since enrolment in 2015.

Secondary data records from the investigated college for the researched cohort 2015 to 2017, indicated that the retention and progression rate from 2015 (Level 2) to 2016 (Level 3) was 52% and the progression rate from 2016 (Level 3) to 2017 (Level 4) was 88% across the two NC(V) Business Studies programmes. The retention rate from the first to the second year concurs with the Council of Higher Education (CHE, 2016:77), which indicated the likelihood of early departure occurring during or at the end of the first year. From the 99 Level 4 enrolments in 2017, only 64% had qualified for the national examination in November

2017. The remaining 36 Level 4 enrolments of 2017 had either departed early or had persisted but had not met national examination entry requirements. Therefore, from the 214 enrolments in Level 2 during 2015, only 99 had persisted towards programme completion in 2017, indicating a 46% retention rate from Level 2 in 2015 to the final year to Level 4 in 2017.

The findings indicated that 70% of participants had prior knowledge of TVET and knew what they wanted to study before enrolment. Eighty two percent of participants had chosen their own study programme without any influence from parents or friends. This indicated the independent decision-making process of participants in conjunction with prior knowledge of TVET and their field of study, which had influenced their programme-completion decision. Although 57% indicated that TVET was not their initial institution of choice, 94% stated that they were satisfied with their programme choice.

After completing their programme, 78% of participants intended progressing to other higher education institutions to further their studies. However, responding to another statement, 91% intended completing their programme with prospective employment as their inspiration. This finding revealed that participants were influenced by a dual factor, one being more dominant than the other, as completing their programme would allow either further study or the labour market. This finding concurs with research conducted by Akoojee (2007, cited in Harris, 2014:43) stating that due to socio-economic conditions, the possibility of employment was a motivator for participants' pursuit of training and employment and the primary goal after TVET was to earn money.

The college requires a degree of social interaction and group work, but 91% of participants indicated their preference to study alone as they felt more productive and focused. Friends were regarded as a distraction and often a negative influence on the achievement of their academic goals. When asked to rank elements in order of importance, the highest ranked elements were teaching quality, friendly teachers, social interaction and then friends. This indicated the hierarchical need and purpose of social interaction with friends and how much of an influence friends had on programme completion.

Based on qualitative findings, participants indicated that teaching quality and style assisted with the understanding of the work. Friendly teachers made college more 'acceptable and welcoming', hence influencing the participants' decision to return to college and complete the programme. Ninety four percent of participants agreed that teachers were supportive and understanding, playing a vital role in their intention to complete their programme. The manner in which teachers conducted themselves, presented the lessons and interacted with participants, apart from the required curriculum, were the main factors influencing their

decision to complete the programme. The level of influence emerged from the correlation between teachers' dedication and a genuine interest in their learners as well as their academic achievement. Respondents to Lawrence's (2016:90) study, who had completed their NC(V) programme, indicated their appreciation for logical explanations provided by the teacher. They acknowledged that the positive communication between academic staff and students and the innovative lesson style certain teachers had in presenting lessons, had a positive influence on them. This study argues that a teacher plays a pivotal role in either creating or damaging a student's perception of the experience, as well as his or her retention and programme-completion decision. The teacher spends most of the day with students, thus building a relationship and connection, fostering a sense of belonging.

Valuable student input was gained with regard to the college's improvement of structures to encourage programme completion. Participants stated that structured extra classes would aid struggling students. Participants shared the view that practical implementation of Level 4 needed to be introduced at Level 2 already, such as WBE, and developed through to Level 4. Lawrence's (2016) study focused on the Civil Engineering NC(V) programme but a similar response emerged from respondents who agreed to wanting more practical aspects linked to their programme (Lawrence, 2016:91).

This study concludes that TVET colleges, particularly the NC(V) programme, are intended to create a 'young' job-ready graduate after three years, when compared to students of a similar age completing their National Senior Certificate (NSC) programme at traditional public secondary schools who do not have the job readiness experience or requirement. The intention of the NC(V) programme should be accompanied by additional state support regarding TVET career guidance, TVET transition (especially for young students), appropriate student-programme fit and NC(V) programme readiness assessment. According to Keup (2007:21), there is a link between experiences of independence at college and the realisation of self-discipline and responsibility required for the completion of college when compared to traditional public schools. However, Keup (2007:13) argues that college students who face challenges such as meeting various classroom demands and self-motivation to attend class, especially younger students, require additional or special support structures to improve or influence their academic performance.

In summary, this study concludes that there is a level of influence from various factors that correlate with the likelihood of NC(V) programme completion within the Business Studies department. Stemming from the quantitative and qualitative research findings, a summary of the importance of the factor of influence and the likelihood of NC(V) Business Studies programme completion is presented in Table 4.1 below.

Table 4.1: Factor of influence and likelihood of programme completion

Factor of influence and likelihood of programme completion	Factor of influence and likelihood of programme non-completion
<ol style="list-style-type: none"> 1. Clear reason for enrolment 2. TVET and NC(V) programme readiness 3. Friendly and supportive teachers 4. High teaching quality 5. Developed soft skills, namely study technique 6. Active parent/guardian engagement and involvement 7. Social interaction with friends with similar academic commitment and goals 8. Accountable financial aid and transportation or self-funded 9. Mature / older student 10. Female gender 11. Student Support Service (SSS) and teacher collaboration 12. Programme and career path specific orientation 13. Clear intention after completion 14. Assistance with labour market entry 15. Parents input on programme choice 	<ol style="list-style-type: none"> 1. Unclear or no reason for enrolment / forced enrolment (parents) 2. Unfriendly and non-supportive teachers 3. Poor teaching quality 4. Absence of or under developed soft skills, namely study technique 5. Absence of parent/guardian 6. Friends for social interaction only 7. Limited or no financial aid and transportation 8. Limited or no career guidance 9. Younger and immature student 10. Male gender 11. Limited or no Student Support Service (SSS) 12. Limited or no TVET and NC(V) programme readiness 13. Absence of or ineffective orientation 14. Limited or no family and society support 15. Unclear or no intention after completion 16. Limited or no labour market entry assistance

4.5 Conclusion

Chapter Four provided an analysis of findings gathered during the quantitative and qualitative study components. The chapter detailed the analysed quantitative component responses, which were collated, correlated and expressed as a percentage of the total response per statement. The quantitative findings were combined with the qualitative data collection process. Responses of the qualitative components were collectively presented and analysed. Common themes in the qualitative responses were identified in relation to and clarified by the numerical data which had been gathered and analysed. Findings of the quantitative and qualitative study were then summarised, identifying and presenting the key factors that influenced the students' programme completion that are in direct TVET college control.

Chapter Five hereafter presents a summative discussion of the analysed quantitative and qualitative findings. The summative discussion will be presented under key influencing factors that are within the direct influence or control of the TVET college. Recommendations of planned action towards the potential improvement of student retention and persistence in the NC(V) programme at the identified TVET college in the Western Cape, South Africa, will be provided.

CHAPTER FIVE: SUMMATIVE DISCUSSION AND RECOMMENDATIONS

5.1 Introduction

Chapter Four provided an analysis of the findings gathered during the initial quantitative component, which was correlated with the qualitative component. Quantitative findings were analysed in relation to correlating factors and presented as a percentage of the total response per statement. Qualitative responses were collectively analysed to identify a common theme within each response. Questions developed for the qualitative instrument were based on the analysed quantitative findings. Variables tested in the qualitative study components were correlated with the numerical quantitative data, either in support thereof, or to clarify or negate the numerical quantitative data. The qualitative study component tested and clarified factors over which the TVET college has direct control.

Chapter Five provides a reflective overview of the study and a summative discussion of the quantitative and qualitative findings. Findings are aligned to the research objective, ensuring comprehensive coverage and adherence to this study's purpose. Recommendations are provided under key factors of influence, over which the investigated TVET college has direct control.

Chapter Five unfolds with an overview of the study's research problem and design in Section 5.2. This section revisits the research objective and questions to ensure that this study was conducted within the intended ambit. A summative reflection of research findings is presented in Section 5.3. The study's recommendations in relation to variables in the TVET college control are presented in Section 5.4. Section 5.5 highlights the contributions emerging from this study in relation to the body of knowledge, before concluding with Section 5.6.

5.2 Reflective overview of research problem and design

Since the inception of the NC(V) programme in 2006, its success has been less than intended. The undesired outcomes have resulted in various topics being researched in South Africa with regard to the problem of student retention, attrition and academic performance.

Distinguishing between existing South African TVET studies mentioned earlier, this study concurs with Thomas (2014:225) (this will be discussed more fully in section 5.4) and explores factors influencing NC(V) student persistence and programme completion.

This study's main objective was to determine the internal and external factors that influenced programme completion of 2017's NC(V) Business Studies Level 4 students at a TVET college in the Western Cape, South Africa. The study subscribes to the explanatory approach of determining the research objective, namely to investigate and explain the study's focus. The main research question, *What individual, institutional and social factors influenced programme completion of the NC(V) Business Studies Level 4 students?*, was supported by four sub-questions, namely:

- What was the retention rate, over the three-year period 2015 to 2017, of students enrolled in the NC(V) Business Studies programme?
- What specific internal (individual and institutional) factors influenced or supported programme completion and student retention?
- What specific external (environmental and social) factors influenced or supported programme completion and student retention?
- What are the prevalent internal and external factors a TVET college can control or influence?

Secondary data records from the investigated college assisted in answering sub-question 1.1, by indicating the programme duration retention and progression rate of student cohort 2015 to 2017 in the NC(V) Business Studies programme at the identified TVET college campus in the Western Cape, South Africa. Sub-questions 1.2 and 1.3 were addressed with data analysis findings, establishing what specific internal (individual and institutional) and specific external (environmental and social) factors influenced or supported NC(V) programme completion. Final data analyses of sub-questions 1.2 and 1.3, assisted sub-question 1.4 to determine what prevalent internal and external factors were in direct TVET college control or influence.

Positioned in the critical research paradigm, this study promoted critical awareness of the possibility of changing current conditions or actions by investigating limiting factors or existing TVET college conditions. The study employed a cross-sectional mixed methods approach to investigate a single view of the researched population at a particular point in time, using the strengths of both quantitative and qualitative methodologies.

This study used an attitude Likert rating-scale and computer-based self-completion questionnaire to gather research data. The variables were organised under three categories, namely Individual, Institution and External Factors. The self-completion questionnaire used for the qualitative study component, improved reliability by avoiding possible subjective contamination through personal interview influence or researcher bias in certain variables

when exchanging ideas and making conversation. The qualitative data-collection instrument focused on variables rated by respondents with a high influence, either Agree or Disagree. The use of the quantitative data analysis to develop the qualitative instrument provided in-depth knowledge to support the quantitative numerical data.

The analysis of data was undertaken using computer-aided software, namely Microsoft Excel and Word. Variables were analysed and correlated in relation to an overall variable tested. This study analysed respondents' generalised opinions from the one open-ended question by identifying a common theme to support or clarify the numerical data.

After collating the qualitative responses, this study used content analysis to note content patterns, consistencies and general themes, by sifting participant data and making sense of their understanding and expressions. Quantitative data determined which individual, institution and external factors influenced the intention of students to complete their NC(V) programme. The collection and analysis of qualitative data enhanced the quantitative data.

5.3 Summative research findings

Data-collection instruments tested variables or factors that influenced student programme completion within three categories, namely individual, institution and external (including social) factors. Variables and the level of influence were initially presented as quantitative numerical data. The qualitative data assisted with the understanding of the quantitative numerical data.

Biographical data indicated that age and gender are key indicators for the likelihood of the intention of participants to complete the programme. Older, more mature participants aged 21 to 35, accounted for 94% of the research sample, of which 96% were female. According to this study's findings only 6% of participants who had persisted with the completion of their NC(V) programme during 2017, were aged 18 to 20. Thus, the findings indicated that older, more mature enrolments were more likely to complete their programme, as their reason for enrolment at the TVET college was motivated by stronger academic goals or a need for labour market entry.

The enrolment and retention of females in the NC(V) Business Study programmes were more than double that of males. Historical secondary data from the investigated TVET college indicated that 56% of the students retained between 2015 and 2017 were female and 23% were male. This indicated a decrease in gender progression. This study concludes that

a gender-programme-fit exists within the NC(V) Business Studies programmes, specifically the Office Administration programme.

Data collected within the individual and institutional category assisted this study to understand which factors were specific to the individual and which factors were specific to the educational institution. Findings indicated that sound career guidance and prior knowledge of TVET are key pre-college entry factors that influence commitment and programme-completion intention. Participants, who attended their first-year orientation programme, were assisted with the transition and integration into the college environment.

Participants' predominant reason for enrolment at a TVET college was to obtain their NQF Level 4 qualification at an alternative institution that accepted their mature age and provided exposure to practical work. Enrolment was motivated with the intention of furthering their studies at higher education institutions, but, more importantly, the prospect of labour market entry with vocational experience. The need for a practical and vocational qualification was motivated by their perception of greater job prospects. The job-placement assistance provided by the TVET college was an attraction to enrol and complete the NC(V) programme.

Social interaction with friends, as an internal influential factor, had an interesting limitation. Although participants indicated receiving motivation and support from friends, 72% preferred to study alone to achieve their academic goals. Findings indicated that social interaction with friends was limited to the classroom and not during study or examination periods. This indicates that a varied type of or need for social interaction with friends exists and that the interaction is dynamic, prioritising academic achievement above social needs. Participants who indicated that friends motivated study and academic achievements the least, confirmed this. This indicates that social integration and interaction is dynamic at different stages of a student's duration of study.

This study found that teaching quality and supportive teacher interaction were seen as being more important to a participant's programme completion when compared to social interaction with friends. This indicates that social interaction and the integration of programme persistence and completion did not primarily depend on a social need for friends, but rather on the strategic relationship with friends and meaningful interaction with teachers. Collective participants' responses indicated that teacher character and method of information transfer were more motivational than the actual subject's content knowledge.

Findings revealed that teachers had a greater and more immediate influence than that of the Student Support Services (SSS) offered at campus and parents. Qualitative data indicated that participants were highly appreciative of teachers who supported and guided them beyond curriculum requirements. This appreciation made the acceptance of the NC(V) programme easier and influenced the completion of the programme. The pivotal influence of teachers indicates the important internal influence available at the college to motivate a student simply by means of the manner in which the student is addressed and treated during their time at college. This is a key indicator and factor within direct control of the TVET college.

Participants indicated that the implementation of Level 4 work-based exposure should be introduced at Level 2 and carried through to Level 4. Work placement, business role-play and dressing professionally were regarded as aspects that would add value to programme understanding and reinforcement from the time students enrol to the time they complete their studies. Participants indicated that the introduction of industry requirements and career-path description at Level 2 would have made the reinforcement at Level 4 easier. The reinforcement would increase familiarity and reduce the pressure in Level 4, thus promoting a good application of industry requirements, especially in the soft skills. This finding serves as a vital factor of influence regarding curriculum and programme delivery from Level 2 to Level 4.

In summary, variables tested, analysed and presented, collectively indicated that the following internal and external variables had an influence on and forecast the likelihood of the completion of the NC(V) Business Studies programme:

- Enrolment with a clear knowledge of TVET and study programme;
- Mature and older age;
- Female gender;
- Clear intention after qualifying, namely progression to other higher education institutions or improved labour market entry;
- Existence or development of soft skills, namely being organised and having good study habits;
- Set academic and career goals;
- Quality teaching methods;
- Friendly, supportive and motivating teachers;
- Practical application and logical explanation of theoretical content;
- Motivation and support from friends; and
- Parental and family support.

Analysing all variables tested and presented, this study sought to identify the variables within direct control of the investigated TVET college. Identifying variables in direct TVET college control, facilitates the making of recommendations for the potential improvement of NC(V) programme completion.

5.4 Recommendations for improved NC(V) programme completion

Thomas (2014:225) emphasises the responsibility of institutions for improving students' intention to complete their programme. According to Bean and Eaton (2001:73), student retention is affected by policies and culture. Maharaj (2009:13) attributes equal responsibility to educational institutions for student attrition, persistence or retention. Similarly, Jensen (2011) emphasises institutional responsibility for removing controllable cultural obstacles to promote college completion. According to Cabrera *et al.* (1992, cited in Aljohani, 2016:11), educational institutions should focus on variables that encourage student persistence and programme completion when creating and implementing retention plans and strategies. The identified variables should address initial or current behaviour of students' intention of early withdrawal. Cabrera *et al.* (1992, cited in Aljohani, 2016) emphasise the importance of continuous monitoring and revision of retention plans and strategies by educational institutions' research and development departments. According to Papier (2009:41), student performance may be impacted upon by external influences, but require interventions focused on student improvement which are influenced by factors within the college's control.

This study presented research that would be useful to the investigated TVET college and similar institutions, as they need to know about the findings concerning the institution(s) and its students. The research will be of assistance to the TVET college at particular times during the student's study programme, especially when the likelihood of early departure can be identified and prevented with controllable factors that could remedy or lower the risk. To encourage transformation and social change in current conditions, as advocated by critical research, this study's recommendations focus on variables in direct control of the TVET college. The recommendations aim to potentially improve NC(V) programme completion and student encouragement.

The following recommendations can be incorporated into existing or new TVET college policies with the aim of positively promoting students' perception of TVET and providing ways in which college culture can be absorbed, but, more importantly, to improve the possibility of NC(V) programme completion. Policies to be considered for review or development can include marketing, recruitment and selection, student admission testing, student support

services, teacher-student relationships, classroom management, internal quality management system (IQMS), programme delivery and educator development and wellbeing.

The following aspects which will be discussed further below, not in order of importance, are recommended areas of improvement aiming towards NC(V) programme completion.

- TVET stigma and perception,
- Student Support Services (SSS),
- Guidance and assessment,
- Standardised orientation,
- College culture,
- College resources,
- Vocational skills prior, throughout and after the programme,
- Student incentive for completion,
- Institution-Parent relations,
- Teaching quality and staff well-being,
- Retention and student success.

5.4.1 TVET stigma and perception

Literature, reviewed in Chapter Two regarding the perception of TVET in South Africa (Needham & Papier, 2011:36) and internationally, has indicated what Puckett *et al.* (2012) describe as a 'negative-feedback loop'.

This study recommends addressing the problem at the potential root cause. TVET colleges together with other stakeholders, namely state departments and industry partners, could improve the portrayal of TVET in South Africa. TVET contributions, accomplishments and triumphs should consistently be available in the public forum, namely by means of print, radio and social media. Successfully employed TVET graduates should be showcased on platforms that receive public interest and attention. The expressed success of TVET has the potential of improving the negative perception and 'feedback loop' that exists. Traditional public secondary schools should not only be made aware of the programmes on offer at TVET when recruiting students, but also be in contact with current and graduated students of TVET to allow secondary school students a personal testimony of TVET's value.

Industry partners should voice their need for practically skilled students and the value TVET can offer to the labour market and skills shortage. Community entrepreneurs who have graduated through TVET should be identified to create awareness in their communities,

together with the TVET college, of positive outcomes. Based on literature, the social perception of TVET contradicts actual student experience. This positive promotion of TVET and NC(V) is not done to discount traditional public secondary schools or other higher education institutions, but rather to promote the importance and purpose of TVET and what it truly offers and produces.

5.4.2 Student Support Services (SSS)

The services of the SSS department, not being the focus of this study, were indicated as not being used by students to assist them with the completion of their NC(V) programme at the investigated TVET college campus. Providing a brief context of the responsibilities of SSS, Fryer's (2014:66) research focused on student support officers' perception of student support provision at South African TVET colleges. Fryer's (2014) research presented the following three-tier hierarchy of encompassing responsibilities, shown below in Figure 5.1.

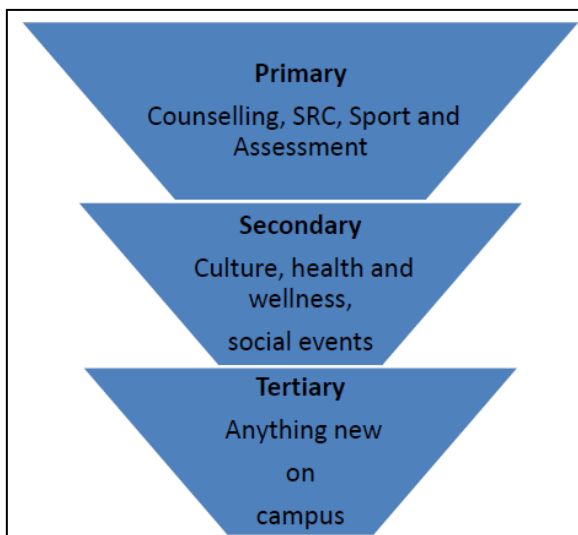


Figure 5.1: Responsibilities of Student Support Services (Fryer, 2014)

For the purpose of this study's recommendations, one primary responsibility will be discussed, namely that of counselling. Fryer (2014:66) argues that students are only counselled for socio-economic reasons and not for academic or programme support. Fryer's (2014) findings on SSS responsibilities together with this study's findings, indicating that participants do not make use of SSS for assistance in programme completion, provides a key internal variable to improve programme completion among NC(V) students.

Not directly placing the onus on the SSS department, this study recommends that the SSS department work closely with NC(V) programme managers and teachers to identify students who make use of the SSS. Similarly, NC(V) programme managers and teachers who provide

interventions for poorly performing students, who do not make use of the SSS, should be encouraged to make use of the SSS department for academic improvement and guidance. A key need expressed by participants of this study to assist them with their intention to complete their programme, was for the development of soft skills, such as being organised and having good study habits. The SSS intervention could be conducted during Life Orientation or enrichment periods prior to assessments or during the final examination period. This study thus recommends a working partnership between NC(V) programme managers, teachers and the SSS department to promote programme completion holistically, by dealing with socio-economic concerns and the achievement of academic goals.

5.4.3 Guidance and assessment

Despite 70% of this study's participants receiving career guidance prior to enrolment, the type of career and academic guidance should be standardised and TVET-specific. Most NC(V) enrolments take place late or during the actual academic year. The variable of TVET-specific career guidance should be proactively attended to, despite it being offered at traditional public secondary schools to learners intending to enrol at TVET colleges. TVET-specific career and academic guidance prior to or immediately after enrolment would ensure a clear reason for enrolment and create a foundation for developing academic and career goals. This type of guidance can be incorporated during, after registration, or at an orientation session.

Directly linked to career guidance, is the aptitude test administered to determine the appropriate programme in which a candidate should enrol. Currently, the aptitude test, known as a PACE test, which is used at the investigated TVET college, focuses only on numeracy and literacy ability. Although numeracy and literacy ability are valid aptitude indicators, it does not measure student perception of TVET nor interest in the prospective vocational programme. Programme-specific screening questions or tests should be developed to identify whether the potential student understands the NC(V) programme delivery method and vocation enrolled for. This form of testing could potentially identify the likelihood of programme completion or early departure based on factors such as career goals, academic goals and overall intention to attend a TVET college.

The outcome of a career guidance, aptitude test and programme expectation test, could provide the TVET college with an early opportunity to identify the risk profile of students. Through early detection, high-risk students could be attended to with additional services immediately after enrolment by, for example, the SSS department.

5.4.4 Standardised orientation

After successful enrolment, a programme-specific orientation programme should be standardised and tailored to suit the level of students and their intention, addressing career and academic goals. Orientation programmes can incorporate social integration components, such as team activities, while promoting an awareness of the vocational programme candidates have enrolled for and their career-path options. A recommended approach is a scenario-related career-focused role-play in which students form groups, receive a scenario to role-play, inclusive of a small judging and recognition component, namely the academic staff. Candidates should be aware of judgment criteria, which can indirectly test soft skills, such as the use of proper language and personal presentation.

The role-play recommendation could also serve a greater purpose in introducing the culture and practical nature of the programme requirements. Orientation programmes should be done at Level 2, Level 3 and Level 4. The orientation programme can be structured in Level 3 to revise Level 2 vocational implementation and introduce the link to Level 3 and Level 4 can be structured according to industry and labour-market entry requirements, where job interviews and conduct can be simulated.

The investigated TVET college comprised four departments at the time of research. This study recommends that individual departmental efforts to provide an orientation programme can be strengthened with a standardised collective effort to present a single TVET college orientation programme promoting a 'unified diversity'. The standardised orientation programme could facilitate two stages of Tinto's (1993) SIM model, namely separation and transition, and introduce the college's culture.

5.4.5 College culture

This study regards the student as an employee, with the TVET college as their workplace. This analogy concurs with John Bean's industrial or workplace application to his Student Attrition Model (SAM), where workplace behaviours can be seen as forecasters of an employee's fit-to-company.

This study recommends that the TVET college create observable artefacts and espoused values to represent a sense of belonging and pride. For example, tall colour-coded flag posts at the entrance of each faculty representing 'who we are and what we stand for', as well as posting visible signage of the college values and ethos to create a sense of pride in student and staff behaviour and their representation of TVET. As the investigated TVET college does

not use student uniforms, the study recommends including a badge or sweater with each successful enrolment. This espoused value would create a sense of uniformity, pride and belonging, inculcating a sense of belonging by means of visible artefacts and attire and by promoting these as a form of cultural behaviour. For example, for staff and students alike, to display a badge or wear a sweater on Fridays, would be another unifying feature. This recommendation emerged from the researcher's observation of the SSS department and Student Representative Council (SRC) who are equipped with corporate attire, which identifies and sets them apart with a sense of purpose.

5.4.6 College resources

Participants in this study indicated that they stayed away from scheduled lessons without permission to gain access to resources such as the library and computers. Personal observation and researcher involvement can confirm that access to computers are due to teachers allowing supervised access to computer classrooms during break or recess time and often after hours to accommodate students who need to complete and print their practical assignments. The available resources, namely computer facilities, at the TVET colleges' Open Learning Centre (OLC) are currently limited. Students are required to deliver multiple practical assignments for all seven subjects and therefore require adequate access to computer resources to produce these. Qualitative findings revealed that scheduled classes are often 'bunked' (staying away from scheduled lessons without permission) in order to complete practical tasks when the resources become available.

It may be argued that students generally miss classes without permission or fail to deliver assignments, but it is this study's strong recommendation to provide more open learning computer laboratories for learners as most either do not have the resources at home or the time to complete assignments during their normal class timetable. This study also recommends that a dedicated practical session be built into the programme timetable. The provision of a dedicated session and computer laboratory resource should be monitored to ensure that students adhere to a regular class timetable and do not stay away from scheduled lessons.

5.4.7 Vocational skills prior, throughout and after the programme

Participants in this study indicated that NC(V) programmes' vocational skills were only implemented at Level 4 and would have served a greater benefit if they had been introduced from Level 2 already and reinforced in Level 3. Within the Business Studies NC(V) Office

Administration programme, the in-service component implemented at Level 4 was specifically mentioned because it provided participants with a real career interest and insight.

This study recommends that vocational skills regarding career readiness and work-based experience be included at Level 2 and Level 3. Respondents indicated that the introduction and reinforcement throughout the programme would serve as a valuable factor for career achievement and reinforcement of labour-market requirements. This study's recommendation of gradual introduction and reinforcement of vocational skills throughout the programme, could potentially assist with the development of what this study describes as critical soft skills, such as communication and business conduct creating familiarity with workplace performance requirements when implemented at a workplace at Level 4.

A related recommendation would be to include field trips to workplace environments, demonstrating what the labour market requires and how to achieve it. Industry partners can host day-trip job-shadowing opportunities for Level 2 students, to create an initial interest and exposure to the labour market and what their labour-market entry prospects are after NC(V) programme completion. The field trips can include a simple walk about in Level 2 and a content-tested trip in Level 3, leading up to the application-based assessment in Level 4, which currently exists and is known as Work Based Exposure (WBE). Industry partners and Sector Education and Training Authorities (SETAs) can conduct career days to reinforce the employment opportunities and career paths within their vocation.

5.4.8 Student incentives for completion

Similar to bursary awards and transport allowance linked to attendance, an award system that encourages bursary and non-bursary students could be created. Awards can be given for attendance and academic performance at each of the three programme levels. This incentive can be recommended at Level 2 as early as Term 1. The opportunity can be used to highlight what is expected of students at Level 4. Monetary or prize awards can be used to obtain and reinforce a desired behavioural outcome of programme completion and academic excellence. Although vital at Level 4, the reinforcement needs to be understood and be visible at Level 2 when students are most vulnerable in their decision of an early departure before programme completion.

This study recommends hosting an annual internal prize-giving or recognition ceremony at each level. A recognition ceremony creates an overall sense of accomplishment and is a potential motivation to return for the next programme level at the same TVET college. Progressing students at Level 3 or having exited at Level 4 could be used as guest speakers

at, for example, the Level 2 recognition ceremony. The progressing students invited as guest speakers, in turn, could become the testimonials, storytellers, culture creators and TVET ambassadors to encourage current students' programme completion.

5.4.9 Institution-Parent relations

The study's findings revealed that the most influential external factor towards programme completion was parental support. Attempts at parent-teacher interventions often prove challenging due to the socio-economic conditions and family background, which would include issues such as transportation, timing and employment commitments. Arranging after-hour meetings proves challenging because parents often work different hours and most do not have personal transport to attend evening meetings.

This study recommends considering alternative approaches to promote parent-teacher or parent-institution communication. In the same manner in which students attend an orientation programme, invitations should be extended to parents to attend an orientation programme as well, with the same urgency and pride as attending a graduation ceremony. With prior investigation, a parent/guardian intervention could be arranged on a day and time that is convenient for most parents to attend. The intervention could include a pamphlet for the parent/guardian such as contact numbers, assessment schedules and an academic calendar for the year. These key academic points would provide parents with foundational information to keep track of their children's progress and academic requirements, but, more importantly, create that initial link between the institution and external factors.

Together with the parents' orientation programme, as an intervention for parents who are not able to attend and reinforcement for parents who do attend, the most immediate forms of communication are direct calls, short message service (SMS) or Instant Messaging (IM). The SMS and IM platforms are more convenient for parents, informing them of any concerns identified with their child, as well as overall progress updates and important reminders. This form of interaction also assists parents or guardians to directly communicate with the TVET college. Apart from isolated or unique cases, this form of communication should be done consistently, for example before an examination period.

An attempt to increase the relationship between parent-teacher and parent-institution as a cultural norm, could potentially have greater impact and influence on student persistence and programme completion.

5.4.10 Teaching quality and staff well-being

A vital internal variable emerging from this study's findings that influenced participants' programme completion, which institutions have great control over, are teachers and the quality of teaching. Participants felt motivated and connected to their programme based predominantly on the manner in which their teachers relayed and related the content knowledge to understandable practical application. Participants indicated that similar to teachers motivating their completion, there were teachers that made them dislike college due to the teacher's conduct and, what respondents described as, 'unpredictable moods'.

Educational institutions' core business is education delivery and teachers are vital in delivering education to the client, namely students. This study recommends that academic staff development, in relation to their personal wellbeing, content delivery, pedagogic style and personal interaction with students, be investigated. Respondents indicated that they felt welcome and safe in friendly environments. Although the onus is directly on teachers to ensure a welcoming classroom environment, the TVET college also shares a responsibility to ensure that teachers are well equipped and supported towards fulfilling their duty, which is to promote quality teaching.

This study recommends that staff wellness interventions be considered by, firstly, approaching teachers to enquire what factors hinder their development and what would promote their work-wellbeing, which, in turn, would potentially effect a positive teaching quality. Staff development interventions, such as a sporting code during enrichment periods, could boost morale among colleagues. A symbiotic relationship of student-teacher award can be created whereby students can nominate their best teacher and teachers nominate their top performing student, based on set criteria. The nomination approach also suggests a teacher-student satisfaction survey. The survey and nomination would encourage a desired behavioural outcome, recognising staff and student performance at an internal award ceremony.

It is the researcher's opinion that academic staff are appreciative of recognition, but are challenged by classroom size, discipline, resources, administrative requirements and deadlines. By investigating and attending to factors that could improve teachers' work experience, the TVET college has the potential of motivating an internal variable, namely teachers, which, in turn, influence student-institution integration and programme completion.

5.4.11 Retention and student success

Existing studies of South African TVET have predominantly applied Tinto's SIM as the theoretical model to understand student retention and early departure. South African studies on the application of Tinto's SIM, mentioned earlier, include Maharaj (2007), Ngcobo (2009), Papier (2009), Moodley and Singh (2015), Pather (2015) and Lawrence (2016). However, Tinto's SIM did not come without criticism as discussed in Chapter Two.

Guarding against single-model limitation and critique, this study analysed and combined an alternative theory and model, namely that of John Bean's, to better understand and address the research problem. Tinto and Bean provide similar arguments, namely that student persistence is the result of interaction between personal and institutional factors, and that the intent to persist stems from a successful fit between student-institution, integration-experience and internal-external support and motivations (Cabrera *et al.*, 1992).

By testing internal and external variables, this study was guided by understanding and combining two student-retention theories and models, namely Vincent Tinto's Student Integration Model (SIM) and John Bean's Student Attrition Model (SAM). Understanding both Tinto's and Bean's model, contributed the following value to the research enquiry:

- Tinto's model assisted the development of data collection instruments regarding the internal social and academic integration factor statements, whereas Beans' model assisted the study enquiry regarding the external factor of influence.
- Tinto's model supported the internal dynamics and influences, whereas Bean's model supported the external dynamics and influences.
- Tinto's model supported internal factors shared between institution and student, such as orientation programmes and socialising with friends and the integration thereof, whereas Bean's model supported the influence that external factors, such as family, friends and finance, has on the perception, attitude and beliefs of the student concerning the institution, and the personal fit between institution and student.

Although approached differently, Tinto and Bean provide similar arguments, understandings and concrete frameworks, indicating that student persistence is the result of interaction and integration of personal, social and institutional factors, and that the intent to persist stems from the successful fit between student-institution, integration-experience and internal-external support and motivations. The combined contribution of Tinto and Bean minimised the critique of single-model relevance and increased the understanding of internal and external factors that influence students' persistence and programme completion.

The combined theories of Tinto and Bean led to the development of the Internal and External Factors Influencing Student Persistence and Departure (IEFISPD) Model for the purpose of this study, illustrated in Figure 2.1 in Chapter Two and repeated in Figure 5.1 below. The internal factors or variables tested included friends at college, student support services, orientation programmes, academic staff, teaching quality and style, financial assistance and programme advice. The external factors or variables tested include intention of student post-graduation, employment prospects, role of family, community, career guidance, reason for enrolment at TVET, support structures and importance of friends outside of college.

The development of this study's IEFISPD model ultimately envisages the harmonious fit between institution-student through the combined theoretical framework of Tinto and Bean represented by the green overlapping section of the IEFISPD model in Figure 5.1 below.

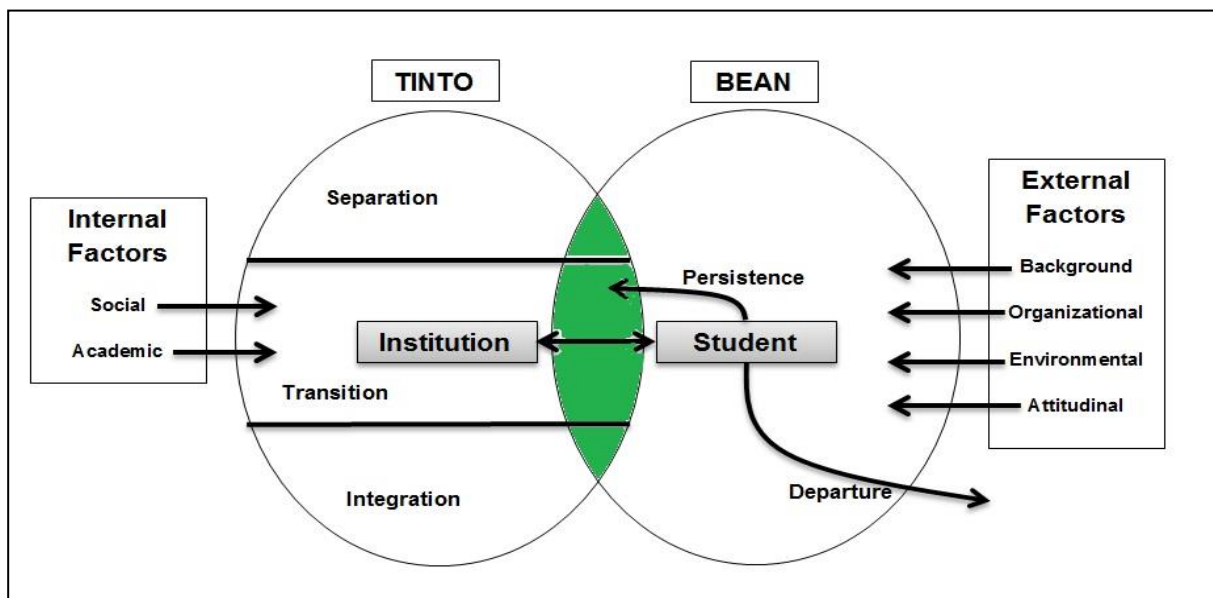


Figure 5.1: Internal and External Factors Influencing Student Persistence and Departure (IEFISPD) Model (Gaffoor, 2018)

This fit is intended for an improved student-institution fit and integration and an improved student-programme fit and completion. With a student-centred approach, investigating and understanding their external factors of influence, institutions can assist students through Tinto's three stages of integration, namely separation, transition and integration. The IEFISPD model depicts the shared responsibility of student and institution, as well as the internal and external influence towards programme completion.

This study recommends that future South African studies related to student success at TVET employ the combined works of Tinto and Bean to holistically research and understand the factors that influence student-related concerns in education.

5.5 Study contribution

In relation to existing South African studies namely Maharaj (2008), Ngcobo (2009), Papier (2009), Pather (2015), Moodley and Singh (2015) and Lawrence (2016), this study's contribution to the related body of knowledge is in accordance with the argument presented by Thomas (2014:225). This study provided the current South African TVET context and the factors that influence NC(V) Business Studies students' programme completion.

The study analysed and combined two retention theories and models, namely Vincent Tinto's SIM and John Bean's SAM. Combining the theories and models facilitated a better understanding of the research problem. The combined theories allowed this study a strong foundation upon which to develop the data collection instruments and variables to be tested. Both internal and external variables were understood to be part of this study's enquiry. From the combined pioneering theories and models, this study presented the Internal and External Factors Influencing Student Persistence and Departure (IEFISPD) Model depicted in Chapter Two, Figure 2.1 and repeated in Figure 5.1.

In support of DHET's envisaged 2.5 million TVET enrolments by 2030 (South Africa, 2013:13), this study's recommendations could potentially assist with realising the envisaged enrolments but, more importantly, realise an improved throughput and completion rate of the NC(V) programme.

The recommendations provide policy makers with a solid personalised platform from which to view, revise and create TVET college policies in relation to student input based on variables influencing NC(V) programme completion. Policies related to student recruitment, student support, curriculum delivery and teacher support, can be aligned to variables of influence that a TVET college has direct control over.

5.6 Conclusion

In a country reforming its educational equality, the South African PSET TVET structure is of great economic importance. The TVET sector is widely accepted by and enrolled in mostly by previously and currently disadvantaged groups, promoting greater access to post-school education. TVET seeks to promote vocational skills for a niche target market, with the intention of economic development. TVET is perceived by many students in South Africa and internationally as an unfavourable institution for career prospects. This perception creates a negative cycle and tarnishes the TVET sector and its intentions.

Many studies have investigated the reason or factors influencing poor performance, attrition and early departure. However, by not investigating and understanding what factors influence persistence and programme completion, is directly neglecting educational reform within the TVET sector. Although perceived in South Africa and internationally as a second-chance institution for learners who 'cannot make it' at traditional public secondary school, the TVET college and its students have a far more complex reason for their existence than inadequate academic performance alone. The introduction of the NC(V) programme provides greater access to learners who would possibly not have continued with their post-school education. These learners have found sanctuary in an environment that accepts various age groups, backgrounds and educational levels and provides a quality education towards achieving their academic goals.

The question of poor performance as presented, for example, by Papier (2009), is not a direct result or reflection of TVET or the sector but rather the misaligned expectation and mind-set of students who enrol with a mismatched programme-fit and under-developed academic and career goals. It is evident that there are students who enrol with a clear and goal-orientated intention. Student success and programme completion is reliant on, nurtured and influenced by various internal and external factors and support structures.

Chapter Five provided a reflective summary of the research approach and findings of factors that influence NC(V) programme completion. Recommendations were provided in relation to variables that the TVET college has an influence or control over, based on valuable input gathered from research participants. The recommendations should aid policy makers to consider a review of existing or in the creation of new TVET college policies to potentially influence greater NC(V) programme completion.

Chapter Five concluded by indicating the contribution this study has made to the related body of knowledge, namely TVET student retention, success and programme completion. Apart from aiding policy makers, the findings also intend to encourage supplementary or complementary research at other TVET colleges in South Africa. The researcher recommends that future studies be duplicated at various campuses of TVET colleges in South Africa, using the combined works of Tinto and Bean to reach conclusive research findings towards improving overall retention and NC(V) programme completion at TVET colleges in South Africa.

REFERENCES

- 1) Academics: what is critical research-paradigm? Available at: <http://manju-basnet.blogspot.com> (Retrieved on 10 October 2016).
- 2) Adamson G, & McAleavy G. 2000. Withdrawal from vocational courses in colleges of further and higher education in Northern Ireland. *Journal of Vocational Education and Training*, 52(3): 535-553.
- 3) Aljohani, O. 2016. A comprehensive review of the major studies and theoretical models of student retention in higher education. *Higher Education Studies*, 6(2): 1-18.
- 4) Allen, J. 2012. Student Retention in Further Education: A Case Study. (Unpublished Master's thesis. University of York)
- 5) Astin, A.W. 1975. *Preventing students from dropping out*. San Francisco, CA: Jossey-Bass.
- 6) Babbie, E & Mouton, J. Eds. 2011. *The practice of Social Research*. South Africa: Oxford.
- 7) Bhattacharjee, A. 2012. Social science research: Principles, methods and practices. Tampa, FL: University of South Florida.
- 8) Bradley, K.D., Peabody, M.R., Aker, K.S., & Knutson, N.M. 2015. Rating-scales in Survey Research: Using the Rasch model to illustrate the middle category measurement flaw, 8(2) February. ISSN 2168-0094. Available at: <http://www.surveypractice.org/index.php/SurveyPractice/article/view/266> (Retrieved on 16 September 2016).
- 9) Bean, J. 1980. Dropouts and turnover: The synthesis and test of a causal model of student attrition. *Research in Higher Education*, 12(2): 155.
- 10) Bean, J.P. 1981. The synthesis of a theoretical model of student attrition. Paper presented at the Annual Meeting of the American Educational Research Association, Los Angeles, CA. ERIC.
- 11) Bean, J., & Eaton, S.B. 2001. The psychology underlying successful retention practices. *Journal of College Student Retention: Theory & Practice*, 3(1): 73-89.
- 12) Bean, J. P., & Metzner, B. S. 1985. A conceptual model of non-traditional undergraduate student attrition. *Review of Educational Research*, 55(4): 485–540.
- 13) Burrus, J., Elliott, D., Brenneman, M., Markle, R., Carney, L., Moore, G., Betancourt, A., Jackson, T., Robbins, S., Kyllonen, P. & Roberts, R.D. 2013. Putting and keeping students on track: Toward a comprehensive model of college persistence and goal attainment. *ETS Research Report Series*, 1: i-61.
- 14) Cabrera, A. F., Castaneda, M. B., Nora, A., & Hengstler, D. 1992. The convergence between two theories of college persistence. *Journal of Higher Education*, 63(2): 143–164.
- 15) Cloete, N. (Eds.). 2009. Responding to the educational needs of post-school youth. Determining the scope of the problem and developing a capacity-building model. Cape Town: CHET.
- 16) Cloete, N. 2009. Synthesis. In Cloete, N. (Eds). *Responding to the educational needs of post-school youth*. Cape Town: CHET: 1-18.

- 17) Cohen, L., Manion, L., & Morrison, K. 2007. *Research methods in Education*. Sixth Edition. New York: Routledge.
- 18) Cook, T. & Rushton, B.S. 2009. *How to recruit and retain higher education students: A handbook of good practice*. New York: Routledge.
- 19) Council of Higher Education. 2010. *Report on the National Review of Academic and Professional Programmes in Education*. HE Monitor No. 11. Pretoria: CHE.
- 20) Council of Higher Education. 2016. *South African Higher Education Reviewed: two decades of democracy*. Pretoria: CHE.
- 21) Creswell, J.W. 2014. *Research Designs: Qualitative, Quantitative and Mix Methods Approaches*. Fourth Edition. Sage Publications.
- 22) Cunningham, A. 2010. Factors associated with the persistence of students receiving learning support in a two-year college. Doctoral thesis. The University of Georgia: Georgia.
- 23) Denzin, N.K. & Lincoln, Y.S. (Eds). 1994. *Handbook of qualitative research*. Thousand Oaks, CA: SAGE Publications.
- 24) DeRemer, M. A. 2002. *The Adult Student Attrition Decision Process (ASADP) Model*. Doctoral dissertation. Faculty of the Graduate School, University of Texas, Austin.
- 25) Ebrahim, A. B. 2013. *An exploration into the synergy between the experiences and perceptions of students and inclusive education discourse within a Further Education and Training College in the Western Cape*. Master's thesis. Cape Peninsula University of Technology.
- 26) Fryer, L. 2014. Student support officers' perceptions of student support provision in Technical and Vocational Education And Training colleges. Master's thesis, Stellenbosch: Stellenbosch University.
- 27) Grebennikov, L & Shah, M. 2012. Investigating attrition trends in order to improve student retention. *Quality Assurance in Education*, 20(3): 223-236.
- 28) Guba, E. G., & Lincoln, Y. S. 1994. Competing paradigms in qualitative research. In Denzin, N. K. & Lincoln, Y.S. (Eds.) *Handbook of qualitative research*. Thousand Oaks, CA: Sage: 105-117.
- 29) Guiffrida, D. A. 2006. Toward a cultural advancement of Tinto's theory. *Review of Higher Education*, 29(4): 451 – 472.
- 30) Harris, T. 2014. Secondary school students' perceptions of vocational education in Barbados. School of Education and Social Work. University of Sussex.
- 31) Henning, E. 2004. *Finding your way in qualitative research*. (4th Ed) Pretoria: Van Schaik Publishers.
- 32) International Labour Organisation (ILO). 2014. *Key Indicators of the Labour Market*. Eighth edition. International Labour Office, Geneva.
- 33) Jensen, U. 2011. *Factors Influencing Student Retention in Higher Education*. Kamehameha Schools Research and Evaluation Division.

- 34) Karp, M. M., Hughes, K. L. & O'Gara, L. 2008. An exploration of Tinto's integration framework for community college students: *Journal of College Student Retention: Research, Theory & Practice*, 12(1): 69-86.
- 35) Keup, J. R. 2007. Great expectations and the ultimate reality check: Voices of students during the transition from high school to college. *NASPA Journal*, 44(1): 3-31.
- 36) Khuong, H. 2014. Evaluation of a conceptual model of student retention at a public urban commuter university. Doctoral dissertation. Loyola University, Chicago.
- 37) Koen, C. 2007. *Postgraduate student retention and success: A South African case study*. South Africa: HSRC Press.
- 38) Kumar, R. 2014. *Research methodology: a step-by-step guide for beginners*. Fourth edition. Singapore: Sage Publications.
- 39) Kvale, S & Brinkman, S. 2009. *Interviews, learning the craft of qualitative research interviewing*. London: SAGE Publications Ltd.
- 40) Laskey, M.L., & Hetzel, C.J. 2001. Investigating factors related to retention of at-risk college students. *Learning Assistance review*, 16(1): 31-43.
- 41) Lawrence, M. N. 2016. *Factors contributing toward attrition of engineering students at public vocational colleges in the Western Cape*. Master's thesis, Cape Town. Cape Peninsula University of Technology.
- 42) Lewis, T. & Lewis, M. V. 1985. Vocational education in the Commonwealth Caribbean and the United States. *Comparative Education*, 21(2): 157-171.
- 43) Lincoln, Y.S. & Guba, E.G. 1985. *Naturalistic inquiry*. Newbury Park, CA: Sage.
- 44) Maharaj, R. 2008. An investigation into the retention and dropout of mechanical engineering students at a FET college. Master's thesis, University of KwaZulu Natal.
- 45) Martinez, P., & Munday, F. 1998. 9 000 voices: Student persistence and drop out in further education. Further Education and Development Agency Report, 2(7).
- 46) McCubbin, I. 2003. An examination of criticisms made of Tinto's 1975 Student Integration Model of Attrition.
- 47) Merriam Webster Dictionary. Online. <https://www.merriam-webster.com/dictionary/freshman>
- 48) Moodley, P. & Singh, R. J. 2015. Addressing student dropout rates at South African universities. *Alternation Special Edition*, 17: 91-115.
- 49) Morgan, D.L. 2014. *Integrating Qualitative and Quantitative Methods. A Pragmatic Approach*. Los Angeles: Sage Publications.
- 50) Needham, S., & Papier, J. 2011. *Practical matters: What young people think about vocational education in South Africa*. City & Guilds Centre for Skills Development.
- 51) Neuman, W.L. 2006. *Social research methods: Qualitative and quantitative approaches*. 6th Ed. Boston: Pearson.

- 52) Ngcobo, B.D. 2009. *Factors influencing student's choice of campus and completion or non-completion of courses in FET colleges*. Doctoral thesis. University of KwaZulu-Natal, Pietermaritzburg.
- 53) Odendaal, A. 2014. What is a TVET college? Oxbridge Academy Blog. Available at: <http://blog.oxbridgeacademy.co.za/what-is-a-tvet-college> (Retrieved on 16 August 2016).
- 54) 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. Cape Town: FETI, University of the Western Cape.
- 55) Pather, S. 2015. Pre-entry academic and non-academic factors influencing teacher education students' first-year experience and academic performance. Doctoral thesis, Cape Peninsula University of Technology.
- 56) Perold, H., Cloete, N. & Papier, J. (Eds). 2012. *Shaping the future of South Africa's youth. Rethinking post-school education and skills training*. Somerset West, South African. African Minds.
- 57) Pillay, J. 2014. Ethical considerations in educational research involving children: Implications for educational researchers in South Africa. *South African Journal of Childhood Education*, 4(2): 194-212.
- 58) Puckett, J., Davidson, J., & Lee, E. 2012. Vocational Education. The missing link in economic development. BCG Perspectives. The Boston Consulting Group.
- 59) Roberts, J & Styron, Jr, R. 2010. Student satisfaction and persistence: factors vital to student retention. *Research in Higher Education Journal*, 6: 1-18.
- 60) Saunders, M., Lewis, P., & Thornhill, A. 2007. Research methods for business students. 4th Edition. Prentice Hall. Pearson Education.
- 61) Schreiber, B. Luescher-Mamashela, T. & Moja, T. 2014. Tinto in South Africa: Student integration, persistence and success, and the role of student affairs. *Journal of Student Affairs in Africa*, 2(12), pp 6-10. Available at: http://www.academia.edu/12154467/Tinto_in_South_Africa_Student_integration_persistence_and_success_and_the_role_of_student_affairs (Retrieved on 18 January 2016).
- 62) Sheppard, C. & Sheppard, R. 2012. A statistical overview of Further Education and Training Colleges. In Perold, H., Cloete, N. and Papier, J. (Eds.). 2012. *Shaping the future of South Africa's youth: Rethinking post-school education and skills training*. Somerset West, SA: African Minds: 63 – 102.
- 63) Spady, W. G. 1971. Dropouts from higher education: Toward an empirical model. *Interchange* 2(3): 38–62.
- 64) Statistics South Africa. 2014/15. Annual Report (Book 1). Pretoria: Statistics South Africa.
- 65) Statistics South Africa. 2015. National and Provincial Labour Market: Youth. Q1: 2008-Q1:2015. Statistical Release, P0211.4.2.
- 66) South Africa. Department of Education. 2006. Government Gazette, No 28677. Policy for National Certificate (Vocational): A qualification at Level 2, 3, 4 on the NQF.

- 67) South Africa, Department of Education. 2007. Proceedings of the South African Colleges Principals' Organisation Conference: Available at: www.polity.org.za (Retrieved on 23 May 2012).
- 68) South Africa. Department of Education. 2008a. Organisation for Economic Co-Operation and Development (OECD): *Reviews of National Policies for Education*. Pretoria: Government Printer.
- 69) South Africa. 2008b. National Qualifications Framework Act 67 of 2008. Pretoria: Government Printer.
- 70) South Africa. Department of Higher Education and Training. 2013. White Paper for Post-School Education and Training. Building an expanded, effective, and integrated post-school system. Pretoria: Government Printer.
- 71) Swift, J. & Fisher, R. 2012. Choosing vocational education: some views from young people in West Yorkshire. *Research in Post-Compulsory Education*, 17 (2): 207-221.
- 72) Tierney, W G. 2000. Power, identity and the dilemma of college student departure. In Braxton, J. M. (Ed.). *Reworking the student departure puzzle: new theory and research on college student retention*. Nashville, T.N: Vanderbilt University Press: 213 – 234.
- 73) Thomas, D. 2014. Factors that influence college completion intention of undergraduate students. *Asia-Pacific Education Research*, 23(2): 225-235.
- 74) Thomas, L. 2011. Engaging students to improve retention and success. *International Perspectives on Higher Education Research*, 6: 41-55.
- 75) Thomas, R.M. 2003. Blending qualitative and quantitative research methods in theses and dissertations. Thousand Oaks, Ca: Corwin Press.
- 76) Tinto, V. 1975. Dropout from higher education: a theoretical synthesis of recent research. *Review of Educational Research*, 45(1): 89-125.
- 77) Tinto, V. 1987. *Leaving college: Rethinking the causes and cures of student attrition*. Chicago: University of Chicago Press, Chicago.
- 78) Tinto, V. 1993. *Leaving college: Rethinking the causes and cures of student attrition* 2nd Ed. Chicago: University of Chicago Press, Chicago.
- 79) Tinto, V. 1997. Classrooms as communities: Exploring the educational character of student persistence. *Journal of Higher Education*, 68(6): 599-623.
- 80) Tinto, V. 2006. Research and practice of student Retention: What Next? *Journal of College student retention*, 8(1): 1-19.
- 81) Vanson, S. 2014. What on earth are Ontology and Epistemology? Available at: <https://theperformancesolution.com/earth-ontology-epistemology/> (Accessed on 28 May 2018).
- 82) Welman, J.C. & Kruger, S.J. 1999. *Research methodology for the business and administrative sciences*. Cape Town: Oxford University Press South Africa.
- 83) Wylie, J. R. 2005. Non-Traditional Student Attrition in Higher Education: A Theoretical Model of Separation, Disengagement then Dropout. In Australian Association for Research in Education 2005 conference papers.

APPENDICES

APPENDIX A: SAMPLE OF THE QUANTITATIVE DATA COLLECTION INSTRUMENT



Participant #



Factors influencing programme completion of National Certificate (Vocational) students at a college in the Western Cape, South Africa.

In line with the above-mentioned title, you have been selected to participate in a study conducted by Mr A Gaffoor from the Faculty of Business and Informatics at the Cape Peninsula University of Technology. As a student of CPUT the results disclosed will contribute to the fulfilment of Mr A Gaffoor's Master of Technology dissertation in Business Administration.

Your eligibility as an NC(V) Level 4 Business Studies student has led to your selection as a possible participant.

Survey duration: 15-20 Minutes (4 pages)

ACCEPTANCE TO PARTICIPATE IN THE RESEARCH

I hereby understand and accept participation in the research study conducted by Mr A Gaffoor. I acknowledge that the purpose of the study and outcomes were explained to me, and that all information will be handled with confidentiality with none of my personal details being made public.

Signed at on the day of 20

Participant signature: _____

COMMITMENT BY RESEARCHER

I, Aasief Gaffoor, hereby confirm that I will place your best interests and well-being before the study. I will protect your identity and treat you with respect. I will not divulge your information or personal details to any other person, and only use the information for my research purpose.

Signed at on the day of 20

Researcher signature: _____

Kindly complete your details below (*only to be used for statistical purpose*):

Date				Tel / Cell			
Student number				Your age, today (for statistical purpose only)			
Gender	M	F	Race	A	W	C	
NC(V) Programme	Office Admin	Finance, Eco, Accounting	Information Technology	Education and Development	Primary Health		
Current Level	Year of <i>first-year</i> registration, e.g. 2010						
Transferred from another college/campus		Y	N	If Yes, where from?			
NSFAS Bursary holder		Y	N	Home Language			
Reason for attending a TVET college and not main stream school							

Complete the following sections by placing **one** tick (✓) in the appropriate box [*Strongly agree (4), Agree (3), Disagree (2), Strongly Disagree (1)*] for each of the following statements. *Read carefully and ask for clarity where needed.*

Thank you for your participation. Kindly note that your identity will remain confidential and information only used for research and reporting purposes. ☺

'I remained at college and intend completing my NC(V) programme because...'				
SECTION 1: Individual	Strongly agree (4)	Agree (3)	Disagree (2)	Strongly Disagree (1)
<i>I want to further my studies at a university</i>				
<i>I want to further my studies at a TVET college</i>				
<i>I want to apply for employment for work experience</i>				
<i>I want to find employment to support my family (parents, brothers, sisters)</i>				
<i>I want to better support and encourage my children</i>				
<i>I am self-motivated and determined</i>				
<i>I have my own transport</i>				
<i>I have many friends that support me</i>				
<i>I knew what I wanted to study from the start</i>				
<i>I enrolled early before the programme started</i>				
<i>Other programmes are full</i>				
<i>I always wanted to attend a college and study the programme I am doing</i>				
<i>I did programme research before applying</i>				
<i>I received career guidance</i>				
<i>I could not manage at a normal main stream school.</i>				
<i>I am satisfied with the programme I chose</i>				
<i>My parents are in the same career path</i>				
<i>I performed better at college than secondary school</i>				
<i>I want to be away from home</i>				
<i>I am organised and have good study habits</i>				
<i>I already have a job offering, but need the qualification first</i>				
<i>I am the first in my family to attend college</i>				
<i>I want to succeed in my career goals</i>				

'I remained at college and intend completing my NC(V) programme because...'				
SECTION 1: Individual	Strongly agree (4)	Agree (3)	Disagree (2)	Strongly Disagree (1)
<i>I did not pass my Grade 12 (matric) examinations</i>				

'I remained at college and intend completing my NC(V) programme because...'

SECTION 2: Institutional	Strongly agree (5)	Agree (4)	Disagree (2)	Strongly Disagree (1)
<i>My teachers are approachable, supportive, patient and always available</i>				
<i>My teachers interact with me outside of class</i>				
<i>The teaching style and learning material (textbooks, notes) are of a high quality</i>				
<i>The lessons are fun and understandable</i>				
<i>The teachers helped me understand my work</i>				
<i>Learning support service is always available</i>				
<i>I applied for the correct course</i>				
<i>I applied early</i>				
<i>I received a bursary / financial assistance</i>				
<i>The programme met all my expectations</i>				
<i>I receive academic support</i>				
<i>I receive personal support</i>				
<i>I receive administrative support</i>				
<i>I receive additional classes when I need them</i>				
<i>There are extra-curricula activities on campus, e.g. sport</i>				
<i>There is a small workload per subject</i>				
<i>The programme content is easy</i>				
<i>I receive a lift to college (family, friends, etc.)</i>				
<i>Tests and examinations are easy</i>				
<i>I take public transport</i>				
<i>I receive a transport allowance as part of my bursary</i>				
<i>I attended the orientation programme when I registered in the programme</i>				
<i>I received textbooks and class notes</i>				
<i>I received good advice before registering</i>				
<i>The college is close to my home and easy to travel to</i>				
<i>The college assists with job placement for graduating students</i>				
<i>My classwork is explained in my home language</i>				
<i>If I don't attend, I don't receive a bursary</i>				
<i>I feel safe at college</i>				
<i>I have access to resources at college, e.g. library, computers</i>				
<i>I have a study group (at college or outside)</i>				
<i>I attend extra class</i>				
<i>Each subject offers extra classes</i>				
<i>There are cultural activities on campus</i>				
<i>The college and campus suit me well</i>				
<i>I make use of student support services</i>				
<i>I am required to be at college or I can't get a bursary and transport allowance.</i>				

'I remained at college and intend completing my NC(V) programme because...'

SECTION 3: Social and Environmental	Strongly agree (5)	Agree (4)	Disagree (2)	Strongly Disagree (1)
--	---------------------------	------------------	---------------------	------------------------------

<i>My husband or wife supports me</i>				
<i>I receive support from my friends</i>				
<i>I receive support from my parents</i>				
<i>I receive support from my family members</i>				
<i>I receive support from community members</i>				
<i>My parent said I must complete my studies</i>				
<i>My parents chose my study option</i>				
<i>I study alone for tests and examinations</i>				
<i>I study with my friends</i>				
<i>I have many friends in class</i>				
<i>I have many friends on campus in other programmes</i>				
<i>My parents have money to pay for my studies</i>				
<i>I have friends that motivate me</i>				
<i>I have a part-time job and can pay for studies</i>				
<i>I need the qualification to apply for a job</i>				
<i>The students on campus are friendly</i>				
<i>The class size is good</i>				
<i>I don't have any family responsibilities</i>				
<i>I study better on my own</i>				
<i>I have time at home to focus on my studies</i>				
<i>I look forward to seeing my friends at college</i>				
<i>The college culture and environment suit me</i>				
<i>There are college programmes that allow students to interact with one another</i>				
<i>My parents completed college / university</i>				

Kindly read and answer the following question in your own words and experience, in the space provided. Please ask should you need clarity.

Think back to the very first day you entered college as a Level 2 student, up until today as a Level 4 student – was there any reason(s) that made you feel like dropping-out, but what made you stay and complete your programme?

List and Explain **your Top 5 reasons** for staying at college and completing your NC(V) programme...

Thank you for your participation. Kindly note that your identity will remain confidential and information only used for research and reporting purposes. 😊

APPENDIX B: SAMPLE OF THE QUALITATIVE DATA COLLECTION INSTRUMENT



Participant #



Factors influencing programme completion of National Certificate (Vocational) students at a college in the Western Cape, South Africa.

Duration: Approx. 1hr 30min – 2hr

Kindly complete your details below (*only to be used for statistical purpose*):

Date		Tel / Cell	
Student number		Your age, today (for statistical purpose only)	

Open / broad questions

1. What do you enjoy most about college?	
2. What do you least enjoy about college?	
3. What do you think is the reason students complete their NC(V) programme?	
4. Why did you decide to enrol in an NC(V) programme and not normal high school?	
5. Has there been a time when you considered dropping out of college before graduating?	
YES	NO
If YES , what made you want to drop-out?	
If NO , what was that main reason that made you stay?	

6. Did you consider dropping out only once or were there many times during your studies that made you want to drop out?	
YES	NO
If YES , what made you want to drop out more than once?	
7. Do you know of reasons why any of your friends that started with you in Level 2 did not continue their studies?	
8. What factors on campus do you think influenced your decision to stay and complete your studies?	

Closed / focused questions

9. What role did your teachers play in either making you want to drop out or stay?
10. What support structures (academic, student support) did you use at college that assisted you with your programme?
11. What support structures (family, community, and friends) did you use or have outside of the college that assisted you with your programme?
12. If you need academic or personal support who would you approach? Why?
13. Do you prefer studying in groups or alone - why?

14. On a scale from 1-10 (1 is LEAST important and 10 is VERY important), how important are friends towards your study motivation? Why?
15. Is financial assistance / bursary the main reason you intend completing your studies? If your studies were free, what would motivate you?
8. Was there anything about the college culture that was against your character?

Rate the following 8 items in **order of importance** for **your** decision to stay at college and complete your NCV studies:

<i>bursary</i>	<i>teaching quality</i>	<i>friendly teachers</i>	<i>family support</i>
<i>friends</i>	<i>college support</i>	<i>job certainty</i>	<i>social interaction</i>
1	2	3	4
5	6	7	8

9. Based on the list above and YOUR number 1 item, please explain why this was the most important item that made you stay and complete your studies over the 3 years of NCV:

10. What do you think the college can do to support students further/better to encourage them to complete their studies?

*****This is the end of the Questionnaire. Thank you very much for your participation.**

Should you have any additional comments regarding your reason for staying at college and completing your NC(V) programme, please indicate them below. We would like to know what your reasons are.

THANK YOU FOR PARTICIPATING IN THIS STUDY, YOUR IDENTITY WILL REMAIN ANONYMOUS

APPENDIX C: QUALITATIVE LETTER OF CONSENT

Factors influencing programme completion of National Certificate (Vocational) students at a college in the Western Cape, South Africa

In line with the above-mentioned title, you have been selected and asked to participate in a study conducted by Mr A Gaffoor from the Faculty of Business and Informatics at the Cape Peninsula University of Technology. As a student of CPUT the results disclosed will contribute to the fulfilment of Mr A Gaffoor's Master of Technology dissertation in Business Administration.

Your eligibility as a NC(V) Level 4 Business Studies student, as well as your participation in the survey completion, has led to your selection as a possible participant.

PURPOSE OF THE STUDY

The study aims to explore the factors that influenced your decision to complete your NC(V) programme at the College of Cape Town, Crawford campus. The objective is to determine all internal and external factors (personally, institutionally, and socially) that have influenced your decision to complete the programme.

PROCEDURES

If you volunteer to participate in this study, we would ask you to do the following things:

- Attend a meeting which will discuss and clarify the purpose of the event, and answer any questions you may have. (meeting should not be longer than 30 minutes)
- Sign the consent form during the above mentioned meeting.
- Agree to a venue, date and time to meet on campus to complete a questionnaire, during the above mentioned meeting.
- Attend the questionnaire completion session (scheduled for approximately 2 hours 30 minutes)
- Complete an electronic questionnaire that contains ___#___ of questions, which relate to your personal views, experiences and opinions about the factors that influenced your decision to complete your NC(V) programme.
- You will receive your own computer space and area to complete your questionnaire.
- The researcher only will be present to assist should you need any clarification of questions asked.
- After completion, the researcher will check to ensure you have completed the questionnaire correctly.
- The researcher will save your questionnaire and print one hard copy.
- The researcher will analyse your answers and that of the other participants and write up a report.
- Your name or personal details will not form part of the report.
- The final report will be shown to you, to verify that what the researcher has written is truly your answers.

****Refreshments will be served at the questionnaire session; your identity as a participant will be protected and remain confidential and only known to the researcher .*

POTENTIAL RISKS AND DISCOMFORTS

Your participation in or requirements of this questionnaire session will pose no physical or mental risk to you. The only potential inconvenience would be the time of the session. However, the researcher and all participants will agree upon the most suitable time at your convenience.

POTENTIAL BENEFITS TO SUBJECTS AND/OR TO SOCIETY

Your willing participation and contribution of answers will assist in the conclusion of the researchers' studies, towards qualifying for the Masters programme.

PAYMENT FOR PARTICIPATION

Each participant will receive a **R15.00 once off payment** at the end of the questionnaire session, provided that the questionnaire has been accurately and honestly completed. Payment will be given in cash once the researcher has checked the validity of the answering process.

CONFIDENTIALITY

Information will not be given or used by any other person except the researcher. Your personal identity as a participant will be kept confidential and not used as part of the conclusive findings. A coding system will be used where you will be referred to in the study findings as, for example, Participant 1. All personal information will be kept by the researcher electronically.

PARTICIPATION AND WITHDRAWAL

- You have the choice to participate in this study or not. If you agree and withdraw at any time there will be no consequence of any kind, however the R15.00 payment will be null and void.
- Should the researcher determine that your participation in the study is not for an honest contribution, the monetary payment of R15.00 will be null and void.
- Although you are eligible and selected as a potential participant, the researcher approaches you with the view of your being a competent and honest participant.

IDENTIFICATION OF INVESTIGATORS

If you have any questions or concerns about the research, please feel free to contact the researcher, Mr A Gaffoor on 083 958 9285 or my Supervisor, Dr Andre van der Bijl at CPUT Mowbray Campus.

SIGNATURE OF PARTICIPANT OR LEGAL REPRESENTATIVE

The information above was described to me _____ (participant name and surname) by Mr A Gaffoor. [I/the participant/the subject] was given the opportunity to ask questions and these questions were answered to [my/his/her] satisfaction.

[I hereby consent voluntarily to participate in this study/I hereby consent that the subject/participant may 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

Participant #

Date

SIGNATURE OF RESEARCHER

I declare that I explained the information given in this document to the above-mentioned participant. [He/she] was encouraged and given ample time to ask me any questions.

Signature of Researcher

Date

COMMITMENT BY RESEARCHER

I, Mr A Gaffoor, hereby confirm that I will place your best interest and well-being before the study. I will protect your identity and treat you with respect. I will not divulge your information or personal details to any other person, and only use the information for my research purpose.

**APPENDIX D: CAPE PENINSULA UNIVERSITY OF TECHNOLOGY ETHICS COMMITTEE
RESEARCH APPROVAL**



P.O. Box 1906 • Bellville 7535 South Africa • Tel: +27 21 6801680 • Email: salief@cpu.ac.za
Symphony Road Bellville 7535

Office of the Chairperson Research Ethics Committee	Faculty: BUSINESS
--	--------------------------

At a meeting of the Research Ethics Committee on 18 May 2016, Ethics Approval

was granted to GAFFOOR, Aasief (203000420) for research activities

Related to the MTech/DTech: MTech: BUSINESS ADMINISTRATION

at the Cape Peninsula University of Technology

Title of dissertation/thesis:	Factors That Influence Programme Completion of National Certificate (Vocational) Students in South Africa's Western Cape Province Supervisor: Dr Andre van der Bijl
-------------------------------	--

Comments:

Decision: APPROVED

	18 May 2016
Signed: Chairperson: Research Ethics Committee	Date

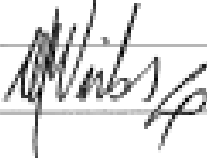
Clearance Certificate No | 2016FBREC349

**APPENDIX E: DEPARTMENT OF HIGHER EDUCATION AND TRAINING (DHET)
RESEARCH PERMISSION**

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

FOR OFFICIAL USE

DECISION BY HEAD OF COLLEGE

Please tick relevant decision and provide conditions/reasons where applicable	
Decision	Please tick relevant option below
1 Application approved	<input type="checkbox"/>
2 Application approved subject to certain conditions. <i>Specify conditions below</i>	<input checked="" type="checkbox"/>
<p>1. Ethical clearance from university to be provided prior to commencement of research.</p> <p>2. Prior written permission to be obtained from each student to be interviewed, as stipulated in DHET policy.</p> <p>3. Where individual students are not of legal majority at the time of the interview, prior written permission must also be obtained from the parent/guardian.</p> <p>4. The granularity of data requested in 3.6/4.3 is not specified. If this is at a statistical level it should be requested from the DHET in terms of clause 7.2 of the DHET policy. If more detail is required than that then a separate application should be made that specifies exactly what data is required (rather than the records from which the data could be accumulated) so that consideration can be given to possible authorisation of access to the data. We do not give blanket access to records of the College. However, it is possible that summary data are already available in reports, for instance those submitted to the Academic Board.</p>	
3 Application not approved. <i>Provide reasons for non-approval below</i>	<input type="checkbox"/>
<p>NAME OF COLLEGE College of Cape Town</p> <p>NAME AND SURNAME OF HEAD OF COLLEGE PP. Louis van Niekerk</p> <p>SIGNATURE </p> <p>DATE 4 May 2016</p>	

APPENDIX F: THE SELECTED TVET COLLEGE AND CAMPUS RESEARCH APPROVAL



Aaslef Gaffoor
10 Wild Almond Way, Mulzenberg
By email

4 May 2016

PROPOSED RESEARCH PROJECT AT THE COLLEGE OF CAPE TOWN

Dear Aaslef Gaffoor

Your research proposal "Factors that Influence Programme Completion of National Certificate (Vocational) students in South Africa's Western Cape Province" has been approved to be conducted at the College, subject to conditions stipulated on the DHET 004 Application form.

We wish you all success with this important research programme and look forward to receiving a copy of the research report on completion.

Yours sincerely

A handwritten signature in black ink, appearing to read "Louis van Niekerk", is written over a horizontal line.

PP Louis van Niekerk

PRINCIPAL

CENTRAL OFFICE

334 Albert Road, SALT RIVER, 7925,
P.O. Box 1054, CAPE TOWN, 8000

Tel: +27 21 404 6700 • Fax: +27 21 404 6701

Info Line: +27 86 010 3682 | email: info@cct.edu.za | Website: www.cct.edu.za

APPENDIX G: QUANTITATIVE RATING-SCALE COLLATED RESPONSE – ‘INDIVIDUAL’ CATEGORY

	Strongly Agree %	Agree %	Disagree %	Strongly disagree %
1. <i>I want to further my studies at a university</i>	54	24	15	7
2. <i>I want to further my studies at a TVET college</i>	26	15	52	7
3. <i>I want to apply for employment for work experience</i>	67	26	7	2
4. <i>I want to find employment to support my family (parents, brothers, sisters)</i>	61	30	7	2
5. <i>I want to better support and encourage my children</i>	50	26	7	0
6. <i>I am self-motivated and determined</i>	67	24	4	4
7. <i>I have my own transport</i>	7	11	48	33
8. <i>I have many friends that support me</i>	13	43	27	17
9. <i>I knew what I wanted to study from the start</i>	40	30	26	4
10. <i>I enrolled early before the programme started</i>	28	37	26	9
11. <i>Other programmes are full</i>	7	30	43	17
12. <i>I always wanted to attend a college and study the programme I am doing</i>	17	24	37	20
13. <i>I did programme research before applying</i>	20	33	33	17
14. <i>I received career guidance</i>	24	46	26	4
15. <i>I could not manage in a normal main stream school.</i>	11	41	28	20
16. <i>I am satisfied with the programme I chose</i>	59	35	2	4
17. <i>My parents are in the same career path</i>	7	11	48	35
18. <i>I performed better at college than secondary school</i>	63	26	9	2
19. <i>I want to be away from home</i>	7	9	52	33
20. <i>I am organised and have good study habits</i>	24	61	15	0
21. <i>I already have a job offering, but need the qualification first</i>	7	24	46	26
22. <i>I am the first in my family to attend college</i>	35	22	34	9
23. <i>I want to succeed in my career goals</i>	83	13	2	2
24. <i>I did not pass my Grade 12 (matric) examinations</i>	63	26	7	4

**APPENDIX H: QUANTITATIVE RATING-SCALE COLLATED RESPONSE –
‘INSTITUTIONAL’ CATEGORY**

	Strongly Agree %	Agree %	Disagree %	Strongly disagree %
1. <i>My teachers are approachable, supportive, patient and always available</i>	59	35	4	2
2. <i>My teachers interact with me outside of class</i>	15	37	46	2
3. <i>The teaching style and learning material (textbooks, notes) are of a high quality</i>	46	39	15	0
4. <i>The lessons are fun and understandable</i>	28	67	4	0
5. <i>The teachers helped me understand my work</i>	48	46	7	0
6. <i>Learning support service is always available</i>	43	35	17	2
7. <i>I applied for the correct course</i>	4	35	4	2
8. <i>I applied early</i>	39	35	24	4
9. <i>I received a bursary / financial assistance</i>	54	30	11	4
10. <i>The programme met all my expectations</i>	41	50	4	4
11. <i>I receive academic support</i>	17	48	28	7
12. <i>I receive personal support</i>	24	37	37	2
13. <i>I receive administrative support</i>	22	39	30	9
14. <i>I receive additional classes when I need them</i>	13	35	39	13
15. <i>There are extra curricula activities on campus, e.g. sport</i>	33	46	15	7
16. <i>There is a small workload per subject</i>	4	24	39	33
17. <i>The programme content is easy</i>	7	39	39	13
18. <i>I receive a lift to college (family, friends, etc.)</i>	9	7	52	33
19. <i>Tests and examinations are easy</i>	9	24	54	11
20. <i>I take public transport</i>	65	30	4	0
21. <i>I receive a transport allowance as part of my bursary</i>	46	24	20	10
22. <i>I attended the orientation programme when I registered in the programme</i>	52	37	7	4
23. <i>I received textbooks and class notes</i>	59	37	0	2
24. <i>I received good advice before registering</i>	39	37	17	7
25. <i>The college is close to my home and easy to travel to</i>	7	11	50	33
26. <i>The college assists with job placement for graduating students</i>	35	48	15	2
27. <i>My classwork is explained in my home language</i>	11	7	37	46
28. <i>If I don't attend, I don't receive a bursary</i>	67	22	2	9
29. <i>I feel safe at college</i>	22	63	7	9

30. <i>I have access to resources at college, e.g. library, computers</i>	48	46	2	4
31. <i>I have a study group (at college or outside)</i>	24	30	35	11
32. <i>I attend extra class</i>	4	9	63	24
33. <i>Each subject offers extra classes</i>	4	11	57	26
34. <i>There are cultural activities on campus</i>	20	35	33	9
35. <i>The college and campus suit me well</i>	24	63	11	2
36. <i>I make use of student support services</i>	13	25	49	13
37. <i>I am required to be at college or I can't get a bursary and transport allowance.</i>	41	33	15	11

APPENDIX I: QUANTITATIVE RATING-SCALE COLLATED RESPONSE – ‘SOCIAL AND ENVIRONMENTAL’ CATEGORY

	Strongly Agree %	Agree %	Disagree %	Strongly disagree %
1. <i>My husband or wife supports me</i>	11	4	7	11
2. <i>I receive support from my friends</i>	20	46	24	9
3. <i>I receive support from my parents</i>	61	33	4	2
4. <i>I receive support from my family members</i>	37	48	11	4
5. <i>I receive support from community members</i>	7	33	37	20
6. <i>My parent said I must complete my studies</i>	50	35	9	6
7. <i>My parents chose my study option</i>	4	11	52	28
8. <i>I study alone for tests and examinations</i>	41	30	24	4
9. <i>I study with my friends</i>	17	20	41	17
10. <i>I have many friends in class</i>	11	28	41	13
11. <i>I have many friends on campus in other programmes</i>	17	22	33	26
12. <i>My parents have money to pay for my studies</i>	0	4	48	46
13. <i>I have friends that motivate me</i>	20	57	13	11
14. <i>I have a part-time job and can pay for studies</i>	0	2	46	46
15. <i>I need the qualification to apply for a job</i>	65	26	7	0
16. <i>The students on campus are friendly</i>	26	50	17	7
17. <i>The class size is good</i>	41	52	7	0
18. <i>I don't have any family responsibilities</i>	15	15	48	22
19. <i>I study better on my own</i>	37	54	5	4
20. <i>I have time at home to focus on my studies</i>	24	43	22	9
21. <i>I look forward to seeing my friends at college</i>	13	61	20	4
22. <i>The college culture and environment suit me</i>	15	67	11	7
23. <i>There are college programmes that allow students to interact with each other</i>	30	43	15	7
24. <i>My parents completed college / university</i>	4	13	42	41